Vision

Working together for excellence in specialty medicine for healthy Canadians

Mission

The Royal College is dedicated to excellence in specialty medical care, the highest standards in medical education and lifelong learning, and the promotion of sound health policy

Strategic Priorities and desired outcomes

- Adapt and strengthen specialty medicine to meet society’s health needs.
- Support members throughout their education, profession and retirement.
- Advance specialty medical education and lifelong learning.
- Build the capacity, effectiveness and accountability of the Royal College.
- Canadians will benefit from timely, evidence-informed, excellent specialty care.
- Members will see the Royal College as essential and relevant in performing their professional responsibilities at a high standard.

University Mission Statement

"At McMaster, our purpose is the discovery, communication, and preservation of knowledge. In our teaching, research, and scholarship, we are committed to creativity, innovation, and excellence. We value integrity, quality, and teamwork in everything we do. We inspire critical thinking, personal growth, and a passion for learning. We serve the social, cultural, and economic needs of our community and our society."

University Vision

"To achieve international distinction for creativity, innovation and excellence."

Hundreds of people work behind the scenes at the University ensuring that it fulfills all of the mandates set down by the mission and the vision.
Faculty commitment to residents:

We are committed to creating an environment conducive to the educational needs of the Anesthesia trainee. This education will not only include evidence based clinical practice of medical expert knowledge and skills within the realm of Anesthesia, but will also reflect the core guiding CanMEDS competencies of professionalism, communication, collaboration, scholarship, management and health advocacy. We will demonstrate a sound understanding of the Anesthesia program objectives and to individualize these objectives where possible, to the individual learning needs of our trainees.

We will strive to create a learning environment free from intimidation and harassment and to uphold the codes of conduct at each hospital site and McMaster University as well as the College of Physicians and Surgeons of Ontario position statement on professionalism. We are committed to developing and maintaining positive and respectful relationships with all trainees.

We are committed to providing timely discussions of rotation specific goals and objectives and to ensuring that all trainees receive timely and pertinent evaluations of performance within all realms of the CanMEDS competencies in a constructive and fair manner.

We will provide graded responsibilities to Anesthesia trainees throughout their training while acknowledging and conforming to PARO guidelines. At all times we will provide adequate support and back-up commensurate with the needs and requirements of the Anesthesia trainee.

Above all, we will create an environment conducive to the development of a professional, competent and skillful Anesthetist.

* The heights by great men reached and kept were not attained by sudden flight, but they while their companions slept, were toiling upward in the night.  
* Henry Wadsworth Longfellow  
* US poet (1807 - 1882)
Resident Expectations

Residents will be expected to be motivated and dedicated in applying themselves to the mastery of Anesthesia including all CanMEDS competencies: medical expert, collaborator, communicator, professional, health advocate, manager and scholar. This includes continual case-based study and appropriate preparation for operative and clinic based experiential learning within the context of evidence based clinical practice.

Residents will be expected to demonstrate a collegial and professional attitude at all times, and specifically towards a graduated learning and responsibility process. They will conform to the codes of conduct of each hospital site and McMaster University as well as the College of Physicians and Surgeons of Ontario position statement on professionalism. Residents are expected to contribute to the creation of a healthy environment for learning, free from intimidation and harassment.

Residents will be expected to discuss rotation specific goals and objectives at the onset of every rotation and to provide constructive timely evaluation to their respective faculty.

Residents are expected to demonstrate compassionate, professional and exemplary clinical care in the context of a multidisciplinary team environment.

Residents are expected to seek appropriate back-up from faculty or seniors in the face of clinical uncertainty beyond their level of training or comfort.

Residents are expected to provide education for faculty, their peers and medical students. This can take the form of formal teaching sessions or educational clinical experiences.

Residents are in training to become life-long learners and practitioners of the art and science of Anesthesia.
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2016-2017

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Faculty & Resident Acknowledgement and Reading
Receipt of Manual – MUST SIGN AND RETURN
Welcome to the Residency Training Program in Anesthesiology at the Michael DeGroote School of Medicine at McMaster University. Anesthesia training in Canada is of the highest quality and McMaster enjoys a favourable reputation among Canadian training programs. For those of you already settled in the Anesthesia Residency Training Program, and progressing to the next level of your training, congratulations and keep up the great work!

As Program Director (PD), I have enjoyed getting to know all of you. I love being able to see our specialty through fresh eyes, to learn from all of you and to be surrounded by your youthful energy! Being your Program Director is a privilege and I take its associated responsibilities very seriously. Some of the goals that I would like to achieve are reflected in this book. (By the way, this book would not have been possible without the tireless efforts of our Program Assistant, Candice Stroud, who makes everything look easy.)

The first goal is to achieve clarity, transparency and fairness. By having an up-to-date, accessible handbook, all residents can understand how the program works, what its policies are, and observe those policies being applied fairly to everyone. In addition, it is important that you, as residents, understand exactly what is expected of you. Sometimes the written rules are not made clear; and the unwritten ones even harder to discern. In this document, all expectations, written and unwritten, appear in black and white.

There are a lot of moving parts to the Residency Program, compared to when I was a resident 25 years ago. The McMaster Anesthesia Residency Program has many elements to it. In part, this is to meet the increasing demands and expectations of the Royal College. The increased complexity can also be attributed to the wider array of opportunities available to the learner, such as Simulation and Undergraduate Teaching. The growth of the program, in size and complexity, brings opportunities but also poses risks. The risks are that the whole thing gets too confusing, hard to keep track of, and distracts us from the core elements (clinical experience and academic curriculum). So a second goal of this document is to show how all the pieces fit together into a whole.

The training program is designed to meet the requirements of the Specialty Committee of the Royal College of Physicians and Surgeons of Canada. These standards include all domains of the CanMEDS competencies, in which you will be both trained and evaluated. Your training program is designed to help you gain the knowledge, skills and attitudes necessary to achieve excellence in the practice of Anesthesia and will include:

- A comprehensive clinical experience at 4 clinical sites as well as the community.
- An academic program tailored to each PGY year, organized by the Curriculum Committee led by Dr. Michele Cappello
- A dynamic, integrated simulation program
- Opportunity to develop teaching skills and experience through multiple avenues including the teaching of medical students and fellow residents (Coordinated by our Undergrad Chair, Dr. Daniel Cordovani)
- Research experience, including an introductory course in the PGY1 year and the necessary support to complete your own research project. Research program is led by Research Chair, Dr. James Paul
- Opportunity to be involved in administrative and leadership positions within your residency program
- A Promotions Portfolio that will help you track your development along all the CanMedS Competencies and facilitate periodic reviews
• The support and infrastructure required to take ensure that your clinical experience and academic learning translates to success at the Royal College exams
• An experience of community within the residency program, within the City-wide Department of Anesthesia and within the larger community of McMaster University.

To navigate the manual, please ensure that you have your “bookmarks” turned on, which functions as a click-able table of contents, allowing you to easily find and move directly to a given Chapter. The bookmark icon is located in the upper left of the screen.

Please take the time to understand the key features of the McMaster Anesthesia Residency Program. This handbook was designed to allow easy access to that information, being divided into Chapters for easy navigation. Much of the document contains information that is there for you when you need to access it and does not need to be read immediately, as long as you know that you where you can find the information. However, there are many areas of the handbook that I would urge you to read as soon as possible and that you are responsible for knowing. These critical sections are listed on the final page of the digital document. Please read these sections, sign the acknowledgment page and return your signed form to Candice.

Residency is hard. Like most hard things, not many people would be able to do it. And like most hard things, it will be worth it when you achieve it- you will begin a rewarding career in a dynamic, challenging field, having been well prepared over 5 years of training to hold your patients’ lives in your hands. You are on your way to doing something amazing.

Sincerely,

Dr. Karen Raymer, MD, MSc, FRCP(C)
Program Director
McMaster University Anesthesia Residency Training Program

March 31, 2016
Welcome to anesthesia at McMaster. We are proud of our anesthesia training program, and our graduates over the years have taken up positions across the country ranging from the largest academic centres to a variety of community hospital settings. This is a particularly interesting time in the history of anesthesia training as we move to wider use of training processes outside the operating room proper and into simulation settings, and as we emphasize more and more the importance of training and performance in fields outside of the 'Medical Expert' role described by the Royal College of Physicians and Surgeons of Canada in its CanMeds competencies. You will also hear, if you have not yet done so, about the introduction of ‘Competency By Design’, a reconceptualization and reorganization of the Royal College training programs to focus on attainment of specifically measurable elements of training.

You will have the opportunity to observe a very wide range of clinical practice, in and out of the operating room, in pain clinics and pre-op assessment clinics as well as participating in academic activity including research groups and discovering the pedagogy of education.

The Department is affiliated with the Michael G DeGroote Institute for Pain Research and Care, focusing on persistent post-surgical pain, and the National Pain Centre, dedicated to dissemination of best practice in pain management. Members are formally affiliated with the Population Health Research Institute, and a number have played key roles in developing, piloting and carrying out studies such as the landmark POISE and POISE II trials and VISION.

As education becomes a more formal part of academic promotion, there are increasing opportunities to learn about clinical education strategies, curriculum development and evaluation.

With departmental leaders in the University sphere, hospital leadership roles and involved in national academic and other leadership, there are opportunities to observe administrative positions in action. Leadership opportunities also exist for you within the residency program and at the national and provincial levels with the Canadian Anesthesia Society and the postgraduate professional associations.

There are members of the department engaged in provision of educational and clinical services in developing countries, formally through departmental relationships and informally or 'extra-curricular' to their departmental roles.

Take advantage of the opportunities available, keep your eyes, ears and mind open. One never knows what the future will bring in terms of new procedures, new locations for our services and new demands upon our skills. We have led the fields of resuscitation, monitoring and safety and our great successes have often come outside of the operating room 'home'.

Thanks for coming to McMaster and we are looking forward to the future.

Best regards,

Norm Buckley
Chair, Department of Anesthesia
McMaster University
THE ANESTHESIA RESIDENCY TRAINING PROGRAM OVERVIEW

A. CLINICAL SITES

Anesthesia is an acute-care specialty. It draws upon knowledge from medical specialties as well as science disciplines. The purpose of the McMaster Program is to assist residents in developing their skills so that they will be competent in facing the demands of this evolving specialty. Currently, there are 4 hospital sites in Hamilton that provide the program's diverse clinical experience.

ST. JOSEPH'S HEALTHCARE

St. Joseph's Healthcare is one of the busiest general hospitals in the area. Here, you will learn how to manage an active general anesthetic practice. St. Joseph's has several unique aspects that will be important to your training. The hospital houses the regional renal disease and transplant unit. It also has a major head, neck and thoracic surgical service, a busy intensive care unit, and a high volume obstetrical unit. St. Joseph's has developed into the major centre of expertise in minimal access surgical procedures providing valuable exposure to the practice of anesthesia for minimally-invasive surgery. You will also gain experience in bariatric anesthesia. There is an active acute pain service.

HAMILTON HEALTH SCIENCES

The Hamilton Health Sciences (HHS) consists of the Hamilton General, the Juravinski Hospital and McMaster University Medical Centre.

The Hamilton General is the regional centre for cardiovascular, neurosurgery, trauma and burn management. There are also busy general surgery and orthopaedic surgery services. A comprehensive, multidisciplinary chronic pain management service and an active acute pain service are present. The Hamilton General site also maintains three intensive care units, one of which is focused on management of post-operative cardiac surgery patients. A coronary care unit, managed by the Cardiology service, rounds out the compliment of Critical Care Services.

The Juravinski Hospital is an adult general hospital with an emphasis on hepatobiliary and colorectal general surgery, orthopedics, dental, major urology and gynaecological oncology. The city’s largest acute pain service also is found at this site.

The McMaster University Medical Centre is the regional Pediatric and Women’s Health Hospital. In addition to general pediatric surgery, the hospital manages pediatric trauma, pediatric sedations, pediatric neurosurgery, and major pediatric orthopedics. Pediatric and neonatal intensive care units are present at McMaster. The McMaster University Medical Centre has a busy high-risk obstetrical unit, as well as Women’s Health surgical services. General adult ambulatory care services are also housed at this site.

The Hamilton Health Sciences has a consolidated pre-operative assessment clinic where patients undergoing surgery at any of the three HHS sites are assessed in a clinic situated at
McMaster University Medical Centre. Residents rotating through any of the HHS sites will attend this clinic as part of their clinical rotation.

COMMUNITY EXPERIENCE

The program allocates 2 blocks for the mandatory community anesthesia rotations. Training opportunities are available at a number of community-based centers in the region and the province. These rotations usually occur during the PGY4 year (usually) or PGY5 year. While much flexibility in selecting sites and rotations is maintained to ensure appropriate educational opportunities and experience, there are some restrictions. For example, the supervising anesthesiologists must be FRCP(C). The rotations must occur in Ontario, unless a reasonable case can be made that the experience cannot be provided within Ontario. In that case, the PD would have to seek approval from the Associate Dean (Postgrad).

At least one of the two blocks MUST be a true community anesthesia experience. There is some latitude to pursue a different type of experience for the second block. In all cases, the rotations must be approved by the PD. Please see the Community elective section for more details.

B. SPECIALTY REQUIREMENTS

It is assumed that trainees entering the program will complete the full course. However, appointments are on a yearly basis and reappointment is contingent upon satisfactory achievement of the criteria set by the Program (goals and objectives for clinical rotations; promotions portfolios) and the Royal College (specialty training requirements or STR’s).

The STR’s are renewed from time to time. The STR’s that were in place at the time that a resident begins their residency are the ones that apply to them. The two STR documents that apply to current cohorts of residents are attached. The older set of STR’s required:

1. Basic Clinical Training (PGY-1) Year
2. 30 months of training in anesthesia.
3. One year of training in internal medicine (12 months or 12 blocks).
4. A further six months during which further anesthesia training, research or study of basic sciences may be undertaken.

The July 2014 STR’s are similar but allow more latitude:

1. Basic Clinical Training (PGY-1) Year
2. 24 months of training in anesthesia.
3. One year of training in internal medicine (13 blocks)
4. Up to 12 months during which further anesthesia training, research or study of basic sciences may be undertaken.
C. PROGRAM STRUCTURE

First Year (PGY-1)

This is a broad-based year of training including rotations in anesthesia, medicine, emergency medicine, surgery, pediatrics and obstetrics as well as elective time. The PGY1 begins and ends with two blocks of Anesthesia, the latter two blocks involving (buddied) call shifts.

Second Year (PGY-2)

This year is spent developing skills and gaining experience in general and regional anesthesia. In addition to general anesthesia, the year involves exposure to introductory pediatric anesthesia at McMaster University Medical Centre and introductory obstetrical anesthesia at St. Joseph's Healthcare and McMaster University Medical Centre.

Third Year (PGY-3)

The PGY3 year consists of 13 blocks of Medicine which includes adult critical care, pediatric critical care, neonatal ICU, cardiology, respirology and medical subspecialty electives (hematology, palliative care, nephrology and renal transplant etc.) The program provides a template from which the residents can indicate their preferred rotations. There is also the opportunity to apply for a research block during the third year. There are specific criteria and expectations for a research elective; please refer to the relevant section in the handbook.

We are very fortunate to have the full support of the Departments of Medicine and Pediatrics and the services of Critical Care in providing an excellent experience for our residents. Occasionally, some of the PGY3 rotations will occur in the PGY4 year.

Fourth Year (PGY-4)

This year is made up of subspecialty rotations. Residents will do rotations in: cardiac anesthesia (2 blocks), neuroanesthesia (2 blocks), thoracic anesthesia (2 blocks), high risk obstetrics (1 block), pediatric anesthesia (2 blocks), chronic pain (1 block), regional anesthesia (1 block) and community elective (2 blocks). Some of the subspecialty rotations may be deferred to PGY5.

Fifth Year (PGY-5)

This is the final year, in which further experience in clinical anesthesia is gained. During this year, the resident should begin the transition from resident to consultant and prepare for independent practice. As well, intensive preparation for the RCPSC written and oral examinations takes place during this time (see below).

Each resident is required to keep an individual record of cases and procedures done during their training, using the Resident Log Book (RLB) and residents caseloads are compared to program and national norms.
D. ACADEMIC ACTIVITY  (Core program)

September-June programming (“Foundations”)

During the PGY 1-4 years, residents are required to attend a series of seminars (Foundations 1, 2 and 3) organized and presented by the Anesthesia Department, during their academic day from September to June of each academic year. These core sessions are generally run as interactive tutorials and address level-specific topics in basic and clinical sciences. Preparation and participation is expected by all residents. Self-directed, problem-based learning should form an integral and important part of this course. Thus residents are expected to be able to perform within these guidelines.

Foundations Program seminars are held in the afternoons (1-4 pm) for PGY1 and PGY3 and may include sessions in the morning and/or afternoon for PGY2 and PGY4. From September to June, the protected academic time is as follows:

PGY1- Thurs pm  
PGY2- Thurs full day  
PGY3- Wed pm  
PGY4- Wed full day  
PGY5- Thursday full day (beginning when the resident becomes PGY5)

July-August (“Transitions”)

A summer “Transitions” program is organized for PGY1, 2 and 3. The PGY1 and 2 transitions program is highly simulation-based and includes many full days of sessions on Thursdays and some Fridays (particularly for PGY1’s).

The PGY3 summer transitions program is led each week by a PGY4 resident with faculty supervision. **PGY4’s do not have academic time during the summer, other than the PGY3 session(s) that they lead.**

The schedule for all academic programming is kept up to date on the Google Calendar.

PGY5’s

The PGY5’s have a full academic day starting at the beginning of their PGY5 year and ending after the completion of their RC oral exam. It is used for independent study until the beginning of January, at which time organized oral exam preparation sessions begin until the end of May. After the oral exams in early June, the PGY5’s have no further protected academic time. For out-of-sync residents, please see out-of-sync resident policy.

The purpose of the full academic day for PGY5’s is to provide adequate protected time for exam preparation. This means that during the other 4 clinical days, the PGY5 resident is to be fully immersed in their clinical experience. The PGY5 resident should not be taking prolonged breaks from the OR to study, should not be bringing or opening up study
material in the OR. The latter practice gives the supervising faculty the impression that the resident would like to be sent out to study and is not consistent with the resident taking full ownership of the cases. The intent of the full academic day is to better allow the dual goals of the PGY5 year to both be met: preparing for the RC exams and gaining enough clinical experience to be a consultant (and to pass the oral exams).

The resident as teacher:

During the training program, the resident is expected to participate actively in the teaching of medical and other students, as well as other health care professionals. Residents will begin teaching in the Undergraduate Anesthesia Clerkship Program in the latter part of the PGY1 year. (See Clerkship Teaching chapter). Residents receive training in how to teach.

Clinical Teaching Rounds:

In addition to the clinical teaching which occurs on a one-to-one basis, Regional Grand Rounds are held once a month, focused on either clinical or research topics. A Visiting Professor Program is in place to bring in an outside expert once a month to present at Grand Rounds.

Each hospital is also responsible for organizing its own Resident Trouble Rounds on topics of clinical interest. Resident presentations play a major role in leading Trouble Rounds.

At McMaster and the Hamilton General, there is a monthly subspecialty round prepared by a local consultant and a resident every month in the areas of cardiac, pediatric and/or obstetrical anesthesia.

St. Joseph’s Healthcare conducts monthly Morbidity and Mortality rounds presented by the faculty and monthly Resident Rounds presented by residents during their rotations at the site. Topics for Resident Rounds are selected by the residents in consultation with the CTU Director.

June 2016
RTC Committee Chair  
Dr. Karen Raymer

Program Coordinator  
Candice Stroud  
Tammy Purchase

Chair, Dept. Of Anesthesia  
Dr. Norm Buckley

Associate Chair, Research  
Dr. James Paul

CTU Director  
MUMC  
Dr. Tracey Bruce

CTU Director  
HGH  
Dr. Iwona Zieba

Associate Chair, Education  
Dr. Anne Wong

CTU Director  
JHCC  
Dr. Jonathan Dingle

CTU Director  
SJH  
Dr. Peter Moisiuk

CTU Director  
HGH  
Dr. Iwona Zieba

CTU Director  
JHCC  
Dr. Jonathan Dingle

CTU Director  
SJH  
Dr. Peter Moisiuk

Curriculum Chair  
Dr. TBD

Member at Large (SJH)  
Dr. Geoff Rosenblood

RAC Chair  
Dr. Brent Maclellan

RAC Executive  
Jessie Ursenbach(PGY4)  
Caitlin Vandecappelle (PGY3)  
Jeffrey Overington(PGY2)

RAC Executive  
Jessie Ursenbach(PGY4)  
Caitlin Vandecappelle (PGY3)  
Jeffrey Overington(PGY2)
Anesthesia Residency Program Organizational Chart

Chair of Department
Dr. Norm Buckley

Program Coordinator
Candice Stroud
Tammy Purchase

Program Director
Dr. Karen Raymer

CTU Director MUMC
Dr. Tracey Bruce

CTU Director HGH
Dr. Iwona Zieba

CTU Director JHCC
Dr. Jonathan Dingle

CTU Director SJH
Dr. Peter Moisiuk

UG Program Director
Dr. Daniel Cordovani

Curriculum Chair
TBD
Anesthesia Contact Information

**Academic Chair:** Dr. Norm Buckley  
Contact: 905 521 2100 ext 75166

**Program Director:** Dr. Karen Raymer  
Contact: 905 521 2100 ext. 75170/ 75165

**Program Coordinator:** Candice Stroud  
Contact: 905 521 2100 ext. 75170

**Program Coordinator/ Pain:** Tammy Purchase  
Contact: 905 521 2100 ext. 75154

**Curriculum Chair:** Dr. TBD

**Clinical CTU Directors:**

- **HGH**  
  Dr. Iwona Zieba  
  Contact: 905 972-1148 (p)

- **JHCC**  
  Dr. Jonathan Dingle  
  Contact: 905 923 2300 ©

- **MUMC**  
  Dr. Tracey Bruce  
  Contact: 905 777-7132 (p)

- **SJH**  
  Dr. Peter Moisiuk  
  Contact: 905 966-2611 (c)

Anesthesia Contact Information

**Associate Chair for Research** Dr. James Paul  
Contact: 905 521 2100 ext. 21737

**Departmental Manager** Ksenija Kasumovich  
Contact: 905 521 2100 ext. 75171

**Ombudsman** TBD
2016-2017

Anesthesia Resident Photos
All Residents

PGY1

Abdulrahim Alkalbi
Denise Darmawikarta
Dillon Horth
Davinder Jain
Cameron Nishi
David Parsons
Kathleen Wheeler
Sari Yakubovich

PGY2

Justine Denomme
Natalie Lidster
Scott McCusker
Jeffrey Overington
Tyler Oswald
William Sanh
Mike Troncone
Anthony Valente

PGY3

Abdelaziz Alkalbi
Bosco Law
Mohammed Nassef
Broden Rutherglen
Urooj Siddiqui
Andrew Syrett
Caitlin Vandecappelle
Sarah Jennison (FPA)
David Roukema (FPA)
Terms of Reference – Program Director

1. The Anesthesia Program Director is responsible for overseeing all aspects of the conduct and ongoing development of the Anesthesia Residency Training Program. The Program Director ensures that the standards set by the Royal College of Physicians and Surgeons of Canada are met by the Program. The Program Director reports to the Chair, Department of Anesthesia and to the Assistant Dean of Postgraduate Medical Education.

2. The Program Director must have qualifications that are acceptable to The Royal College of Physicians and Surgeons of Canada and must be certified by the Royal College in Anesthesiology.

3. The Program Director must be available one day per week in the Anesthesia Office for meetings and resident reviews and must dedicate a minimum of 1.5 days per week to responsibilities of the position.

4. The Program Director must make a sincere effort to attend the bi-annual ACUDA meetings (held in November and June each year), as well as the ICRE and other residency-specific educational events hosted by the RCPSC.

5. The Program Director will host or co-host the summer welcome BBQ for incoming PGY1 residents, faculty and other residents, as well as their family members.

6. The Program Director will Chair or assign another faculty to Chair the Multiple Choice Question (MCQ) Writing Committee and ensure the appropriate number of MCQs are submitted annually to the Royal College Written Exam Committee.

7. The term of office of the Program Director will be chosen by the Program Director Selection Committee from two options:
   a) Three years, with possible renewal for a further three years
   b) Five years, with a possible renewal for a further three years

8. As Chair/Member of the RTC, the Program Director is responsible for:
   a) Ensuring the adequacy of clinical, administrative and faculty resources, as required by the Royal College of Physicians and Surgeons of Canada.
   b) The design and structure of the Residency Program, including the goals and objectives for each rotation, based on the CanMEDS competencies as published in the Specialty Training Requirements of the Royal College of Physicians and Surgeons of Canada.
   c) The quality of the educational experience provided by the Residency Program, including both the clinical and academic aspects of the Program. This process will include regular evaluation of each teacher and rotation.
The appropriate and timely evaluation of each resident in the program, in multiple domains and by multiple observers, through a well organized in-training evaluation strategy.

c) The selection of residents for the Residency Program.

d) The assurance of a safe and collegial environment within which the residents may achieve their educational goals.

e) The establishment of mechanisms to provide career planning and counseling for residents and to deal with problems such as those related to psychological stress.

f) The maintenance of an appeal mechanism in accordance with policies determined by the Faculty Postgraduate Education Committee.

g) Conducting an annual review of the Program to assess the quality of the educational experience and to review the resources available in order to ensure that maximal benefit is being derived from the integration of the components of the Program. This review must include:

- An assessment of each component of the Program to ensure that the educational objectives are being met;

- An assessment of resource allocation to ensure that resources and facilities are being utilized with optimal effectiveness; and

- An assessment of teaching in the Program, including teaching in areas such as biomedical ethics, medico-legal considerations, and administrative and management issues.

- The opinions of the residents must be among the factors considered in this review. Appropriate faculty/resident interaction and communication must take place in an open and collegial atmosphere so that a free discussion of the strengths and weaknesses of the Program can occur without hindrance.

9. The RTC is responsible for ensuring that the Residency Training Program functions in a manner which is consistent with the corporate policies of the University Faculty, the McMaster University Department of Anesthesia, the affiliated hospitals, and the qualifying bodies, the Ontario College of Physicians and Surgeons and the Royal College of Physicians and Surgeons of Canada.

10. The RTC meets at least 4 times per year and is composed of, the Program Director (Chair), 4 elected resident representatives, the CTU Directors, an elected representative from each hospital corporation, the Undergraduate Program Director(s) (ex officio), a community representative, the Research Director, Chair of Department (ex officio), the Department Education Coordinator, the Program Ombudsman, and the Program Assistant. Minutes are kept and circulated before each meeting by e-mail.
Terms of Reference – CTU Director (and RTC executive)

1. The CTU Director reports to the Program Director of the Anesthesiology Residency Program (RTC).

2. The CTU Director is appointed by Anesthesia Residency Program Director (PD).

3. The CTU Director must be a fellow of the Royal College of Physicians and Surgeons of Canada and hold an active staff appointment at their hospital and an academic appointment with McMaster University.

4. The term of office of the CTU Director is a five-year term, with an option of renewal for a further three years.

5. The CTU Director must provide suitable resident orientation to the clinical site as well as collecting feedback and delivering a formal evaluation (ITER). Final evaluations should be timely and provided face-to-face with each resident, as required by the Royal College. A mid-unit (informal) evaluation is ideal, particularly when concerns have been identified.

6. The CTU Director is a member of the RTC and must attend RTC meetings. The RTC is responsible for ensuring that the Residency Training Program functions in a manner which is consistent with the policies of the McMaster University Department of Anesthesia, the affiliated hospitals, and the qualifying bodies (the College of Physicians and Surgeons of Ontario and the Royal College of Physicians and Surgeons of Canada). Please refer to the terms of reference of the RTC.

7. As a Member of the RTC, the CTU Director is responsible for:
   a) Discussion and involvement in all RTC matters.
   b) Individual site reports on all resident issues.
   c) Participating in the selection process of residents for the Residency Program, including transfer, Pool C and IMG candidates if required.
   d) Communicating RTC issues to their clinical department meetings.

8. The CTU directors, along with the program director, form the RTC executive committee. The executive is responsible for assisting the PD with the writing of the final in-training evaluations (FITERs) and with evaluating the residents’ promotion portfolios. The RTC executive serves in an advisory role to the PD; at the discretion of the PD, the RTC executive may be required to meet separately.

As of May 24, 2014.
McMaster University
Anesthesia Residency Program Ombudsperson
Terms of Reference

McMaster University is committed to the just, fair and equitable treatment of each and every member of the University community.

The role of an ombudsperson is founded on a number of general principles including independence, impartiality, confidentiality, informality, the ability to investigate and accessibility.

In the case of a dispute or disagreement a resident should be following the channels that the program has put in place prior to going to the program ombudsperson. Please see Chapter 17 of the Resident Manual – Dispute Resolution. Options for counsel, support and advice include:
- Mentor
- CTU directors
- Program Director

If these channels are not satisfactory, then please make an appointment with the Ombudsperson.

The Ombudsperson reports directly to the Program Director and if not applicable, the Chair of the Department of Anesthesia.

The Ombudsperson shall meet with persons or groups on a confidential basis and shall not intervene without their express written, or e-mail, consent.

Notwithstanding the foregoing, the Ombudsperson is not required to maintain confidentiality in cases involving the commission of a serious crime or where there is an imminent risk of physical harm or abuse.

The Ombudsperson is not be a member of the Residency Training Committee (RTC) and therefore is able to be an arms-length intermediary or mediator between the resident and any party involved in the dispute, including members of the RTC.

Karen Raymer
November 4, 2014
McMaster University Department of Anesthesia
Anesthesia Residency Training Committee

Terms of Reference of the Residency Training Committee

1. The Anesthesia Residency Training Committee (RTC) shall assist the Program Director in all aspects of the management and ongoing development of the Anesthesia Residency Training Program. The Program Director ensures that the standards set by the Royal College of Physicians and Surgeons of Canada are met by the Program. The Program Director reports to the Chair, Department of Anesthesia and to the Assistant Dean of Postgraduate Medical Education.

2. The RTC meets at least 6 times per year and is composed of:
   - Program Director (Chair)
   - Each CTU Director (4 in total)
   - 5 resident representatives, one elected by the residents from each postgraduate year
   - 2 members at large, representing each of the two hospital corporations. Each member at large shall serve a three-year term. Near the end of the term, the hospital corporate department chief will submit at least two and preferably three suggested representatives from which the RTC will select the new member at large.
   - Curriculum planning committee chair
   - Research Director
   - Department Education Coordinator
   - Undergraduate Program Director(s) (ex officio)
   - Chair of Department (ex officio)
   - Program Coordinator

3. The RTC is responsible for:
   a) Ensuring the adequacy of clinical, administrative and faculty resources, as required by the Royal College of Physicians and Surgeons of Canada.
   b) The design and structure of the Residency Program, including the goals and objectives for each rotation, based on:
      - the CanMEDS competencies
      - the Specialty Training Requirements of the Royal College of Physicians and Surgeons of Canada
      - the policies of McMaster University Department of Anesthesia, the affiliated hospitals, and the qualifying bodies, the Ontario College of Physicians and Surgeons and the Royal College of Physicians and Surgeons of Canada.
c) The quality of the educational experience provided by the Residency Program, including both the clinical and academic aspects of the Program. This will include regular evaluation of clinical teachers; clinical rotations; academic teachers; academic experiences.

d) The assurance of a safe and collegial environment within which the residents may achieve their educational goals. This includes supporting the social elements of the residency program; overseeing appropriate call and workload for residents; ensuring the provision of adequate call room and library facilities.

e) The determination of the requirements that the program has for each resident at each level. These expectations are set forth in the level-specific promotions portfolios. The RTC must ensure that each resident is advancing and gaining in both medical expert competencies (in experience, ability and responsibility) as well as the non-technical competencies as they progress through the program. Such progress is documented in the promotions portfolios and ITERs and will be formally reviewed by members of the RTC on an annual basis.

f) The appropriate and timely evaluation of each resident in the program, in multiple domains and by multiple observers, through a well-organized in-training evaluation strategy.

g) The oversight of the development of remediation plans, when necessary, in a manner that considers the need for confidentiality.

h) The maintenance of an appeal mechanism in accordance with policies determined by the Faculty Postgraduate Education Committee.

i) The establishment of mechanisms to foster career planning,

j) Facilitating counseling for residents who are dealing with problems such as psychological stress.

k) Ensuring an appropriate process for the selection of residents for the Residency Program, including the determination of the appropriate number of residents in the program.

l) Conducting an annual review of the Program to assess the quality of the educational experience and to review the resources available in order to ensure that maximal benefit is being derived from the integration of the components of the Program. This review must include:

- an assessment of each component of the Program to ensure that the educational objectives are being met;

- an assessment of resource allocation to ensure that resources and facilities are being utilized with optimal effectiveness; and

- an assessment of teaching in the Program, including teaching in areas such as biomedical ethics, medicolegal considerations, and administrative and management issues.

The opinions of the residents must be among the factors considered in this review. Appropriate faculty/resident interaction and communication must take place in an open and
collegial atmosphere so that a free discussion of the strengths and weaknesses of the Program can occur without hindrance.

m) Minutes are kept and circulated to all members of the RTC and after approval, to all faculty and residents.

May 23, 2014.
Residency Advisory Committee

The Residency Advisory Committee (RAC) is a body of resident representatives that works in tandem with the Residency Training Committee (RTC). The function of the RAC is to ensure resident input in the planning, organization and execution of the program.

Composition of Committee

1. A representative from each residency year PGY 1 - 5
2. Representatives will be elected to coincide with the selection of the RTC resident members
3. The RAC Chairman is the Chief Resident

The RAC must meet regularly, at least quarterly, and keep minutes. The RTC and resident body will receive a copy of the minutes.

Responsibility of the RAC

The RAC is responsible for:

1. Individual members are responsible for collecting feedback from their academic year and presenting it to the RAC in a timely fashion
2. The member representatives are responsible for feeding back RTC decisions and policies to the resident body, ensuring two-way communication between the resident body and the RTC
3. The RAC will represent and advocate for the resident body on the RTC
4. The RAC provides feedback to the RPC with emphasis on:
   a. Performance of teaching sites and staff
   b. Resident morale
   c. The influence of nursing, paramedical and administrative hospital staff on resident education and service
   d. Any discord between CanMeds program objectives and program reality
5. The RAC will conduct an annual review of the program to assess the quality of the educational experience in order to ensure maximal benefit
Duties of the Chief Anesthesia Resident

The Chief Anesthesia Resident is elected from the resident group, with approval from the RTC, for a one year term. The resident selected will be in the final six months of their PGY-4 year of training and will assume the responsibilities of the position January 1st of each year. There will be a transitioning period. Elections will be held in October by the Program Coordinator. If more than one candidate comes forward, they will be asked to provide a letter of intention. The election of the chief resident must be approved by the RTC.

The Chief Anesthesia Resident is a member of the Residency Training Committee in Anesthesia and acts as a liaison between the residents and the faculty. The role of the Chief Resident is to act in the capacity of a spokesperson for the residents and to communicate concerns of the resident group to the RTC for consideration. The Chief Anesthesia Resident also communicates with the residents and conveys decisions of RTC regarding the administration of the residency program to the residents.

The Chief Anesthesia Resident will meet with the Program Director on an “as needed” basis to deal with aspects of the residency program.

The Chief Anesthesia Resident will chair a monthly meeting with the residents to discuss issues relating to the training program and provision of resident clinical services. Items from these meetings may be referred to the Program Director, the RTC or the Academic Chair as required.

The Chief Anesthesia Resident will be involved in problems relating to an individual resident’s performance. The Residency Program Director and Chief Anesthesia Resident will jointly mediate issues between residents and individual faculty members.

The Chief resident will be responsible for co-ordinating the Wednesday afternoon academic sessions. Under the guidance of the Program Director and the Chief Anesthesia Resident, the PGY-4 group will organize the academic half-day program by soliciting input regarding topics, arranging for speakers and conducting evaluations. Under the guidance of the Program Director the Chief Resident will help the PGY-4 group organize the PGY-3 summer academic teaching sessions for July and August.

The Chief Anesthesia Resident will aid the Program Assistant in the collection of information pertaining to resident assignments and facilitate the process of program and faculty evaluations completed by the residents in a timely fashion.

The Chief Anesthesia Resident will monitor resident assignment and duty rosters and monthly on-call schedules to ensure that treatment of residents at all levels of training in the training program is fair and equitable.

The Chief Resident will aid the Program Assistant in monitoring vacation leave and conference leave taken by the resident group.

The Chief Anesthesia Resident will receive a monetary stipend for the performance of the duties as specified by the PAIRO collective agreement.

Revised May, 2011
Revised October 15th, 2014
How to be an Administrative Resident: A Primer for McMaster Anesthesia Residents

(i) Roles of the Admin Resident:

- Assign daily OR lists and weekly clinic coverage
- Ensure daily code pager coverage (at all sites except the JHCC).
- Approve and deny vacation, off-call, PL, and lieu day requests
- Generate call schedules
- Track trouble and hospital rounds attendance
- Record sick days
- Orient new learners

How do you do all this? While it sounds simple, there are many resident commitments that complicate scheduling, including vacation, academic days, simulation, clerkship teaching, etc. That's why we've developed the Google Calendar, a 'one stop shop,' where you can figure out where every resident will be on a given day.

(ii) Google Calendar Overview:

- The idea of the calendar is to provide a tool that is an overview of where all residents are at all times. This allows for 'smarter,' more equitable call schedules and an ongoing way to track all clinical activities.
- It can be accessed by going to www.medportal.ca and logging in. In the top left hand corner there is 5 icons that look like this:

Click the following: Google Drive icon (second from the right) > 2015-2016 (or 2016-2017) Anesthesia tab; this will open up the Google Drive Call Calendar.

- As admin residents, we will have the ability to change the calendar (others will have only viewing privileges), with Candice and Tammy acting as the overarching administrators.
- The calendar is broken down according to site, with rows for each of the following possible resident assignments:
  - Day Call
  - Night call
  - Post-call
  - In OR
  - Clinic
  - Academic Full/Half Day
  - Simulation
  - Clerkship Teaching
  - Vacation
  - Other (P/L, Lieu day)

- It will also contain rows for sick days and CCCA shifts. You need to enter sick days as they occur. Candice will enter CCCA shifts.
Vacation and off call requests are included on the calendar itself. Until they are approved, they will be highlighted in red (meaning not yet approved) and listed in the order they are received.

On the right hand side of the calendar is the list of residents at that site, as well as whether or not they are completing a subspecialty rotation.

(iii) Daily assignments:

- Priorities
  - #1 - subspecialty residents
    - Subspecialty residents generally get priority over the most interesting cases that fall under that subspecialty
    - When subspecialty residents are away (vacation, post call), try to place more senior residents in these complex cases. Try to assign PGY2s to rooms with nerve blocks when the Regional resident is away.
  - #2 - optimizing level-specific clinical exposure for anesthesia residents
    - More junior residents should generally be assigned to straightforward rooms where they can be given greater responsibility. That being said, it is important to intersperse days in more challenging rooms (e.g. cardiac, neuro, hepatobiliary) so that junior residents can be exposed to more complex cases (which they will encounter on call), though this should only occur 1-2 times per week at the most.
    - More senior residents are generally assigned rooms with more complex cases
    - Every effort should be made to assign residents to the most rare and challenging cases in an equitable fashion
  - #3 – elective residents (see below)

- Timing/List access
  - Admins are expected to have assignments submitted to the OR desk and emailed to all learners (+ CTU director) by 1400h the day before
    - This time is a guideline but understandably not always realistic
  - It is reasonable to ask other (usually more senior) residents to do the assignments while you are post call or away – email them a template of all learners including who is on call and which staff (HHS vs. SJH) have elective students
  - For HHS sites, email Robin Williamson, in charge of staff assignments, office adjacent to HGH anesthesia lounge (Williar@hhsc.ca) to have yourself added to her daily email at ~1100h with HHS staff anesthesia assignments
  - MUMC/JHCC – after ~1200h, personnel at the OR desk can print a copy of the next day’s OR list. Return your assignments to them
  - HGH – usually the next day’s OR list is posted in the hallway between the OR desk and anesthesia lounge. Assignments are written on a schedule taped to the main OR desk
  - SJH – Michelle Barbara (site administrator in anesthesia office, mbarbera@stjosham.on.ca) can provide you with a copy of tomorrow’s OR list with staff anesthesia assignment by mid morning. After assigning learners, copy Michelle on your email to all learners and she will add learners to the main list for the following day.

- Room requests
  - Bottom line is that this should not be a daily occurrence
  - It places unacceptable stress on the admin resident and undermines their managerial role
  - When everyone is professional and collegial, all residents should have a balanced case exposure over the block(s)
  - Acceptable reasons to request particular rooms include seeing an interesting patient in clinic or fulfilling particular learning goals
  - These requests must be made in a timely fashion that does not interfere with assignments the day before
  - The best approach is to encourage residents to intermittently make general requests to
do certain types of cases when the opportunities arise (eg: trying to do a little more Urology or ENT over the course of the block)

- Requests for an "early room" for personal reasons MUST be communicated in email in advance to the admin resident and CTU director. These requests are acceptable provided good reason is given (research meeting, appointments, etc.) but should be rare.
- Residents must accept that admins cannot fulfill every request
- Admins who are having difficulty dealing with residents making excessive requests should discuss this with the CTU director and/or chief resident

**Special guidelines for PGY5s**
- We understand that PGY5s are in a more unique circumstance of having a finite opportunity to fulfill educational needs
- Again the best approach is for the PGY5 and admin resident to maintain an open dialogue about the types of cases and/or staff the resident wishes to experience over the course of the block
- Maintaining a professional approach helps us fulfill CANMEDS roles including Collaborator, Manager, and Communicator
- Again daily room requests are unacceptable
- "Early room" requests follow the same guidelines above for all other residents
- Overall the quality of the cases, not the length of the day, should drive resident requests
- Admin residents and PGY5s at the same site are expected to work together to fulfill everyone’s educational goals in an equitable fashion

**Preop Clinic**
- Only PGY 2, 4, and 5 residents should be assigned to clinic
- PGY1s as a rule should never be in clinic
- Clinic Days
  - SJH:
    - Tuesday - no ECT due to trouble rounds
    - Friday – ECT first (West 5th campus +/- Charlton site PACU; get West 5th parking pass from Michelle day before and return it to her on arrival back to SJH before clinic)
  - MUMC: Monday (after APS rounds)
  - HGH: Tuesday (after APS rounds)
  - JHCC: Friday
- As much as possible, there should be a resident scheduled in clinic. However, exceptions may occur if necessary to provide pager coverage and meet subspecialty rotation requirements.

**Elective residents**
- Eg: Emerg, ICU, Peds, PCCU
- Add them to the email thread from the start
- Provide them with a brief orientation to anesthesia on their first day
- Ensure they have a good number of "Elective resident evaluations" to be completed daily by their staff
- Try to assign them to rooms that are relevant to their goals (airways for Emerg/ICU and peds rooms/sedations/MRI for peds learners)
  - However your first priority is to assign anesthesia residents to the most interesting cases so off service residents must understand that their assignments will not always be the exact patient population they hope to see (eg: peds residents may do Gyne lists at MUMC)
  - As much as possible, avoid assigning off service residents the most complex
• Core Clerks
  o Undergrad coordinators will email you their information before their two week block starts
  o Add them to the email thread from the start
  o Give them a brief orientation on their first day in the OR (usually Wed after teaching Mon, Tues)
  o It is their responsibility to schedule evening call shifts
  o When possible assign them to more straightforward rooms

• Elective Clerks
  o Undergrad coordinators reliably email admin residents with details of elective students (which staff, timing) > immediately make a recurring reminder across two weeks in your calendar
  o Remind staff that it is their responsibility to find a staff to replace them for their days off, which must be communicated to affected admin residents

• Surplus of learners/Doubling
  o Sometimes there are too many learners and/or too few ORs to avoid doubling learners
  o Try to avoid having a PGY4 on a subspecialty rotation be the senior “buddy”
  o Acceptable combinations are PGY2s and PGY5s as senior “buddies” with core/elective clerks or rarely an elective resident
  o While this provides a great teaching opportunity for residents, they should act as senior buddy no more than 1-2 times per block
  o Alternatively it is acceptable to send more experienced residents to another site (easiest is between HHS sites) provided they have worked there before. Try to avoid sending a junior residents to other sites, especially HGH.
  o A last alternative is to assign a resident to clinic if there isn’t already a resident in clinic (Wed/Thurs for HHS, Mon/Wed/Thurs for SJH)

• Hospital Holidays
  o Eg: Easter Monday and Remembrance Day
  o Not stat holidays but overall reduced clinical activity
  o All residents not post call or on approved leave (vaca, PL) are expected to work a regular day
  o Residents on night call get a pre-call day off before reporting at 1700h
  o If there is a surplus of learners and buddying is unreasonable…
    ▪ Exhaust all possibilities (buddy residents together, EP, MRI, sedations, allocate residents to another site)
    ▪ Reasonable buddy options are usually a PGY5 with an anesthesia PGY1/2, clerk, or elective resident
    ▪ If these options don’t work, identify residents on the highest end of the call tally to allocate days off and record this in the google calendar

(iv) Ensuring Pager Coverage:

• It is extremely important that there be a minimum of 1-2 residents available each day to provide pager coverage; this should influence approval of vacation requests and call scheduling.
• Please see below for further detail.
• Occasionally there will not be an a resident available to carry the code pager from 0800-1700h due to full academic days, retreats, MAD days, etc.
Try to avoid this situation as much as possible, especially at HGH for trauma coverage (should be extremely rare)

These dates should be communicated to the CTU directors well ahead of time

It is the responsibility of the post call resident to inform all involved parties: on call anesthesia staff (eg: both peds and OB), paging, OB nursing station

At SJH leave the pager at the paging desk in the main lobby

At MUMC and HGH, leave the pager at the main OR desk unless instructed otherwise by your staff

**v) Vacation, Off-Call, PL Day, Lieu day requests:**

- **Approval process**
  - All factors that may take a resident out of the OR (simulation, clerkship teaching etc) should be taken into account when approving requests. Unpredictable factors may arise between the date of the request and the date requested. Try to avoid approving requests that result in the bare minimum of residents being available for coverage.
  - It is normal to deny a vacation request and ask the resident to consider another time off.
  - Requests will be highlighted in red on the Google Calendar and listed in the order they are received. If you approve a request, change the highlighted colour to green.
  - In accordance with PARO, you must contact residents within 2 weeks of them submitting their vacation request to acknowledge their request and either approve, deny, or explain why you are waiting to approve their request.
  - PGY 5’s are entitled to have March break off during the day ***BUT***, they are still required to do call unless requested specifically as vacation/PL. Dates TBD annually.

- **Limitations on requests**
  - To provide call coverage for a week-end (at all sites except the JHCC) you need 3 people (see Lone Wolf Model below).
  - **Residents cannot request more than one weekend off call per block** (except for unique circumstances)
    - Residents requesting two weekends off are dictating which two weekends they will work
  - **Residents can only request up to a max of four stat holidays off-call per academic year** (although they will usually end up with more than that off). Please look at the final tab at the bottom of the Google Calendar entitled ‘Resident Totals.’ Here you can find out how many stat days a given resident has worked so as to ensure they are distributed equally.
  - Residents can request vacation days up to 4 weeks before proposed dates
  - Residents can request PL or lieu days up to 1 week before proposed dates
    - Exceptions for unique circumstances are understandable
  - Whenever possible try to avoid only allowing yourself the bare minimum number of residents available to cover the call schedule in case emergency coverage is needed

- **Minimum rotation requirements**
  - Keep in mind that in order to successfully complete a rotation, residents must be evaluated on 10 elective clinical days (OR/clinic) for a single block rotation or 20 elective days for a two-block rotation. That means that they can’t be post-call, at simulation/teaching or on holiday for this minimum number of days.

**(vi) Track Trouble and Hospital Rounds Attendance:**

- **Weekly trouble rounds by site**
  - **MUMC**: Tuesdays at 7:15am in the Anesthesia library
  - **St. Joe’s**: Tuesdays 7:15am in Anesthesia conference room. Access code is 2430#
  - **HGH**: Tuesdays at 7:15am in the Anesthesia lounge
  - **JHCC**: Tuesdays at 7:15am in the OR Doctor’s lounge
• Please keep track of attendance at these, as well as hospital rounds, and submit a record to Candice (and NOT the CTU director) at the end of each block.

(vii) Guidelines for making call schedules

• General principles
  o This is by far the most involved of all of our duties. The creation of a fair and balanced schedule that takes into account all factors is an art.
  o Take your time to make a thoughtful and balanced schedule. It will save you and all the residents headaches if you fix potential problems before they start.
  o See the Step-by-step guide below for further detail. See Appendix 4 – Winter holiday scheduling for details on how to deal with the Holiday block.
  o Shifts will not be allocated based on PGY level (ie: junior residents will not be given less favourable schedules)
  o Both weekend and weekday shifts should be divided evenly among all residents at that site
    ▪ Note restrictions below for fly in residents
    ▪ Allocate extra shifts to residents on the high end of the Call Tally (see below)
    ▪ Generally speaking there should not be a difference greater than 1 call between residents on service based at that site (ie: no one should be doing 7 calls if another resident only doing 5 or less).
  o JHCC weekend calls
    ▪ Generally each resident will take one weekend with Sat 0800-2000h and Sun 0800-2000 “home” call shifts
      ▪ Communicate daily with on call staff about duties including cases, consults, APS rounds, and whether it is reasonable for you to go home between cases
      ▪ If you go home you must provide your on call staff and OR desk with a number to reach you at
    ▪ If there are more than four residents at JHCC, one weekend can be split among residents lowest on the Call Tally
  o As much as possible, avoid having residents post call for their academic (half/full) day – especially PGY5s during exam prep
    ▪ PGY1 – Thurs pm (full day when on service)
    ▪ PGY2 – Thurs full day
    ▪ PGY3 – Wed pm
    ▪ PGY4 – Wed full day
    ▪ PGY5 – Thurs full day
    ▪ Off track residents – refer to google calendar or ask them what academic day they take
  o Enter your call schedule draft directly into the calendar in red lettering (NOTE: the letters themselves, not highlighted as with vacation requests). This allows it to be reviewed by all residents and admins for fairness and continuity.
  o When the schedule is finalized (usually about 1 week later), change the lettering to black. During this 1 week period, there is opportunity for residents, Candice, and Dr. Raymer to review the schedules. Please email all parties to inform them when your draft has been posted. Please send additional email notifications each time a change is made to the draft prior to it being finalized.

• PGY5 considerations
  o During the two blocks before the written Royal College Exam (usually blocks 9 and 10), PGY5s will have reduced call with NO expectation that these calls be made up for after the exam
    ▪ Normally this means 2 weekend and 1 weekday (night) shifts
    ▪ Only if resident numbers are small and they are maxed out on call, PGY5s may be asked to pick up a small number of additional shifts
PGY 5’s are entitled to have March break off during the day ***BUT***, they are still required to do call unless requested specifically as vacation/PL. Dates TBD annually

**Timelines**
- The JHCC admin resident should assign weekend call coverage approximately 6 weeks before the rotation start date – this must be communicated to other admin residents for that block
- Approximately 5 weeks before the rotation start date, admin residents at HGH/SJH/MUMC should post a draft of their call schedules – inform all other admin residents so everyone is on the same page
  - This gives residents adequate time to address concerns and possible changes to be made
- Our program policy is that call schedules must be finalized 4 weeks prior to the rotation start date
- This allows for simulation scheduling and ensures FINAL schedules are released 2 weeks prior to the start of a rotation, in accordance with PARO guidelines.

**Fly-in Coverage**
- **PGY3 residents**
  - Those completing rotations without call requirements (nephro, resp, heme, palliative) will be assigned fly-in anesthesia calls at various sites.
  - Maximum 3 weekend (0800-1700 or 1700-0800) shifts
    - When possible make weekend shifts Fri pm + Sun pm, and Sat pm another weekend
  - Maximum 1 overnight weekday shift (1700-0800) to minimize loss of time from their base rotation.
    - Avoid Tues night call when possible (academic day Wed)
  - Those completing research rotations will be available for full call equivalent to that of service anesthesia residents
  - Those completing rotations that require call (ICU, CCU) do not do anesthesia call during these blocks
- **JHCC residents**
  - When coverage is necessary, JHCC residents will be assigned to fly-in to other sites.
  - Typical arrangement:
    - 2 weekend days at the JHCC (typically Saturday/Sunday of the same weekend).
    - Maximum of 1 fly-in weekend shift at the fly-in site (usually Sat pm but flexible).
    - Week-night fly-in call Monday to Thursday.
  - The total # of call shifts (ie JHCC + fly-in site) is NOT to exceed the lowest number of call shifts assigned to residents based at the fly-in site. For example, if residents at HGH are doing 5-6 shifts each, the JHCC fly-in can do a maximum of 3 fly-in shifts (in addition to their 2 shifts at the JHCC).

**Appendix 1 – Step-by-Step Creation of a Call Schedule**

1. ~6 weeks before start of rotation, JHCC admin resident assigns JHCC weekend coverage – communicate clearly with three other admins
2. ~5 weeks before the rotation start date, other three admins should proceed as follows…
3. Schedule JHCC residents for one weekend shift (usually Sat pm)
4. Schedule PGY3 fly-in residents for weekend shifts, according to fly-in call guidelines.
5. Schedule remaining residents for weekend shifts based on when they are available.
6. Equally distribute weekday shifts, especially Thursdays
7. Equally distribute Wednesdays, aiming to minimize post-call academic days for PGY1/2/5s.

****HGH requires seamless coverage; a PGY4 MUST be available during the day on Thursday (i.e. cannot be post-call) to carry the pager.****
8. Equally distribute Tuesdays, aiming to minimize post-call academic days for PGY3/4s. 
***HGH requires seamless coverage; a PGY 2/5 MUST be available during the day on 
Wednesday (i.e. cannot be post-call) to carry the pager.

9. Equally distribute clinic days – surplus clinic days can be allocated based on number of clinic days 
completed in previous rotations or simply overall fit into that block’s schedule

10. Verify the fairness of the call schedule (Refer to Appendix 4):
   - Tally the number of calls – total, weekday, weekend
   - Tally the number of clinical days (OR and clinic)
   - Avoid consecutive weekends of call when possible, including checking the previous 
     block schedule for each resident
   - If you have a JHCC fly-in, check the JHCC call schedule to try to avoid two 
     consecutive weekends
   - Honour PGY5 call limitations before Royal College exam
   - Residents who take vacation during the rotation should have 1 less call if possible

11. Post the draft (in red lettering) on the Google Calendar. Send an email to the site resident group 
asking for feedback (cc pdanes@mcmaster.ca AND stroudc@mcmaster.ca).

12. Apply feedback to the schedule when possible.

13. Once the schedule is finalized approximately 4 weeks before the rotation start date (~one week 
after the draft is issued), change the lettering on the Google Calendar to black.

14. Further changes to the call schedule must be arranged by individual residents (not the admin 
resident) and must be approved by the admin resident and CTU director. Exceptions include 
emergency call coverage (see appendix)

**Appendix 2 – ‘Lone Wolf Model’**

<table>
<thead>
<tr>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
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<tbody>
<tr>
<td>Night</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>C (“lw”)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
</tbody>
</table>

- This is how essentially all weekend calls at SJH/MUMC/HGH should be organized
- Holiday Mondays usually involve having resident C do the Monday day call and a fourth resident “D” 
doing the Monday night call
- Try to avoid having resident A or B do a third call over a long weekend

**Appendix 3 - Duty Hours and Handover:**

- The incoming resident is responsible for contacting the resident currently on call at least 15 minutes 
prior to shift change to facilitate timely handover
- SJH weekday call is from 0800-1700h (carrying pager/APS day) or 0800-0800h if on for 24h
- SJH weekend/holiday calls are from 0800-1700h or 1700-0800h
- MUMC/HGH weekday call is from 0800-1700h (carrying pager) or 0800-0800h if on for 24h
- MUMC/HGH weekend/holiday calls are from 0800-1700h or 1700-0800h
- JHCC Sat and Sun call is 0800-2000h; there is no anesthesia resident holiday coverage that does not 
fall on a weekend.
- If you have concerns or questions about the PARO contract you can find details at [www.myparo.ca](http://www.myparo.ca)

**Appendix 4 – Resident Call Tally**

- This is a call tracking system that regularly updates the total numbers, distribution, and average 
number of calls per block for on service PGY 2, 4, and 5 residents who are completing at least 4 
blocks of anesthesia that academic year of July 1 – June 30.
- By ensuring transparency, we aim to help admin residents create equitable call schedules that even 
out as much as possible over the course of each academic year.
- This system is not meant to be punitive
- Each month, all residents will receive an updated version of our call tally
Admin residents should use the most updated version to inform allocation of extra calls at their site during the creation of the next call schedule

- **Allocate extra calls to residents based primarily on who is lowest in the mean total call per block column of the Tally**

- The denominator is used to calculate residents’ mean number of calls per block, acknowledging that residents may have spent a variable number of blocks on service that year (ie: out of sync residents).
- Despite our best efforts, there will invariably be discrepancies among residents that cannot be completely corrected by the end of the academic year.
- Each July the call tally resets for the next academic year.
- For PGY5s, the two blocks preceding the Royal College written exam with reduced call will each be treated as half a block for the purpose of the denominator.
  - Again PGY5s will NOT have to make up calls during blocks 11-13.

**Appendix 5 – City-wide winter holiday scheduling**

- The CHIEF RESIDENT (not site admins) makes a city-wide holiday schedule for all days at all sites.
- OR schedules obtained from site administrators (HHS – Robin Williamson [Williar@hhsc.ca](mailto:Williar@hhsc.ca), SJH – Michelle Barbara [mbarbera@stjosham.on.ca](mailto:mbarbera@stjosham.on.ca))
- Admin residents are still responsible for.
- It is crucial that admin residents clearly communicate with each other (especially JHCC with other sites), the chief resident, and program administrator so everyone is on the same page with resident time off requests and call schedules. Seemingly small errors can have create huge problems for all resident assignments. If there is anything you are unsure about, get clarification ASAP.
- Day to day issues should be brought to the admin resident or if necessary, the chief resident and CTU directors.
- Residents will be moved between sites when appropriate and necessary to ensure equal workload.
- Every effort will be made to equally distribute assignments including call rooms, non-OR lists (MRI, sedations, EP, Neuro DI, clinic), and rare days off assigned based on call tallies.
- Residents are guaranteed at least 5 consecutive days off during the winter holiday block.
- Following the release of the schedule for that academic year, after a date outlined by the program administrator and program director, residents can request time off over either Christmas or New Years weeks on a FIRST COME FIRST SERVED basis.
- Admin residents for block 7 must approve such requests to allow for an even number of residents working during each holiday week (Christmas or New Years).
- The exact details of scheduling will vary from year to year as dates change.
- Usually each week is seven days inclusive.
- **Residents should expect to work every day during their non-vacation week with the following exceptions:**
  - Post call
  - Stat holidays (Dec 25 and Jan 1) are treated like hospital holidays where night call resident gets pre-call day off.

**Appendix 6 – Emergency Call Coverage Policy**

- The following guidelines were developed to streamline the maintenance of resident on-call coverage in the event of illness or necessary absence of the resident who is on call. These guidelines have been approved by the Residency Training Committee, Department of Anesthesiology, McMaster University.

**PREAMBLE**
• It is the opinion of the Residency Training Committee that residents who are suddenly too ill to work (as determined by themselves and fellow physicians) or must deal with a personal emergency (family illness, etc.) should be relieved of their clinical duties. While the decision more of a hazard than a benefit to the hospital environment. Every effort will be made to respect the confidential nature of a resident’s absence.

• It is the responsibility of the resident to notify the CTU Director, the Administrative Resident, the Chief Resident and the Program Assistant if they will be absent from call or other clinical duties at any time and for any reason.

Guidelines
• If a resident cannot complete their call duties at the JHCC because of illness/absence, this shift may remain uncovered, unless the JHCC administrative resident can facilitate a switch within the group of residents specifically assigned to the JHCC for that rotation.

• If a resident cannot complete their call duties at any of MUMC, HGH, or SJH because of illness/absence, the following protocol to seek resident call coverage will be followed. In the following order, attempts will be made to find residents to cover call shifts which previously-assigned residents are no longer able to work:

Step 1:
• The resident, if able, will survey the residents based at that site, in search of a volunteer for the call shift requiring coverage
• If the resident is unable to complete this task (too ill, for example), the responsibility falls to the admin resident
• If the admin resident is unable to complete this task (ill, absent), the responsibility falls to the chief resident.
• If Step 1 does not result in resolution, then proceed to Step 2.

Step 2:
• The resident will survey all residents in the program, in search of a volunteer for the call shift requiring coverage
• If the resident is unable to complete this task (too ill, for example), the responsibility falls to the admin resident
• If the admin resident is unable to complete this task (ill, absent), the responsibility falls to the chief resident.
• If Step 2 does not result in resolution, then proceed to Step 3

Step 3:
• If no volunteers can be recruited, the Chief resident will be informed. The Chief Resident will liaise with the program assistant to compile a list of all residents potentially available for call coverage
  o Ineligible residents:
    ▪ residents w/ pre-existing approved vacation/PL/off-call requests
    ▪ pre-call and post-call residents
    ▪ PGY2 residents who have not done call at HGH, if HGH is the site in question
    ▪ PGY3s ICU or CCU
  o Eligible residents
    ▪ Eligible PGY2s
      ▪ SJH: all PGY2s are eligible
      ▪ MUMC: all PGY2s are eligible
- HGH: only PGY2s that have done solo call at HGH are eligible
  - Eligible PGY3s (Subspeciality Medicine rotations, PICU, NICU, research)
  - PGY4s and PGY5s

Step 4:
- The names of all eligible residents will be placed in a hat. A draw will be conducted by the Chief Resident in the presence of the program assistant, program director or one of the CTU directors (to serve as a witness). The resident whose name is drawn will be responsible for the call in question.

- For weekends only, in the event that no eligible residents exist, detailed by the ineligibility criteria described above, the admin resident and chief resident will re-assign the resident covering JHCC weekend call to the HGH, MUMC or SJH call that needs to be covered.

- In the event that no eligible residents can be found during the week, or on the weekend even after seeking JH resident availability, the Program Director will inform the Department Chief that no resident coverage will be provided for the call in question. This is supported in whole by the Program Director and Residency Training Committee.

- If a resident picks up an extra on-call night or weekend call (voluntarily or as part of the randomized draw process), the two residents involved should arrange a mutually agreeable “pay back” of equivalent call, either in that block or a later block. The payback could involve the use of “fly in” as long as the resident covering call is eligible to do call at that site. Some planning may be required to coordinate a pay-back and it may involve the coordination of admin residents.

- If no payback can be arranged by the two residents, the residents should approach the program coordinator. The coordinator and program director will assess and if no switch can be accommodated, a lieu day will be granted to the resident who covered the sick call. Examples would include the instance where a resident is sick in their final weeks of residency or just prior to a leave, where the ability to arrange a pay back is temporally constrained.

- These guidelines apply only to the case of documented sick leave/unanticipated leave of absence that occurs AFTER the release of the final call schedule TWO weeks prior to the commencement of the block in question.
Introduction

Hello there! Welcome to glorious world of McMaster Anesthesia. We are stoked that you are now part of our excellent program. In this handbook you will hopefully find some of the finer points of residency to help smooth your transition from being a medical student to your new and exciting life as a resident!

Cheers!
Jessie Ursenbach
Josh Peachey
Caitlin Vandecappelle
Will Sanh
Natalie Lidster
Scott McCusker
Jeff Overington
Andrew Syrett

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1. PGY1 Off Service Rotations
2. Hospital Orientation
3. Important Phone Numbers
4. Internet Access information
3. Benefits
4. Vacation
5. Call
6. Mandatory Things
7. Help!
## PGY 1 Off Service Rotations

### July-August

<table>
<thead>
<tr>
<th>Anesthesia (MUMC) (General) (Juravinski) (SJH)</th>
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<tbody>
<tr>
<td><strong>-NO CALL for two months. Best 2 months ever.</strong></td>
</tr>
<tr>
<td><strong>-Responsibilities include doing the pre-op review of your patients and preparing the room for the case.</strong></td>
</tr>
<tr>
<td><strong>-You can find out assigned OR room and cases by checking the next day schedule at the end of the day. (e-mails are sent out as well).</strong></td>
</tr>
<tr>
<td><strong>-First case starts by 8:00 and usually finish by 17:00.</strong></td>
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<tr>
<td><strong>Give yourself time to set up the room and see the patient (Anywhere from 7:00-7:15am seems popular).</strong></td>
</tr>
<tr>
<td><strong>Exceptions:</strong></td>
</tr>
<tr>
<td><strong>-Tuesday = Trouble rounds at 7:15am at various locations depending on site – get your room ready before this.</strong></td>
</tr>
<tr>
<td><strong>-Wednesday = teaching rounds at 7:15am (check your email for locations). ORs start at 9am.</strong></td>
</tr>
<tr>
<td><strong>-Each site has a senior resident admin that you can ask any questions. Classically this is the person who emails you your list.</strong></td>
</tr>
<tr>
<td><strong>-Relax and enjoy! Staff expectations are low and opportunity for learning is high.</strong></td>
</tr>
<tr>
<td><strong>-Perfect time to get to know your fellow PGY1s (and other residents) and socialize.</strong></td>
</tr>
<tr>
<td><strong>-Fill out your online resident logbook! Don’t forget to do this on your off-service rotations too!</strong></td>
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### September – April

<table>
<thead>
<tr>
<th>E.N.T (SJH)</th>
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<tbody>
<tr>
<td><strong>-Great opportunity to learn airway anatomy and use video nasopharyngolaryngoscope</strong></td>
</tr>
<tr>
<td><strong>-Days start at 7:00 am with team rounds on 4 H&amp;N and 4 Chest.</strong></td>
</tr>
<tr>
<td><strong>-Assigned to the OR on occasion, but mostly assigned to head &amp; neck clinic. Request clinics with Dr. Jackson as he does many nasopharyngolaryngoscopes! Staff</strong></td>
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and team are typically very flexible when in clinic, so be sure to ask to leave clinic to attend ALL airway cases in the OR.  
- Often assigned to day call while in clinic – responsible for covering ward issues and consults in ER.  
- Overnight home-call on weekdays and weekends. Call is hit and miss in terms of volume – usually not too many overnight consults. Always backed up by a senior resident.  
- Be assertive – some aspects of the service are not relevant (i.e. otology), so advocate for what you want to get out of the rotation – the service is very accommodating.  
- Prepare to encounter the beast that is the 72 hour Super Weekend (Friday/Saturday/Sunday home call). It can be relaxed or a nightmare. Regardless, no coffee or food after 11:30pm at St. Joe’s so be prepared.  
- There is a call room shared with thoracics when you need to put your feet up.

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<thead>
<tr>
<th>Peds Emerg (MUMC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>- Double check this is the emerge elective that you want -- some people have elected for adult emerge and wound up in peds. While there are more popsicles at MUMC, it might not be what you want.</strong></td>
</tr>
<tr>
<td><strong>-Great opportunity to learn some pediatric physiology and emergencies</strong></td>
</tr>
<tr>
<td><strong>-Typically 14 x 9 hour shifts daytime shifts and 2 x 8 hour overnight shifts.</strong></td>
</tr>
<tr>
<td><strong>-You will be a pro at diagnosing the common cold, but there is the potential to see some very sick kids.</strong></td>
</tr>
<tr>
<td><strong>-Evaluated daily by each staff, but assigned a preceptor with whom you spend multiple shifts, and who will complete your final evaluation.</strong></td>
</tr>
<tr>
<td><strong>-Must present a short topic at PEM academic half day</strong></td>
</tr>
<tr>
<td><strong>-Staff are quite supportive of us as anesthesia residents – express interest in seeing sicker patients, as opposed to patients on the psych emerge side (unless that’s your jam!)</strong></td>
</tr>
</tbody>
</table>
| Peds. Surgery  
(MUMC) | -The day starts at 6:45 in NICU followed by inpatient ward rounds with the team (incl. one or two fellows).  
-Rotate daily through covering ward issues, OR, clinic and carrying ultrasound requisitions to radiology.  
-MUST DO a pediatric grand rounds presentation. Make sure it works with your schedule at the beginning of the rotation.  
-Make sure to obtain 360 evals from fellows/faculty for this rotation as they are required for rotation eval.  
-24hr call backed up by a fellow who is home call. The fellows are very involved so you feel well supported. So so so supported. Minimal autonomy in patient care.  
-Carefully review your call schedule and bring any issues to the anesthesia programs attention. This is a good idea with any rotation. |
|---|---|
| Emergency HHS  
(General)  
(Juravinski) | -The general is a really cool place to do ER. Expect some wild shifts. The Juravinski has a lot of sick patients with complications of malignancy  
-Shifts are normally 10hr except 8hr overnight shifts  
-On average 10pts/ shift and 14 shifts per rotation  
-Rotate between General and Juravinski.  
-Evaluated by the assigned staff from the beginning of the rotation. You cannot change shifts when assigned to this staff (5 total).  
-Be upfront with your staff about desire for procedures/ACLS/ATLS.  
-Ask the trauma nurse to page you for everything at the start of your shift.  
-Consider asking security to walk you to your vehicle on late night shifts. Those parking lots are sketchy. |
| Emergency SJH  
(SJH) | -Shifts are normally 10hr except 8hr overnight shifts  
-On average 10pts/ shift and 14 shifts per rotation  
-Evaluated by the staff most frequently worked with  
-Less procedure/trauma than HHS, lots and lots of failure to cope.  
- Not a lot of acuity but the rare cases of true emergencies are interesting |
| Internal Medicine  
(General) (Juravinski) | -Possibly the best off service rotation for getting to know other non-anesthesia residents. Hurrah for making friends!  
-Teaching at 8:00, afternoon teaching 12:00-13:00, and finish by 17:00 (maybe).  
-Pre-rounding is not mandatory but you may be asked to stay post-call to round  
-24-26hr call covering your own team + 1 or 2 non teaching team (Yes! You could be carrying up to 3 pagers to better replace potassium at 4 AM).  
-Buy the McMaster IM resident survival guide = amazing  
- Get the best handover you can from the non-teaching teams before the staff leaves to avoid fun surprises  
-Every resident is responsible for doing a “Journal Paper Critical Review” (Short 15-20 min presentation)  
-Generally only 1 week of vacation allowed within 2 month rotation. It is possible to get more if you are very lucky. Request vacation for IM ASAP.  
- Go to all the Code Blues you can and let the anesthesia resident know you are an anesthesia PGY1 – you may be able to intubate! |
| Internal Medicine  
(St. Joe’s) | -Day starts at 8am with your team. Teaching at 1200 and 1600hrs.  
- Same as the General (especially Code Blues) |
| Ob/GYN  
(MUMC/SJH) | -Possibly the most important thing is to make friends with the nurses. You will be seeing them A LOT in the next few years. Seriously. They will impact your future quality of life dramatically. Food is always welcome.  
-The day starts at 7:00 with teaching until 7:30 then handover. Day finishes around 5:30  
-In AM, responsible for rounding on all general (non high-risk) post-partum patients. You’re expected to discharge them at your discretion. Pro tip: you’re not supposed to transfuse them at your discretion.  
-Rest of the day involves helping out with C-sections/Triage/GAA/L&D. No clinics.  
-Pelvic exams can be only performed when obs
**NICU (SJH)**
- Day starts at 0800. See your patients and present at table rounds at 0900-1000.
- Low-level care nursery. Most babies are there to feed and grow. Lots of opportunity to see babies withdrawing from substance abusing mothers.
- Carlito is the man. Get in with him and you will learn so much and get delicious Tim Hortons. He can also teach you Neonatal Resuscitation.
- Practice IV access + LPs whenever possible.
- Generally very chill rotation with lots of time to read but downtown can be sucked up by loonnnnggg, nebulous rounds -- prepare to discuss intricacies of TFI.

**ICU (St. Catherines)**
- Get ready for 4 weeks of central lines, art lines, emergency intubations, minimal scut work, and choosing your own call schedule! Staff are happy to have anesthesia residents.
- This rotation is a unique opportunity to roll your sleeves up in critical care as a fully supported PGY1. No other learners!
- Days start at 7:15 or 7:30, depending on attending (they change every week)
- You will be encouraged to take a few patients and become comfortable with them - bite off what you can chew/ learn at the same time.
- New consults in the ER, admits or urgent procedures often interrupt rounding.
- Call is what you make of it. You can pick 4 or 5 nights for call that work for you.
- Choose between great accommodations generously provided by the program or reimbursement for gas money- it’s an easy 45 min commute depending on time of year. Niagara on the Lake nearby as well.

**Thoracics (St. Joe’s)**
- Great opportunity to practice bronchoscopy. This is the best part of this rotation. Talk to fellows about maximizing opportunities – in clinic/start of OR etc.

**May-June**

<table>
<thead>
<tr>
<th>Anesthesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Similar to the first two months except now you do call.</td>
</tr>
<tr>
<td>- You will be buddied with a senior resident for the first 3 calls.</td>
</tr>
<tr>
<td>- Just enjoy it. After being off service for an entire year you’ve earned this.</td>
</tr>
</tbody>
</table>

**Gynaecologist Fires Anaesthetist to Allow Unlimited "Head Down"**

Gynaecologist Dr Francis He has taken a bold step in his private surgery by firing his anaesthetist. Dr He told Gomerblog his anaesthetist did not allow him to have enough "head down" during major...
**Hospital Orientation:**

**McMaster Site:**

1280 Main Street West  
Hamilton, ON, Canada  
L8S 4L8

**Parking:** Under the Hospital – Blue Section is closest to OR’s. Damn near impossible at noon so plan for extra time for parking if coming for afternoon teaching (can add up to 15 minutes delay finding a spot)

**Bike lockup:** Best bike cage in Hamilton! Which is good given how often bikes get stolen from campus. Top secret location – take stairs outside ER front entrance. Access requires filling out a form at the security office.

**OR’s:** 2nd Floor between Blue and Yellow Sections  
Scrub Machine:  
2nd Floor between Blue and Yellow Sections  
4th Floor Red Section  
(Both are pretty well hidden – ask other people in scrubs for directions)

**Food:**  
Both between Yellow and Red Sections  
*Cafeteria* – Level 1 – Open Mon-Fri till ~3PM  
*Coffee Shop* – Level 2 – Open 24/7. Unfortunately the 1am muffins smell better than they taste. Go with the cookies.  
Purple Section  
*Williams Coffee* – Open Mon-Fri. Variable Hours  
MDCL  
*Tim Hortons* – Open Mon-Fri. 8AM-5PM

**Call Rooms:**  
*Off service:* Rooms are on Level 3 between the Yellow and Red Sections near 3C. Keys are located in a lock box in the hallway outside call room. Must have your ID badge registered in order to get a key (Call security on first day and they can do it for you, it takes a few days). Tap badge, follow prompts, take key and return the following day. Only one key at a time. If any problems with lock box, call security.

*On-service:* Attached to pager. Rooms are on 3rd Floor East Room 15. Use your swipe card to locate key

**Lockers:**

<table>
<thead>
<tr>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>#19 -- 14-59-41</td>
<td>#19 -- 17-58-19</td>
</tr>
<tr>
<td>#20 -- 43-12-49</td>
<td>#20 -- 00-29-45</td>
</tr>
<tr>
<td>#21 -- 39-08-20</td>
<td>#21 -- 56-46-13</td>
</tr>
<tr>
<td>#22 -- 17-56-32</td>
<td>#22 -- 19-48-24</td>
</tr>
</tbody>
</table>

**Trouble Rounds:**

Tuesday 07:15-07:45 in the Anesthesia Library
St. Joseph’s Hospital Site (Charlton Campus Site):

50 Charlton Avenue East
Hamilton, ON, Canada
L8N 4A6

Parking: Across from back of hospital on St. Joseph’s Drive. Cross over to hospital via Street or Walkway.

Bike lockup: Super sketchy bike cage in parkade near entrance to Fontbonne. All you need is a valid ID card and a lot of misplaced optimism that no one will steal your bike.

OR’s: 1st Floor. Enter at surgeons lounge (Room 1123)
Access Code = 33855# from hall and OR side.

Scrub Machine: Located in OR area near lounge (through “restricted access” door from hall)

Food: Cafeteria – Level 2 – Open Mon-Fri. Closes at ~3 PM
Tim Hortons – Level 1 – Open 7 Days a Week. 6:30-11pm. (Earlier on weekends)
You’ll have regrets if you don’t make it to Tim’s before it closes whilst on call.
No 24 Hour Food/Coffee at this site. PACK FOOD!

Call Rooms:
Off-service- Keys at paging office (Level 1). Rooms are on Level 2 Mary Grace Wing and very hard to find (long walk/multiple turns)
On-service - Keys attached to pager. Rooms are on Level 2 Mary Grace Wing. Similarly hard to find but by the time you do Anesthesia call you will have been to this wing already.

Lockers:
Female
‘Anesthesia Resident’ (Locker 67ish) - 16-58-34
Locker 21 – 25-13-33
Male
‘Anesthesia Resident’ Locker 56 – 05-50-32
Locker 59 – ANES
Locker 17 – 50-19-32

Anesthesia assistant numbers (For machine issues in am & for general awesomeness) - 37683, 37684, 37685

Trouble Rounds:  
Tuesday AM 7:15-7:45 in the Anesthesia Office in OR  
(Code = 2430#)

New OR Nursing Lounge Code: 159#
Anesthesia Office (behind old ICU, near where angios performed), Access code: 243
**Juravinski Site:**

699 Concession Street  
Hamilton, ON, Canada  
L8V 5C2

**Parking:** Across from Main Hospital Entrance on Concession Street. Consider asking security to walk you to your car/bike especially at night – it’s a dodgy area.

**Bike lockup:** Solid bike cage near exit of parkade. Get access by filling out a form at security.

**OR’s:** Located on Basement Floor (Level 0)

**Scrub Machine:** There are 2. One located outside OR change rooms and the other on level 1 near ER.

**Food:**  
Nora’s Café – Level 0 – Open until 8pm only. Best hospital cafeteria food in Hamilton! Mmmm... wake up with bacon.

Cancer centre atrium – Level 1 – amazing smoothies. Only open till 3pm and not on weekends.

**Call Rooms:**  
Off-Service: On 3rd floor near the ortho unit. Keys are available after you swipe your card into call room area on the left. First come, first served.  
On-Service: No overnight call

**Lockers:**  
The lockers are to be assigned by Elaine Campbell. Please ask for her at the front desk on your first day

**Trouble Rounds:**  
Tuesday 7:15-7:45 in OR conference room beside the front desk.
General Hospital Site:

237 Barton Street East
Hamilton, ON, Canada
L8L 2X2

Parking: Parkade behind hospital on Victoria Avenue North. Seriously consider asking security to walk you to your car/bike anytime and especially at night, as this is literally the worst neighbourhood in Hamilton.

Bike lockup: Bike cage near exit to parkade beside parking office – it’s a bit dodgy but your other option is parking your bike in the smoking area out front of the hospital and having various upstanding members of the community telling you how nice it is and asking how much it cost. Tough call.

OR’s: Located on 3rd Floor

Scrub Machine: Both on 3rd Floor (1st Beside Elevators, 2nd outside main OR office).

Food: Cafeteria – Level 0 – Mon-Fri. Closes at 3 PM
      Barton Bean – Level 1 – Open 24/7 – The 2am tomato cheese bagel melt! It’s the best.

Call Rooms:
Off-Service – Keys at security (By ER main entrance). Room location depending on service. Mostly Located in McMaster Wing, which is haunted. Seriously. Haunted by ghosts. There is, however, one glorious JMR call room (only available when on Medicine) on 8 North, with a private washroom!

On-Service - Key attached to pager. Room on Level 3 Lower in North Wing

Lockers:
Female
#42 26-6-49
#77 35-20-47
Male
#21 30-7-17

Trouble Rounds:
Tuesday AM 7:15-7:45 Anesthesia Lounge
**Important Phone Numbers:**

Operator – Dial ‘0’ at all sites. This will be your go to for virtually everything and never fails. Be nice to the operators. They work hard and are really good to us.

Anesthesia Resident Pager – Accessed through paging. Changes at every site.

At every site there is always an anesthesia resident carrying the code blue/anesthesia pager 24 hours a day (Except the Juravinski where they are only there until 1700 and may or may not carry a pager – access by calling the OR front desk). This resident will always be available if you ever feel overwhelmed or need help. While they shouldn’t be your first choice on many of the rotations they will be glad to lend a hand whenever possible.

Paging – HHS – 0 or 76443
Or 87 (4 digit pager #) + your extension number + * + priority (usually 2) + hang up
SJH – 33311

Hospital Numbers (good for home call):
   SJH – (905)-522-1155
   HHS – (905)-521-2100
   (Can enter 5-digit extension directly)

Program Director – Dr. Raymer – PDAnes@mcmaster.ca
Program Administrator – Candice Stroud – stroudc@mcmaster.ca
**Hospital**: (905)-521-2100 x75170
**Cell**: (289)-230-5655

2015 Trauma Airway – (gomerblog.com)
Dictations:
How to Dictate Guideline:
http://www.medportal.ca/sf-docs/default-source/postgrad/new-trainee/hhs-centralized-medical-transcription-booklet

HAMiLTON HEALTH SCIENCES

ALL SITES – ACCESS CODE 5000
ALL SITES- EXTERNAL ACCESS 575-2550

Enter Author ID number (#)

Enter Site where Patient Located (#)
11. General
12. Juravinski
13. MUMC
14. Chedoke
15. St. Peter’s
16. West Lincoln

Enter Report Work Type (#)
1. Consultation (Children’s 21)
2. Discharge summary (Children’s 22)
3. Operative Report
4. Pre-op Report
5. Clinic Note - Progress Note (Children’s 25)
6. GI Investigations
7. Cardiac Investigations
8. Diagnostic Investigations
9. Child Development and Mental Health
32. History & Physical
36. Emergency Room Report (WLM)
37. Progress Note (WLM)
38. Mental Health (WLM)

Enter the Patient ID# followed by the # sign
(if the patient ID has an alpha character this is not needed to be entered)

BACKPRINT

To begin dictating press 2.

Dictation Keypad Commands
1. Pause/Play Toggle
2. Dictate/Pause Toggle
3. Rewind by 3 seconds
4. Fast Forward by 3 seconds
5. Finish Dictation and Disconnect
6. Mark dictation as STAT
7. Continuous Rewind (press 1 to pause)
8. New Dictation
9. New Dictation: SAME worktype
0. Suspend Dictation

*4 Go to End
*7 Play from Beginning

# Change Menu
1=Edit Mode, 2=Dictate Mode, 3=Listen Line

For each report, Clearly State:

Your Name
If You are a Resident/Student Report the Name of the Physician You Are Dictating for Patient Name (please spell if difficult)
Chart Number
TELEPHONE KEYPAD CONTROLS

[1] = Play
[2] = Record / Pause (toggle key)
[3] = Rewind w/Playback (may press several times)
[4] = Pause
[5] = Start second dictation
[6] = Go to end of dictation
[7] = Continuous Forward
[8] = Go to beginning of dictation
[9] = Disconnect from system

LISTEN ACCESS
1. Enter USER ID followed by the # key
2. Enter *1
3. Press 3 to Review
4. Enter Patient's MRN followed by the # key

ST. JOSEPH'S HEALTHCARE DIC TATION SYSTEM

On-site: Ext. 32078
Off-site: 905 522-1155 Ext. 32078
Transcription Dept: Ext. 33822

"Welcome to the SJH Dictation System"
1. Enter your User ID followed by the (#) key. (P number without the P).
2. Enter the Work type followed by the (#) key.
3. Enter the Patient's MRN followed by the (#) key.
4. Press (2) to begin dictating.
5. Dictate/confirm your name and the patient's MRN.
6. Press (9) to complete the dictation and hang-up, or press (5) to begin a new dictation (begin at Step 2.)

ST. JOSEPH'S HEALTHCARE REPORT TYPES

CHARLTON CAMPUS
1. INPATIENT AND EMERGENCY Consultation
2. Discharge Summary
3. Operative Report
4. Pre Anesthetic Clinic
5. OUTPATIENT Clinics
6. Endoscopy
7. EDS (EVPs and EMGs)
13. Procedure Note
15. Diagnostic Assessment Unit

WEST 5TH CAMPUS
1. Consultation Note (ACUTE)
2. Discharge Summary (ACUTE)
8. OUTPATIENT Programs
10. Social Work
11. Consultation (Specialty Mental Health)
12. Discharge Summary (Specialty Mental Health)

KING CAMPUS
3. Operative Note (DAY SURGERY CENTRE)
14. Procedure Note
15. Clinic Note

PG 5281 (2011-01)
**Internet Access:**

HHS –
  Account - iHSS
  System Password = HHSguest
  Log on using Meditech Username/Password if requested

St. Joes –
  Account – St. Joe’s WiFi
  User Name = resident
  Password = resident

Meditech At Home – (have to install citrix first)
  hhsc.ca
  Find “Helpful Links” at Bottom of Page.
  Select “Access HHS”.
  Select “Meditech” Icon
  Call IT Department if having issues -

St. Joes System At Home – (install citrix first)
  hhsc.ca
  Find “Helpful links” at bottom of page.
  Select “Access HHS”.
  Select “HHS Intranet”
  Find “Related Links” at Top Right of Page
  Select “St. Joseph’s Healthcare Provider Portal”
Benefits
Residency in Ontario has boatloads of benefits and it would be a shame not to take advantage of them. This is by no means a complete or even accurate representation of your benefits. I’d read the booklet if I were you. There’s also a sweet Manulife website that allows you to submit a lot of things online - this ensures you get your monies 70% faster. Also keep in mind that significant others can exploit all your hard labour and access these benefits as well.

Link to website: http://www.manulife.ca
Brief Overview: http://postgrad.medportal.ca/documents/Benefit_Overview_-PARO.pdf

<table>
<thead>
<tr>
<th>Prescription needed?</th>
<th>Benefit</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rx</td>
<td>Obviously</td>
<td>Complete coverage w/ $15/25 deductible/yr 100% Covered for Eligible Drugs</td>
<td></td>
</tr>
<tr>
<td>Dental</td>
<td>No</td>
<td>85% of most things No maximum q9mo for most cleaning q36mo for some x-rays Not covered if you break your teeth whilst rioting or getting arrested. This is also not conformed by the anesthesia program.</td>
<td></td>
</tr>
<tr>
<td>Vision</td>
<td>Yes</td>
<td>1 eye exam/2 yrs $250/2 yrs for glasses/contacts/laser eyeball surgery This is sneaky - it is 2 years from the first appointment/claim and does not roll over with the calendar year.</td>
<td></td>
</tr>
<tr>
<td>Massage</td>
<td>Yep – 1/ lifetime</td>
<td>$500/yr per person Needs to be an RMT</td>
<td></td>
</tr>
<tr>
<td>Physio</td>
<td>Yes</td>
<td>$500/yr per person</td>
<td></td>
</tr>
<tr>
<td>Podiatry</td>
<td>Compression socks – yes (MD/Chiropodist) inc dx, frequency and type of socks **New as of Jan 2016, must have diagnosis by MD which is treated by stockings to obtain benefit (as in pitting edema, or varicose veins). Manulife no longer covers “symptoms” for stockings. Orthotics – yes (podiatrist/chiropodist).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speech therapy Psychologist</td>
<td>No</td>
<td>$500/yr per person for each service</td>
<td></td>
</tr>
<tr>
<td>MSW Acupuncturist</td>
<td></td>
<td></td>
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Try:
Averie medical (Hamilton)
The Cayden Clinic (Hamilton)
Treadwell (Burlington)
others – many have deals for residents
**Vacation**

You get lots: 20 days Vacation + 7 Professional Leave Days + 5 days off at Xmas/NYE + Stat Holidays/Lieu Days + 1 magical floating Lieu day!

Vacation: 20 days. 15 days must be used in 5 day chunks, where the last week can be broken up. You are guaranteed a flanking weekend when you book off 5 days, so be sure to specify which one you’d like. Vacation must be booked at least 6 WEEKS IN ADVANCE, through the MedPortal site for off-service rotations or via Tammy Purchase for Anesthesia blocks. When deciding when to take vacation, remember that you have to work at least 75% of a rotation, so it’s often not possible to book longer than 1 week since most rotations are 28 days. You can book consecutive last and first weeks of two blocks are a way to get around this sometimes (Try this on Internal Medicine!). Post-call days do not count as vacation days.

Professional Leave Days: Similar to vacation, except usually taken as single days. These must be booked at least 1 week in advance for the Anesthesia department, usually longer for off-service rotations. Again for off-service requests this is done on the MedPortal website. For the Anesthesia department this is done via Tammy Purchase. You can use these however you would like!

Lieu Days: A lieu day is given every time you work an official Statutory holiday (Note, must be a PARO stat and not just a hospital holiday, so be sure to double check on the PARO website). This includes call/ER shifts where you worked pastmidnight the night before. When given a lieu day, you book off another day similar to a PL request (MedPortal or Tammy). Lieu days must be used within 90 days of working the stat holiday, and can even be used on a later rotation. Don’t forget your magical floating lieu day!

Off Call Requests: A maximum 36 call days off call can be requested each year. Only 4 of these can be used to request of statutory holidays. Please consider that each block, an upper year pulls their hair out trying to honour everyone off-call requests while still making a balanced schedule, so be reasonable. You’ll be expected to work 2 weekends a month while on anesthesia, and this is for the most part continued while off service. Plan appointments, social events, everything in advance so you can get your requests in well before the 6 WEEK deadline.

December Holiday Request: Booking Xmas/NYE vacation depends on what rotation you are on. This 5 day request does not count on your vacation total. Watch for emails as they come and be speedy, especially if you want Christmas. Everyone wants Christmas.

PRO TIPS:

1. Booking vacation early is critical. Right now, somewhere in Hamilton, all of the sweet internal medicine vacation is getting booked. This will be reflected in you only being allowed to take 1 week of vacation on medicine CTU.

2. Vacations are lifesaving on IM and all surgical rotations. They’re often wasted on ER rotations as there is flexibility inherent with only working 14 shifts. Seriously – don’t take
vacation on ER. You will do the same number of shifts or 1-2 less. Save it for more useful rotations.

3. Vacation in September/October is smart – you'll be getting burned out then if not before.

4. Don’t leave it all ’til the end of the year - it doesn’t roll over to the next year and the later blocks are popular = higher chance of being denied.

5. Using long weekends as a way to get a full week off can extend your amount of vacation. 20 days becomes 5 weeks instead of 4 when you use an Off-call request for a long weekend Monday.

**PARO Call Guidelines**

Call is one of those formative parts of residency where you gain a lot of clinical experience and see the best and worst of your colleagues, hospital staff, healthcare and human beings in general. It can be terrible and it can be amazing. Occasionally it’s both in the same shift. Fortunately we’re not surgery residents, so we actually follow PARO guidelines for call on anesthesia. This is occasionally less so on off-service rotations. Always carefully check your call schedule; if there are issues, double-check the guidelines and contact the Anesthesia program as needed.

*Things to know:*
1. The limit is 7 call/28 day block (unless it’s home call – then possibly 9/block? It’s less clear). No more then 2 weekends on call per block.

2. Technically, if you take holiday time, your call should be based on the days you're there (i.e 1 week vacation in a block = 5-6 call). This is outlined in the PARO Guidelines. Seriously. Read them already: [www.myparo.ca](http://www.myparo.ca) - Your Contract/FAQ

3. Call is technically 24 hrs + time for handover (which may be synonymous with rounding depending on the service). Really shouldn’t be more then 1 – 2 hours and never later than 1200hrs.

4. It's important to know call rules but a there will be situations where you have extra shifts/stay later. As with everything, it’s about picking your battles.

5. Call stipends need to be entered before the 30th of the next month. Just do it right away. The website is found off the MedPortal site or at [https://hhsstipend.hhsc.ca](https://hhsstipend.hhsc.ca). You need your employee number to complete this. And while that $4.50/hour is ridiculous, you still get about $114….until they take off tax, dues and your dignity.

6. Home call is only $50 unless you work >1hr after midnight in the hospital. They then become "Qualifying shifts". ER shifts where you work >1hr after midnight fall under the Qualifying shift category. Home call and qualifying shifts are also filled out on the McMaster Stipend Main webpage.
Things that are mandatory: 
(unless you’re post call/on vacation)

1. Journal club – 4x/year – a 2nd year resident presents on an exciting paper. There is free food. Technically not mandatory for PGY1s but still awesome to attend.

2. MAD day – 2x/year - multidisciplinary something day – a lecture with ALL the McMaster residents. There is free food.

3. Academic half day –
July-August – PGY1/2 Transition Program- this includes intro topics on anesthesia with lots of academic days, simulation sessions etc.
September-June - anesthesia half days with the PGY2s. Candice will send out the curriculum and schedule- do the pre-reading to get the most out of these academic days!
Ultrasound course - 8 weeks US course (one session a week) with periodic quizzes, and pre and post tests.

Research course: There will be some type of research methodology course during the year- most recently it was a 2 day course in Burlington but it changes a bit each year. This is meant to give an introduction to research practices and help you develop the mandatory research project to be completed during residency.

Sidebar: You don’t have to start on this in PGY1 but you will definitely want it off your plate come PGY5. Exactly how this instruction is given goes through various incarnations each year as the program tries to find the best fit. Eventually, this might be something the program takes over and the instruction is lead by faculty. It remains one of life’s great mysteries.

Why would you miss any of this? It’s going to be awesome. Be bold about leaving on time from your rotations – advocate for your learning. Also you’re free till 5pm if you’re on call as this is protected academic time. Naps are advisable.

4. Program retreats – these happen a few times a year and are pretty fun – beaches, curling and barbeques are just a few recent activities. This is protected time.
Where to live:

It can be a little overwhelming if you haven’t already found a place to hang your scrub cap at the end of the day. There are lots of different things to think about when finding a place -- not even including the overwhelming stress of deciding between renting and buying. You’ll have to do what’s right for you but you’ll find that most of us will buy because housing prices are expected to increase a lot over the next five years, mortgages are almost the same as rent, and we already burst into tears thinking about our LOCs.

As a general rule: avoid east of James Street and North of Main Street. There are some cool pockets of neighbourhoods in there but they might be near streets that have a somewhat “stabby” reputation.

Ancaster and Dundas are north/north-west of Mac. They’re probably the furthest away from the rest of the hospitals but are the oldest and most established neighbourhoods. There are lots of family friendly activities if you’re coming with kids and plenty of cool shops and restaurants. If you settle in Dundas, you can also brag to your family and friends about settling in the same neighbourhood as Sir William Osler. This will probably involve a lot of explaining as to who Sir William Osler is. Ancaster and Dundas are also great for people who like hiking and biking!

Most people have settled in the downtown area because of the proximity to the hospitals, other residents, and the amenities of Hamilton. The most popular apartment buildings are Chateau Royale (the French aesthetic is faux, the commitment to unicorn themed decor is real) and City
Square. The Locke Street area is a neighbourhood unto itself, but people in downtown like to claim it as their own. Locke Street is easily accessible from all the hospitals and home to some of the coolest shops and yummiest restaurants. Lots of residents will be at one its coffee shops studying or drawing strength from the caffeinated and starchy offerings.

The Mountain (or The Incline as anyone from outside Ontario will call it) is also a popular spot for families and other residents. Generally, housing is a little more affordable and just as close to the necessities of life as other neighbourhoods. The Mountain has a good mix of older and more suburban areas and has the biggest number of big box and grocery stores.

Important things to know:
1.) ALWAYS see a place in person or have a trusted set of eyes inspect the place for you. This is like the proverbial dilemma with online dating: very few places will look like their profile pictures. And very few of them actually do like pets.
2.) Alway expect to be asked for a long-term lease. Don’t think you can find a place for a few months until something better comes along. Landlords of Hamilton are needy and want you to commit.
3.) Don't be intimidated by high rental rates. Lots of places will screen out people with higher rental rates and will make concessions if you’re Dr. Responsible and Quiet, MD.

What to do:

Hiking: If you haven’t heard already, Hamilton is the City of Waterfalls and we really, really want you to know. You can get to almost all of them via the Bruce Trail which runs through Flamborough (east of Hamilton) to Stoney Creek (west of Hamilton).

Trivia: PARO will organize the occasional trivia night but all the die hard regulars head to Baltimore House on Monday evenings. It’s not a bad place to meet people and show off useless medical knowledge knowledge while learning about the relative strength of armadillo armour.

Harbourfront: This is a beautiful spot to walk around or grab a coffee/study at the Williams right on the waterfront. There is also a skating rink in the winter.

GO Bus: As much as we hate to admit it, part of the appeal of being in Hamilton is how easy it is to go somewhere else. The old station is just a few blocks from Joe’s on Main and Hunter and a new station will be up and running soon on James Street North just past Barton. Most people use it to check out Toronto or get to the airport (ie: the sweet deals of Porter) but it’s worth checking out the Niagara region too.
Help!
http://www.medportal.ca/pg/well-being

Sometimes residency is just terrible and makes you wonder if this whole “medicine” business was a big mistake – when this happens, there are resources!

1. Never hesitate to talk to your fellow anesthesia residents – we’ve all been there and we’re happy to provide a listening ear, perspective and large amounts of empathy.

2. Get a family doctor. PGME has a list of physicians accepting residents. Email bmontes@mcmaster.ca or check out http://www.hamiltondoctors.ca/find_a_doctor.php.

3. PARO has a confidential support service for residents, their partners & families. Call 1-866-HELP-DOC (1-866-435-7362).

4. Medportal has a solid outline of resources at: http://postgrad.medportal.ca/wellness.aspx

5. Do things outside of medicine. See a movie. Go climbing. Take an art class. Nail someone with a dodgeball (in the context of a game, not randomly – that’s a poor choice). Go on a hot date. Go spend all your money on fancy shoes in Toronto. Weekend roadtrips! Binge watch Netflix till you want to vomit! Check out Hamilton’s fantastic restaurant scene or do an art crawl.

   *It’s going to be a crazy 5 years.
   Welcome to McMaster Anesthesia!*
Program Director’s BBQ

The PD bbq is held each summer, usually in July. All faculty and residents, and their families, are invited to the PD’s home for food and fun. It is a great opportunity for the PGY1’s to get to know some names and faces, and to start to feel a part of the Anesthesia Community at McMaster. Likewise, it is a great opportunity for faculty to begin to get to know the junior residents and reconnect with more senior residents who may have just completed a year of off-service rotations.

Community and camaraderie are amongst the greatest features of being an anesthesia resident at McMaster University and these time-honoured social gatherings help to weave the fabric that holds us all together.

When possible, on-call residents are released from clinical duties to attend.
ORIENTATIONS TO HAMILTON HEALTH SCIENCES

AND

ST. JOSEPH’S HEALTH CARE
Welcome to the Hamilton General Site! The General has a wide referral base for Vascular, Cardiac and Neuro-surgical cases. It is a Level 1 Trauma Centre. This rotation will provide you with excellent experience in high-risk and complicated adult cases. The days can be long, but you will gain invaluable experience.

**Operating Room**

Elective lists start at 0750h (patient in the room) on all days except Wednesday. On Wednesday’s, you will be expected to attend rounds prior to the OR, which will have a delayed start at 0900h. Please arrive with appropriate time to prepare for your cases. Subspecialty OR’s run five days per week. EPS lab runs every Monday and Thursday on the fourth floor by the CCU. Neuro-radiology runs every Tuesday on the main floor POD 3 in Radiology.

**Assignments**

Your daily assignment is the responsibility of the Administrative Resident. Solicitation of residents for lists or clinics by staff physicians is strongly discouraged. Assignments are reviewed at intervals by the CTU Director to ensure each resident is optimising their training opportunities. Residents may be asked to help with surgical emergencies at any time during the day. Subspecialty residents will be assigned to lists within the subspecialty.

Residents may be assigned to the same OR room as a Clinical Clerk. You are expected to see any in-patient on your list.

The OR list is published one day in advance and available at 1200h. The assignment sheet for residents is located at the OR front desk. **Resident assignments will be expected to be completed daily by 1400 hrs by the Administrative Resident.**

**Subspecialty Rotations**

Subspecialty residents are encouraged to participate in as wide a variety of subspecialty cases as possible. Subspecialty rotation lists often end late (1800 hrs or later). If you are on call and on subspecialty, you are **required to check in with the on call staff by 1700 hours** for clarification of further duties.

**On-Call**

The resident call shifts are 24 hrs Monday to Friday and split call Saturday/Sunday. Saturday/Sundays are split into an 8am – 5pm shift and a second 5pm – 8 am shift. If the elective list finishes early (prior to 5 pm), the on call resident is expected to check in with the on call staff for clarification of further duties.

Anesthesia residents on-call are responsible for providing emergency anesthesia service to the OR as well as providing expertise in airway and pain management throughout the hospital. The staff anesthesiologists at the General do not
stay in-house after finishing cases in the OR. However, residents should not hesitate to call the staff anesthesiologist at any time regarding any problem whatsoever.

**Clinical Activities Outside the OR**

**Trauma Team**
The anesthesia resident is a member of the trauma team. Responsible to the trauma team leader (TTL), the resident provides specialized skills in airway management and resuscitation. You are not responsible to provide sedation for patients undergoing radiological investigations. Always document a note when you attend a trauma, whether you have to intervene or not. If you are required to spend a significant amount of time in the Trauma Suite, please call the OR and touch base with your attending staff.

**Cardiac Arrest Team**
Residents are expected to attend in-hospital cardiac arrests (CODE BLUE) for which you will be paged. Please respond in a timely fashion.

**Clinics**
Residents are expected to cover one preoperative anesthesia consultation clinic per week at MUMC. This clinic is held at 0900h each Tuesday on the main floor. Normally a non-subspecialty resident is assigned to this clinic, but due to manpower issues, this may not always be the case. There are three or four staff anesthesiologists working in clinic each day. Please discuss your cases with the appropriate staff person (ie., Peds case with the staff assigned to MUMC, neuro case with the staff assigned to General, etc.). You should have at least one encounter with a patient evaluated by a staff.

**Acute Pain Service**
The General has an Acute Pain Service which is coordinated daily by the Clinic Anesthesiologist. There is an APS nurse responsible for coverage from 0800 to 1600 hrs. Residents may be called by nurses to assist in managing with APS problems. The resident assigned to clinic on a Tuesday is expected to attend APS rounds at 0800 hrs with the APS nurse and clinic anesthesiologist.

**In-house Consults**
During the day, in-house consults should be directed to the on-call Anesthesiologist. The on-call anesthesiologist may request the on-call resident to see an in-house consult. This will be at the discretion of the staff. You may be called to see a consult after hours. Please discuss these consults with the on-call staff.

**Rounds**
Residents are expected to attend all regularly scheduled rounds. During July and August, Wednesday morning rounds are not held. The operating room start time during these summer months changes to 0750. Trouble rounds are continued throughout the summer.

**Trouble Rounds**
Trouble rounds occur each Tuesday at 0715 in the Anesthesia Lounge. Please be punctual and sign in on the sign in sheet. At the end of the trouble rounds place the sign in sheet in the mailbox of the CTU director. Staff anesthesiologists will be assigned to attend each round. The residents will be expected to present interesting or challenging cases for discussion. If, for some reason, a staff person is not present, a senior resident will lead the discussion.

**Citywide Rounds**
First Wednesday of the month 0715 HOURS - Location varies

**Morbidity and Mortality Rounds**
Second Wednesday: Location varies and could be held at McMaster or Hamilton General.

**Subspecialty Rounds**
Fourth Wednesday: Subspecialty rounds. Residents at the General are expected to attend the Cardiac rounds. If these are cancelled, then they should attend the Pediatric rounds.

**Buddy Call**

During certain times of the year a senior resident will be assigned to do call along with a junior resident. The senior resident should be available to attend traumas, codes, ICU calls along with the junior resident during these calls. The senior resident should report to the staff on call along with the junior resident and take direction from the staff as to what their role during the call should be. Some staff will dismiss the senior resident from the OR and manage the cases with the junior resident only, in which case the resident should join the second on call if they are working. If the second on call is not working then there are still many times when the senior resident may be needed to stay and work. These instances may be a challenging case or sick patient when more hands are needed, a long difficult case where the staff may not want to leave the junior alone with a patient (in which case the senior resident may need to give the staff a break). There may also be instances where both residents are in the OR while the staff is out and in that case I hope that the senior resident can take the opportunity to teach/discuss with the junior resident the case at hand, trauma management, airway management etc. Most importantly please remember that a buddy call is part of the regular call schedule and counts towards the total number of calls so it does not excuse absence from clinical OR activity for the senior resident. There may be rare instances when the senior resident is not needed in the first call room and the second room is not running in which case the senior resident is free to leave the OR but needs to be available on their pager to attend traumas etc as outlined above.

**TIME AWAY**

Given the numbers of residents available, vacation may be limited to one resident away at any time. It is the responsibility of the Administrative Resident to arrange the call schedule accordingly. Similarly, only one resident will be allowed away at any time for Conference/Professional leave with the exception of major anesthesia meetings (ASA, CAS, IARS).

Residents may take entitled lieu days any day of the week provided enough residents are available to cover the service. The CTU Director expects reasonable notice of time away.

Vacation time of a maximum one week per month will be allowed during subspecialty rotations at the Hamilton General (Cardiac and Neuro). If your rotation occurs during a “shut down” period (i.e. March Break, Christmas, Summer shutdown), then this may impact the decision by the CTU Director to allow vacation during this rotation. You must have at least 75% of a subspecialty rotation in order to be evaluated.

All time away must be approved by Candice Stroud, the Administrative Resident and the CTU Director.

**Computers**

*Patient Care Inquiry (PCI) - Meditch*
The hospital has a computer system allowing each physician to access patient information and laboratory results instantly. Computers for the Patient Care Inquiry system are located in every OR and throughout the hospital. Please see the Computer Services staff when you arrive to obtain your password.

*Sovera*
All patient documentation is scanned into this system. You will need a password to access this.

**NARCOTIC CONTROL**

The department expects residents to handle controlled substances responsibly. Narcotics should be signed out in the patient holding area on a daily basis. The narcotic documentation log should be filled out for each case.

There is an on-call “stat” pack (black bag) that the on-call Resident will sign out with Pharmacy at the start of the day. The **only narcotic this bag contains is Remifentenil.** You are **not allowed to carry any other narcotic outside of the OR.** If you use drugs from this STAT pack (Trauma room, codes, ward), please dispose of all leftover drugs/syringes appropriately. You should not be carrying any drugs around the hospital unless it is in this STAT pack. **You must document your use of Remifentenil on the narcotic sheet.**

Emergency drugs are readily available in those parts of the hospital where they are routinely used (eg. ER, ICU, HIU).

**Evaluation**

Please ensure you are receiving written evaluations daily. The paper copies of the daily evals are available in the anesthesia lounge. Please submit them to Candice Stroud directly (they will be forwarded to the CTU director electronically). You will receive a verbal mid-rotation evaluation from the CTU Director. Your final evaluation will consist of a one-to-one meeting with the CTU Director, and the written documentation will be discussed and reviewed.

**Problems**

If there are any problems, conflicts or concerns please do not hesitate to contact myself or the Administrative Resident at the earliest opportunity. I am available by email or phone.

**Other Information**

There is a binder located in the anesthesia lounge that outlines the above mentioned points and some further details. It also contains instructions on pager use, subspecialty rotation objectives, policies, and document copies. Please familiarize yourself with the contents of this binder.

I hope you enjoy your rotation at the General. The challenging cases will certainly provide you with an excellent experience in anesthesia. I look forward to working with you.

Dr. Iwona Zieba  
CTU Director  
HHS, Hamilton General Site  
iwona.zieba@outlook.com

(Revised April, 2007)  
(Reviewed May, 2011)  
(Reviewed June 2012)  
(Reviewed June 2014)  
(Reviewed June 2015)  
(Revised May 2016)
Trauma Team Roles and Responsibilities

Purpose: To outline the roles and responsibilities of the Trauma Team members.

Applies to: Trauma Team members

Assumptions:
- All references to the Trauma Team Leader (TTL) will include Acting TTL
- All physicians other than the scheduled TTL will be referred to as the Acting TTL
- All Trauma Team members will use closed loop communication while involved in the resuscitation
- Each member will be respectful to all members of the team
- Each member will be open to re-assignment of roles as needed and as expertise dictates
- Each member will voice concerns at appropriate times during or post resuscitation
- No team member will leave the resuscitation until released by the TTL

Roles and Responsibilities:

Each Trauma Team member
- Will call the ED to advise of receipt of page and attendance to trauma
- Reports to Hamilton General Emergency Department, based on Priority codes

  Trauma Fan-out Priority Codes
  *0 – Patient is in Emergency Department
  *1 – Patient is less than 5 minutes away by ambulance
  *2 – Patient is between 6 – 15 minutes away

- Wears identification badges that can be visualized by all
- Ensures signs in on the Trauma Team Signature and Discipline section of the resuscitation flow sheet
- Dons appropriate PPE and takes appropriate precautions at all times
- Reports in person to the trauma suite and remains present unless discharged by the TTL or designate.

Security (for ORNGE transfers)
- Requests air handling system shut down
- Secures helicopter landing pad
- Controls transport elevator
- Assists with ED lock down if necessary

October 2013
ED Charge RN

- Follow Hamilton General Hospital Trauma Team Activation Guidelines

![Trauma Team Activation Guidelines]

- Obtains report from TTL/ CritiCall/ CACC/ paramedic crew regarding incoming trauma
- Completes patient triage and documents assessment without delaying patient transfer to room.
- Provides demographic information to business clerk in order to begin chart creation
- Assigns patient to trauma room and ensures adequate RN staff and room readiness.
- Ensures paging has activated a trauma fan-out.
- Provide support and assistance to the trauma team during the resuscitation.
- Coordinates early with TTL to find appropriate in patient bed for patient and ensures clerk notifies admitting/bed booking of same.
- Notifies site administrative coordinator if no bed available
- Facilitates the transfer of the patient to the appropriate receiving unit.
- Communicates with and assists family members as required
- Ensures that the trauma room is cleaned and restocked after the trauma resuscitation is complete.

Business Clerk

- Activates trauma team as directed
- Confirms all team members have responded to page and sends a second page to team members who have not responded
- Request paging to call, on cell phone and/or home phone, TTLs who have not responded to the first page
- Informs charge RN if no response from TTL
- Registers patient immediately upon arrival
- Assembles chart ASAP and prints ED panel labels
- Delivers chart and name band to room immediately
- Informs charge RN/TTL of family’s arrival
- Calls consultants as requested

Emergency Attending Physician

- Acts as TTL until the on call TTL arrives (within 20 minutes of patient arrival)

October 2013
• Is responsible for the initial assessment and management of the patient following ATLS guidelines. Consults services or disciplines required for care until the arrival of the TTL and transfer of accountability (TOA) has occurred
• Remains available to assist as needed until released by the TTL
• Assists with procedures as required
• Performs FAST, if deemed appropriate and directed by the TTL

Trauma Team Leader (TTL)

Pre arrival of patient
• Reminds team to don their PPE
• Identifies team members and makes personal introductions
• Allocates roles to team members
• Directs team members to prepare and assemble all necessary equipment for resuscitation

On patient arrival
• Arrives before, on arrival or within 20 minutes of patient’s arrival.
• Obtains history from paramedics
• Directs the trauma resuscitation following ATLS guidelines
• Supervises trauma team members, (including designated trauma fellow or resident) in completing the primary and secondary surveys
• Establishes priorities of management and investigations
• Is cognizant of patient condition at all times
• Maintains quiet, calm environment
• Directs traffic
• Is responsible for direct orders to physicians and nurses during the resuscitation and employs closed loop communication. May reassign personnel roles as required.
• Informs patient of treatments and interventions if appropriate
• Conveys plan of care to the team
• If TTLs expertise is required to provide hands on care (eg ED thoracotomy), the TTL delegates a team member to assume leadership role while so engaged
• Requests additional physician/service consults.
• Dismisses team members when services no longer required.
• Orders tests and diagnostic procedures and interprets results
• Is available, or delegates a team member to speak with patient’s family during or following the resuscitation.
• Ensures documentation of resuscitation is complete and signs trauma flow sheet.
• Ensures admission orders are completed
• Arranges OR if necessary
• Determines definitive care and accompanies patient. Provides TOA to receiving physician (intensivist, anesthetist, interventional radiologist)
• Debriefs team
• Provides education to team members, when appropriate

**Trauma Team Fellow/Resident**

- Communicates with Acting TTL (ED MD) and participates in the resuscitation of the patient as directed
- May act as TTL until the on call TTL arrives if so delegated by the acting TTL (ED MD)
- Assists with procedures as directed
- Completes requisitions for diagnostic tests
- Remains with patient until transferred to definitive care
- Ensures documentation is completed
- Ensures admission orders are completed
- Assumes responsibility for additional trauma patients as directed by the TTL
- Ensures resuscitation documentation is complete and signs the flow sheet
- Participates in team debriefing and education

**ED Recorder**

- Ensures trauma flow sheet available for members to sign in on
- Records arrival times and names of all trauma team members on the trauma flow sheet
- Records history provided by paramedics including last set of vital signs, GCS and fluids administered
- Documents all initial resuscitation data, including primary and secondary survey findings and adjuncts performed
- Records first set of vital signs within 15 minutes of patient’s arrival
- Documents vital signs every 5 minutes in unstable patients and every 15 minutes in stable patients. Notifies TTL immediately of changes in patient’s condition
- Documents all procedures performed and outcomes of same
- Documents medications administered and their effectiveness,
- Documents times of diagnostic testing
- Documents all fluid administered including blood and blood products
- Maintains a chronological record of all events
- Employs closed loop communication with entire team when information presented
- Assists TTL with traffic and noise control in trauma room.
- Ensures completeness of trauma resuscitation flow sheet or ED record including signatures and documentation of in and out times for team members
- Provides transfer of accountability to appropriate unit prior to transfer.
- Ensures that the trauma room is cleaned and restocked once the trauma resuscitation is complete

**ED Trauma RN x 2**

October 2013
- Ensures trauma resuscitation room readiness and resuscitation equipment in working order
- Provides and coordinates nursing management of the patient from arrival until transferred to definitive care
- Inserts two large bore IVs (if not present), draws ED panel and commences infusion of warmed NS as directed by TTL
- Applies Typenex to the unidentified patient or patients with same last name
- Labels and sends ED trauma blood work (ED panel) to lab
- Ensures rapid fluid infusion device available and commences blood/blood product administration as directed by TTL
- Initiates massive hemorrhage control protocol as directed by TTL
- Maintains and monitors all IV lines and informs TTL/recorder of fluid intake
- Obtains initial set of VS and informs TTL/recorder of same. Performs BP measurements in both arms. Obtains patient temperature.
- Connects patient to cardiac monitor and applies oximeter
- Assists with removal of patient clothing and secures appropriately (being cognizant of forensic evidence needs)
- Checks patient ID band and applies to wrist or ankle
- Administers medications as prescribed
- Assists physicians with procedures, line insertions, dressings, irrigation, splinting as required. Ensures recorder aware of same.
- Set up chest tube drainage system if required
- Employs closed loop communication throughout the resuscitation with TTL and recorder. Verbally acknowledges orders.
- Inserts urinary catheter and sends specimens for R&M, C&S. Upreg (where indicated) and toxicology screen. Informs TTL of output and any difficulties with catheter insertion.
- Inserts OG tube as directed by TTL
- Continuously monitors patient and informs TTL and recorder of any changes in patient's status
- Ensures patient is kept warm and maintains privacy (doors and curtains closed)
- Assumes all nursing care of patient once primary and secondary surveys and interventions are complete, Prepares patient for transport and accompanies patient to scans, IR, the OR or in patient unit
- Ensures that Trauma Room is cleaned and restocked, once the trauma resuscitation is complete

Anesthesia

- Airway assessment and management including intubation with C-spine control
- Prepares equipment for managing a difficult or emergent airway
- Communicates with patient answering questions and obtaining medical history
- Determines patient’s GCS and monitors patients level of awareness
- Communicates necessary interventions with TTL
- Gives orders for intubation medications and maneuvers in concert with TTL
Ensures adequate oxygenation and ventilation
Assists with C-spine control on log roll
Assists with Massive Hemorrhage Control Protocol (MHCP) including operation of rapid volume infuser as required
Performs assessments and reassessments of patient's airway and breathing status as directed by the TTL or with changes in patient's condition
Assists with procedures as directed by the TTL (i.e. central line insertion)
Communicates with anesthesia staff/ OR as needed
Ensures airway documentation is complete and signs the resuscitation record

Respiratory Therapist

Ensures, prepares and maintains functioning equipment for airway resuscitation needs
Assists with intubation, (performs cricoid pressure if directed) secures airway, confirms ETT placement and ventilates patient.
Assists with C spine precautions
Continuously monitors airway patency and ventilation.
Assists with orogastric (OG) tube insertion.
Obtains Arterial Blood Gas (ABG) as directed by TTL
Prepares necessary supplies/equipment for patient transfer
Accompanies intubated trauma patients during transport and assumes responsibility for airway and ventilator management.

General Surgery

Assesses the chest and abdomen during the breathing and circulation components of the primary survey
Communicates with TTL re findings and necessary interventions
Performs procedures such as needle decompression, chest tube insertion, line insertions, FAST, DRE as directed by the TTL
Assures placement of OG tube, urinary catheter if needed.
Follows up on investigations post resuscitation (CT scan, etc.).
Informs surgical attending of patient, dictates a consult note and documents assessment and management in the progress notes
Remains with patient until dismissed by the TTL
Ensures resuscitation documentation is complete and signs the resuscitation record

Orthopedics

Assessment of pelvis and long bones during circulation component of the primary survey
Wraps or binds pelvis if unstable
Splints fractures (checks NV status pre and post splinting)
Assists with log roll and assesses patients spine
• Performs secondary assessment of all limbs and identifies lacerations, abrasions, contusions and degloving injuries
• Performs a neurovascular exam of all limbs and identifies presence/absence of pulses and neurological findings
• Communicates with TTL re findings and necessary interventions
• Arranges appropriate x-rays
• Informs orthopedic attending of patient, dictates a consult note and documents assessment and management in the progress notes
• Remains with patient until dismissed by TTL
• Ensures documentation is complete and signs the resuscitation record

Radiology Technologist

• Responds stat to resuscitation room when paged and completes portable chest and pelvis films. Notifies TTL when available for viewing
• Notifies team of potential exposure when shooting films
• Acts as liaison to CT personnel and radiologists
• Completes further x-rays as ordered

Laboratory/Transfusion Medicine Technicians

• Completes all lab test requests ASAP
• Ensures availability of uncross matched blood
• Ensures group and screen is processed ASAP
• Participates in massive hemorrhage protocols as required

ED Social Worker/Chaplain

• Serve as liaison between family/medical team/police/CAS.
• Greet family upon their arrival and escort to designated area
• Notify TTL of family's arrival
• Gather pertinent information from family for medical team (i.e. allergies, past medical history, etc.).
• Prepare family for visiting patient, presence of lines, tubes, ventilator etc and provide general information re condition
• Support family during initial and ongoing visits if required
• Ensure patient is positively identified
• Provide crisis and emotional support to the patient and family.
• Inform family when patient is transferred and provide directions
• Arrange spiritual support if desired by family.
• Assess legal obligation for CAS reporting.
• Ensure ongoing community support through community referrals/resources.
• May assist with team debriefing when necessary.

October 2013
• Provides grief/bereavement support to family.

ED HCA

• Attends all trauma resuscitations (if available) to act as runner and retrieve supplies and equipment
• Transports blood specimens to the lab
• Retrieves blood and blood products from transfusion medicine
• Assist with patient transfers
• Cleans and restocks room, carts, blanket warmer, fluid warmer after trauma resuscitation is complete.

ED Education Clinician

• Provides clinical and educational support to staff members during and post resuscitations.
• Participates in trauma evaluation processes in order to identify learning opportunities and knowledge deficits with staff members
• Encourages staff to advance their trauma skill/knowledge level through conferences and courses such as ATCN
• Participates in performance improvement activities

ED Clinical Pharmacist

• Verifies patient allergy status and weight
• Obtains medication from Accudose
• Is aware of medications given at sending facility or en-route to hospital.
• Ensures medications ordered by team are readily available, evidence-based, and clinically appropriate. Makes recommendations to TTL as required
• Calculates dosages, checks appropriateness of administration routes, and checks final preparation of medications prior to administration.
• Provides a double check for medications prepared by pharmacy technician, or RN prior to administration
• Provides information regarding compatibility issues, administration instructions and is a resource for drug information.
• Monitors ongoing need for medications and identifies adverse effects or effectiveness of administered medications.
• Provides handover to ward pharmacist if patient has outstanding issues.
• Provides education to team members and participates in debriefing as required
• Ensures Accudose is replenished by Pharmacy

OR Charge Nurse or Representative

October 2013
• Reads an OR room when requested
• Communicates with the TTL regarding when the OR is ready to accept transfer of the patient

Role of the Family

• Provide team with patient history/event information
• Provide support and encouragement to patient
• Notify SDM or other family members

October 2013
The following is an orientation and guidelines for the Administrative Duties at the JHCC.

1. Every resident must be accounted for every day on the resident schedule located on the counter at the O.R. front desk. If a resident is teaching or away, write in "teaching" or "vacation". Please post an up to date resident call schedule on the resident board outside of the physician's lounge as well as at the OR front desk.

2. Orientation (not clerks) will be your responsibility. If you are unable to do this, please assign this duty to another senior resident who is able to do this. Orientation should occur on the first working day for any new resident, after the first case is underway (around 9ish). This should include a walk-around of the central core, PACU, narcotics sign-out, how to find their list assignment, and an overview of the Resident's Board outside the lounge.

3. Rotation objectives should be reviewed by you with each resident at the beginning of the rotation. If a resident has any questions about their objectives, they may be directed to me for clarification.

4. Please assign all residents between 1200 and 1400 onto the schedule at the front desk. This ensures enough time for the desk clerk to transcribe their names onto the master sheet. If you want to assign earlier, there is a booking binder at the front desk. This has the OR lists well in advance. Important to note the OR room number and the "surgeon's name" (many times, the OR rooms get changed first thing in the morning) on the resident assignment sheet. The staff list is circulated at noon by Robin (scheduler for anesth dept, x 48890). Robin will also have the lists in advance. Please notify the desk clerk if there are no learners assigned on any given day.

5. It is expected that the 1700 and 1800 rooms have residents assigned to them on most days within reason. These rooms include complex gyne-oncology, general surgery and hepatobiliary lists.

6. All other learners - clerks, Paramedics, RT's, etc – are hospital specific and must be
assigned accordingly. Clerks may be doubled up with Anesthesia residents, as residents are evaluated for teaching. You do not have to orientate clinical clerks.

7. Residents at the JHCC are expected to help out with emergencies through-out the hospital as well as in-patient consults, at the discretion of the on call anesthesiologist. A day-call person must be assigned to carry out these duties TO A MAX OF ONCE PER WEEK PER RESIDENT, and that person should be assigned to the on call room (usually room 9) with the on call staff anesthesiologist. That resident is expected to arrive by 0730 to attend APS rounds. If the on call room has no booked cases or ends before 2 pm, the day call resident is expected to find another room to work in with the advisement of the admin resident. If the burden of consults is high at the end of the day, the on call resident may delegate some of those consults to other residents to see after their day list has finished. Please keep track of these duties to ensure that they are being shared appropriately amongst residents and also to ensure that residents are not being inappropriately pulled from the OR on a frequent basis. Keep me informed of any concerns regarding the above.

8. Trouble rounds - mandatory - 0715 Tuesday morning In the OR classroom, located beside the OR manager’s office, two doors down from the OR main desk. There will be a staff anesthetist (not the person on call) assigned to facilitate. If for any reason the staff do not show up, please let me know, but Trouble rounds should continue. Trouble rounds should not make you late to start the first case of the day (pt in OR at 0750). Please keep an attendance sheet for all of these rounds and hand it in to myself or Judy at the end of the two month block.

9. Days off must be approved by CTU director. Any resident requesting early leave or late arrival - please keep me notified.

10. Daily blue eval forms for both anesthesia and off service residents are found by the in the lounge in a file folder on the wall, and 360 EVAL FORMS will be available in the file folder on the wall in the SRN office directly behind the OR front desk. Please ask Chris Dalio the charge nurse if you have trouble locating this folder. It is the responsibility of the resident to provide the daily evals to the staff each day. PLEASE RETURN ALL EVALUATIONS TO CANDICE IN THE ANESTHESIA OFFICE AT MUMC. Please ensure these forms are well stocked as well as the off service resident evals. And please ensure that any off service resident is aware that an appropriate evaluation must be completed every day. Off service resident evaluation forms should be readily available in the appropriate folder as well.

11. A very brief informal verbal mid-unit evaluation will take place. The final evaluation is one-to-one with the CTU director.

12. One resident must be assigned to the central pre-op clinic every Friday. Please ensure that all residents have received passwords and training on the HHS Electronic Medical Record prior to their first day in clinic.

13. Please inform me of any and all concerns. Keep an open line of communication. You may resolve issues on your own, but let me know. Email is good.
14. There are changes to the nursing weekend call schedule at the Jurvinski site with the new block schedule. The nursing staff will now do a 48 hour call period Saturday and Sunday. **The OR time on Saturday and Sunday are scheduled as 8am to 6pm. The aim is 8am for the start of the first case. After 6 pm, priority 1, and 2 cases may go ahead.** The nurses are to have an 8 hour rest period at the end of the OR shift, whatever time that shift ends. Should the nurses be in past midnight on Saturday this will delay the start of the first case on Sunday morning. Should a priority 1 be booked, they must return regardless of the time. Statistics show that there is minimal priority 1 work after midnight on weekend nights so the impact of this is thought to be small and is being followed. The resident shifts will still be 8am –8 pm, but unless priority 1’s or 2’s are booked, activity is likely to conclude by 6 pm rather than 8 pm as it is currently.

We are keeping our 0800-2000h shifts for now. As you know this is technically home call. You are allowed to go home (with your staff’s permission) provided you aren’t needed for any patient care in house and you provide a number you can be reached at to both your staff and OR desk. If the OR shuts down around 5-6pm (no priority 1 or 2 cases), the same rules apply for you going home and potentially coming back before 8pm. Obviously specifics vary from shift to shift but you are still off duty after 8pm.

Welcome to the Administrative role! Looking forward to working with you!

Regards,

Joanna & Jon (July 2016)
Welcome to the MUMC Site!

Some of you are familiar with the routine at MUMC and others are new to the site. Hopefully this letter will help to fill in some gaps and make the transition to a new rotation a smooth one. I am available for questions or concerns at any time and you will find my contact information at the bottom of this letter.

Your administrative resident for this rotation is ______. He/She will provide an orientation for you if needed on your first day here. Usually this is done after you start your first case. The orientation generally includes the OR, PACU, L&D, and the location of the pediatric ER.

Please be punctual on the first day as your patient is expected to be in the OR by 07:50. Allow yourself time to find the scrub-ex machine (the OR front desk clerk will set you up with scrubs if you are new to the site), set-up your room, and familiarize yourself.

Here is a list of guidelines the RTC expects you to work by:

1. Administrative resident to assign all residents and learners at the OR front desk by 14:00.

2. You are expected to see your inpatients the night prior to surgery. Sometimes a pediatric patient can be added to a list late in the evening. If this happens after you have left MUMC and you are not aware of the last minute change it is not a problem. Often the on-call resident will be consulted to see the patient. If this does not occur it will be sorted out in the morning.

3. Trouble rounds are every Tuesday morning at 07:15-07:45 in the Anesthesia Library. Please be prompt to optimize the time for discussion. Trouble rounds should not delay you from starting the first case of the day.

4. If you are not working with the On-call anesthesiologist during the day, please check in with them at 17:00 for clarification of further duties if your list is still running. You may be expected to join the on-call staff or finish your ongoing case. The on-call anesthesiologist will ultimately make the decision based on the acuity of the on call case. Generally, we try to give you the best learning experience possible. If your list finishes before 17:00, please check in with the on call anesthesiologist for clarification of further duties.

5. The pager should be handed over person to person.
6. When leaving the hospital while on call, i.e. journal club, etc... please notify paging and L&D. The on call anesthesiologist must also agree to you leaving. The vast majority of the time this is not a problem.

7. It is your responsibility to ensure you have your daily evaluation filled out. Sometimes it is just easier to put the form on the anesthetic cart at the beginning of the day. If you do not have your evaluations collected, I will not be able to give you an evaluation and the rotation would be considered incomplete. Evaluation forms should be dropped off to Candice Stroud in the department of anesthesia. Please try to hand them in weekly so I have an idea of how things are going early on in the rotation.

8. You are a part of the Pediatric Trauma Team. Your supervisor is the Trauma Team Leader who is a Pediatric General Surgeon or a Pediatric Intensivist. Your role is airway management and on occasion line insertions. If this is new to you or you do not feel comfortable please articulate this to the TTL and call your staff for back-up early. Keep in mind your staff does not stay in house so a call sooner rather than later is a good thing.

9. We do not provide sedation services after hours to pediatric patients in the ER or trauma suite (with the exception of sedation for emergent airway management). All sedated procedures on all patients must occur in the operating room. The MRP wishing to book the case must speak directly with the staff anesthesiologist. Please direct them to do so.

10. APS at MUMC is covered by the staff anesthesiologist. This is done is for continuity of care and to prevent multiple care givers ordering narcotic medications. Please defer APS calls to your staff.

11. Labour & Delivery will not have a resident assigned each day unless there is someone doing an obstetrical rotation. If you are on call that day and carrying the pager but not assigned to L&D please contact them at 75459 and speak to the desk clerk and charge RN. Let them know that there isn’t a resident on L&D until 17:00. This makes your life easier and avoids
many unnecessary pages throughout your OR day. We try not to pull you from the OR list that you are doing. However, if there is an emergency on L&D or your assistance is required to ensure parturients receive epidurals in a timely manner you may be paged and asked to help out upstairs. Regarding weekends or after hours care, please see the MUMC OB/Peds policy outlining resident responsibilities while both services are running.

12. Most pediatric consults are done after 17:00 because we don’t like to pull you out of your OR list. However, if a child is critically ill and coming to the OR soon the staff on call may ask the day call resident to complete a pre-operative consult to help prepare for the case and optimize the patient as much as possible.

Please direct all concerns to your administrative resident or myself. I hope you have a great rotation at MUMC.

Thanks,

Tracey Bruce BSc MD FRCPC
Assistant Clinical Professor, Department of Anesthesia, McMaster University
Clinical Teaching Unit Director, HHS, MUMC Site
Contact Information: tlbruce1971@gmail.com; Cell or text: 905-512-9594
GUIDELINES FOR ANESTHESIA RESIDENTS AT ST. JOSEPH'S HEALTHCARE

Welcome to St. Joseph's Healthcare. Our hospital offers many opportunities for resident education. Within Hamilton we have the largest OR caseload & perform the largest number of regional anaesthetics. There is a busy obstetrical and acute Pain Service which offers a full range of up-to-date pain management options for postop patients 24 hrs/day, as well as a smaller but active chronic pain service managed by four staff anesthetists. St. Joseph's is the regional centre for renal dialysis and renal transplant. This creates a significant exposure to renal failure patients.

St. Joseph’s Healthcare is also the regional centre for thoracic, head and neck surgery as well as major urologic oncology. In addition, St. Joseph’s is the regional centre of excellence in bariatric and minimally invasive surgery, including robotic surgery.

Practical experience should be obtained in all of the above specialty areas. Clinical competence results from managing a large number and wide variety of cases while accepting increased responsibility. Residents should read around their cases and be prepared to discuss them with the responsible staff person. Preoperative assessment and anaesthetic consult experience will be supplemented by assignment to adult in-patient and out-patient consults.

To assist with case preparation we have a small anaesthetic library conveniently located in the Anesthesia Office near the OR suites. Four computers with multimedia capabilities are available in the anesthesia conference room. There is also a more extensive library on the 2nd floor of the Juravinski Tower.

A resident "on-call" room is located on the 2nd floor of the Mary Grace Wing.
Key access code information for the SJH OR is 33855#.

Contact persons within the department for specific areas of interest are listed for your convenience.

ADMINISTRATION
Dr. Janet Farrell – Chief
Michelle Barbera – Secretary

RESIDENT COORDINATOR
Dr. Peter Moisiuk

ACUTE PAIN SERVICE COORDINATOR
Dr. Turlough O'Hare

OBSTETRICAL UNIT COORDINATOR
Dr. Joel Hamstra

CHRONIC PAIN MANAGEMENT
Dr. Phil Chan
Dr. Mauricio Forero
Dr. Harsha Shanthana
The following rounds are an important component of residency training and attendance is compulsory. If unable to attend please notify the resident coordinator.

1) **TROUBLE ROUNDS** - Weekly - Tuesdays 0715 hours SHARP
   These should be presented by the residents. A staff person is assigned to attend these rounds each week. One case presented by staff anaesthesiologist done in the format of an oral exam question and one case by a resident.

2) **MORBIDITY & MORTALITY ROUNDS** - 2nd Wednesday of each month at 0730 hrs. (Prepared by staff)

3) **RESIDENT ROUNDS** - 4th Wednesday of each month at 0730 hrs. (Prepared by residents)

4) **CITYWIDE ROUNDS** - 1st Wednesday of the month at 0730 hrs.

Residents will be asked to outline any specific needs or expectations of their rotation at SJH at the start of each rotation.
GUIDELINES FOR ANESTHESIA RESIDENTS AT ST. JOSEPH'S HEALTHCARE

RESIDENT DUTIES

1) **SENIOR RESIDENT**

1) Organize resident call schedule as per program policy.

2) Assign Pre-op Clinics for all residents.

3) Assist in teaching during undergraduate electives.

4) Assign residents and medical students to OR lists in a.m. of the day prior to surgery (or arrange for alternate).

5) Act as liaison between residents & resident coordinator

2) **ALL RESIDENTS**

1) Read around cases and be prepared to discuss with staff person.

2) Prepare OR room in advance of scheduled start time for all elective lists.

3) Attend Trouble Rounds on Tuesdays at 0715-0800.

4) Present at Resident Rounds on 4th Wednesday of the month at 0730.

5) Attend ECT treatment sessions on Fridays before attending to assigned preop clinics – *Note ECTs are done at the West 5th Campus, with the occasional ECT being done in the PACU.*

6) Attend two Adult Preassessment/Consult Clinics per month to be scheduled by senior resident. Residents are encouraged to arrange with senior resident to be assigned to lists involving patients they have assessed in the clinic.

7) Residents with no previous epidural experience will be supervised for a minimum of ten epidural insertions. This is waived for those previously certified at MUMC.

8) Residents will keep a log of cases, and will receive a guideline for suggested case experience which should optimize the resources at SJH (see following section).

9) Residents will be assigned to the Acute Pain Service/Day Call in lieu of an OR list. Such days are recommended early in the rotation for new junior residents.

10) Residents are encouraged to assist in newborn resuscitation on L & D whenever possible.

11) Residents have the option to attend Chronic Pain Clinics on a voluntary basis. This is best done by being assigned to the Chronic Pain staff person’s OR list on the day of his clinic. Check with the secretary for up-to-date scheduling.
12) Problems should be addressed to the Senior resident or CTU Director. In their absence problems could be addressed to the Chief of Anesthesia.

13) In-patients on an OR list should be seen by the resident the evening before surgery and appropriate lab tests, IV's and preop orders arranged. If there are any concerns regarding the patient, the resident should attempt to discuss these with the assigned staff person, if necessary, at home. If the staff person is unavailable the on-call staff anesthetist should be contacted for advice.

14) Residents should not start cases without the knowledge of the staff anesthetist unless previously arranged.

15) Residents are responsible for completing the anaesthetic record as accurately as possible.

16) Residents are responsible for completing the narcotic usage card at the end of each day in the OR and returning unused narcotics to the Accudose.

17) Patients should not be left alone in the OR. Distractions from the case should be kept to a minimum. This includes the use of cell phones, computers, and reading materials.

18) Any problems during a case should be immediately reported to the staff anesthetist while remedial action is being taken.

SUGGESTED CASE EXPOSURE UNIQUE TO ST. JOSEPH’S. RESIDENTS SHOULD TAKE ADVANTAGE OF:

1) Thoracic – as per subspecialty rotation guidelines.

2) Regional Anesthesia – as per subspecialty rotation guidelines.

3) Renal Transplant

4) Urologic oncology. Cases include: radial nephrectomy, crystectomy, prostatectomy.

5) Bariatric cases

6) Upper airway, cases include: laryngectomy, tracheal resection, commando case of mouth, thyroidecetomy, laser surgery and microlaryngoscopy and rigid bronchoscopy.

7) Ambulatory surgical cases: cystocopy, arthoscopy, peripheral limb surgery, plastic surgery, gyne or minor ENT lists.

8) ECT treatments
GUIDELINES FOR ANESTHESIA RESIDENTS AT ST. JOSEPH'S HEALTHCARE

St. Joseph’s Hospital
Resident Call Responsibilities

Day Call
- 08:00 – 17:00h
- Will check in with the staff anesthesiologist covering OB/APS
- The day call anesthesia resident will renew "Stat Packs" in L & D case rooms at the start of their shift.
- The resident will participate in the booked elective caesarian sections that morning. If there are no booked C/S that day, the resident will round on APS patients with either the APS nurse or the staff anesthesiologist on the OB/APS service.
- Any in patient consults will be seen with a priority being placed on the patients going to the OR that afternoon or evening and reviewed with the staff anesthesiologist on the OB/APS service.
- The day call resident will be responsible for labour epidurals during their shift under the supervision (as necessary) by the OB/APS staff anesthesiologist
- Will respond to “Code Blue” pages as necessary
- At noon the resident will check in with the 1st on call anesthesiologist in the OR as “pink slip” cases will be starting. The resident can participate in these on-call cases until the end of their day call shift. The resident is responsible to communicate with the OB/APS staff that they are going to the OR and continue to cover L&D calls as necessary.
- Handover to the night call resident will include any unfinished consults from the day, any pertinent information about L&D patients and APS patients that may need to be followed up on during the evening hours.
- Exceptions: PGY4 residents doing Thoracic Anesthesia or Regional Anesthesia are expected to do their subspecialty rotation cases during the daytime hours and are exempt from covering L&D and in-patient consults. They are expected to still respond to “Code Blue” situations.

Night Call; (Weekend & Holiday Day Call)
- 17:00 – 08:00h
- The day call person is responsible for renewal of the “Stat Packs” in L&D
- Will participate in urgent/emergernt cases in the OR as they occur.
- The resident will provide labour epidurals during their shift and participate in C/S under the direction and supervision of the 1st call staff anesthesiologist
- In patient consults are to be seen as requested by other hospital services. However, consults do not need to be done after 23:00h, unless the patient is going to the OR that night or is booked as the 8am case the next day. Any consults that were not seen during the call shift are to be handed over to the resident coming on call at 08:00h
- The program also does not support the wakening of residents by other services to inform them of consults that are not urgent. Notification can be provided the following day after 0700 hours.
- Will be 1st call for the APS patients.
GUIDELINES FOR ANESTHESIA RESIDENTS AT ST. JOSEPH'S HEALTHCARE

Where things are
- ORs are on the main floor, along the very back hallway.
  - Entrance can be found at the end of the long hallway at the back of the hospital, behind the ER OR via the surgeon’s lounge
  - Surgeon’s lounge is located in the back hallway. Go past Tim Horton’s through a door way in a long hall. Turn left. Door is the second one on the right (unmarked).
- The change rooms are located through the back end of the surgeon’s lounge
- Scrubs are located in the ScrubEx Machine just outside of the OR receiving desk/materials management office/nurse managers office
- Main areas within the OR section
  - New ORs and “Old ORs – called Mary Grace ORs”
  - Patient holding/Same day: Up one level from the Main ORs (accessible via elevator or secret stairs)
  - PACU
- Labour and delivery is on the 2nd floor, above the ICU
- There is a Tim Horton’s open until 11:30pm in the main lobby and a cafeteria on the 2nd floor
- The anesthesia office is located behind the old ICU, near where angios are performed. Access Code is 243
- Call room key is attached to the pager. Call room is in the ‘call room wing’ Room #? (We’ll show you)
- Anesthesia trouble rounds room – Access Code is 2430#
- New OR lounge – Access Code is 159#

Lockers
- Second locker - bay closest to the old nursing lounge “Anesthesia Resident – 25-13-33
- Men’s changeroom:
  - Locker 17 “anesthesia resident” 50-19-32
  - Locker 56 “anesthesia resident” 5-50-32
  - Locker 59 “anesthesia resident” ANES_

Pager
- Except for certain academic days (as noted on the schedule) the ‘on-call person’ must carry the pager at all times.
- Day/Night call person will carry the pager
- For weekday call, You will be responsible for the pager until 5pm
  - Anyone on ‘General’ or ‘OB’ rotations will do OB/APS/consults/on-call room AND attend code blues when on day call. You will be responsible for the pager until 5pm
    - You will start on OB to do booked sections on L&D (first one is usually at 8am), the epidurals and consults as directed by the OB/APS staff.
• AT NOON, you will let the OB/APS staff person know that you will be heading down to join the on-call staff for the beginning of the MAIN OR on-call list
  • You may still be required to do consults (and epidurals) if the OB/APS staff requests
    ○ Anyone on Subspecialty rotations (Thoracics and Regional) will be assigned to a subspecialty OR. You will be responsible for Code Blues ONLY and will have to carry the pager until 5pm also. Once your elective room is done, you are expected to check in with the on-call staff to participate in the on-call room until 5pm.
    - The pager can be left in the paging office (first floor, across from the information desk) on academic days or some weekday daytimes, if no other resident is available to take the pager.

**Daily Assignments**
- Assignments for the next day will be done by the admin resident prior to 1400 every day.
- Daily assignments will be either emailed out or hand written and posted on the bulletin board beside the male changeroom up to your admins discretion. Usually, they will also be added to the following day’s OR list formally by Michelle Barbera. (Sometimes this doesn’t happen – so the bulletin board or your email is the place to go)
- If you are doing a sub-specialty rotation, Dr. Moisiuk might ask you to track your number of clinical days
- It is your responsibility to check the list the day before and see any inpatients (i.e. as a formal consult) you may have for the following day. Try to get in touch with our staff for the following day if you have any questions or concerns about the case.
- You are expected to read around your cases and be prepared with a plan for the day. Feel free to ask the staff or senior residents for advice/help

**Call**
- During the week:
  ○ Day call is 8am-5pm
  ○ Night call is 5pm-8am
- Weekends
  ○ Day call is 8am-5pm
  ○ Night call is 5pm-8am
- *For both day call and night call, please arrive AT LEAST 15 MINUTES prior to your call start time* (this applies to weekends also). This will allow for handover time. It will also ensure the ‘outgoing’ resident doesn’t have to stay longer than necessary.
- If you are the person coming on call, it is your responsibility to page/call/text the person coming off call in order to get the pager.

**Evaluations:**
- Completed evaluations are MANDATORY for each day you work, regardless if you are in the OR, Clinic, or On Call or off service
- If there are any evaluations missing; final evaluations for the rotation cannot be filled out
- If you would like a mid-evaluation rotation from Dr. Moisiuk, please let him or your admin know. Otherwise, you will receive a face-to-face evaluation from him at the end of the rotation.
- All evaluation forms are available in the Anesthesia Conference Room (trouble rounds room) – Access Code 2430#
  o Evaluations should be filled out ON THE DAY you work with a particular staff and returned to Candice Stroud in the McMaster anesthesia office weekly.
- 360° Evaluation forms can also be found in PACU (dictation room) as well as on L&D and in the anesthesia office
  o These forms are to be returned to Candice Stroud via inter-hospital mail by the individual completing the evaluation (see section on 360° Evaluations in the Resident Handbook)
- Pink forms are also there for elective residents

Clinic
- Each resident has been assigned 1-2 clinic day(s). You may be asked to do day call on a clinic day. On these days, you are ONLY responsible for Code Blues. Epidurals, consults, APS questions should be directed to the OB/APS daytime staff person.
- Clinic is located on the 4th floor of the Martha wing
- Clinic days are Tues/Fri
- On Tuesdays please attend trouble rounds, then proceed to clinic.
- On Fridays please join the 2nd on call anesthesiologist in PACU or West 5th site for ECTS (start at 7:30am – parking pass for W5th site can be obtained the day before from Michelle Barbera department secretary)

Trouble rounds
- Trouble rounds are Tuesday 0715am sharp in the anesthesia teaching room, in the old OR section beside the entrance to cysto. Access code: 2430#. We are expected to have our rooms ready prior.

Wednesday Morning Rounds
- Mandatory for all residents.
- Rounds/topics are posted in the anesthesia office on the bulletin board.
- At SJH, these are typically held in the Campbell auditorium (Juravinski Tower, Level 2)
- If there are no SJH rounds, we are expected to attend HHS rounds
- On days that you are in the OR after rounds, you are expected to have our ORs ready ahead of time (if rounds are at SJH).

Call Switches
- Any call changes amongst yourselves must be approved by myself and Dr. Moisiuk
- Once approved, you must call switchboard to inform them of the change
- Also, a reminder that calls may no longer be traded between sites unless there has been approval by the CTU director and Program Director.

Sick Day Policy:
- If you are sick and cannot come to work, this must be communicated with myself, Dr. Moisiuk and Candice Stroud via email (or phone) as early in the morning as possible. (At least by 07:00!)
- Also, please call the OR so that your staff can be informed of your absence.
- Please know that it’s ok to be sick and you won’t be penalized for this at all, it’s just to ensure that we know you’re not lying in a ditch somewhere and so that your staff for the day will know you’ll be absent
Med Students
- There are elective and core medical students rotating through SJH this block, and it is possible that you will be assigned to a room with them on occasion. The admin resident will do their best to keep this to a minimum.

Code Blues
- When you attend Code Blues, make sure to write a note about your involvement
- Also, please collect a sticker with the patient's info, and write the following info on it: “Code Blue, Start time, Stop time, Date, your name, your staff's name, and any procedures you did if any” and hand it in to Michelle Barbera in the anesthesia office. These billings are used to fund the Uganda exchange program.

Difficult Situations
- It is inevitable that during your residency training and career, you will be faced with emotionally difficult situations (patient deaths, serious traumas, adverse events, and major interpersonal conflicts to name a few).
- If this occurs and you feel that you cannot continue with your clinical duties for your shift (daytime or nighttime), please inform your staff. They will release you if needed, which is supported wholeheartedly by the program leadership. If possible, contact the admin resident who will attempt to find a replacement for that shift.
- Regardless of whether you feel able to continue on with your clinical duties, please contact the CTU director, admin resident and chief resident within a few days if an event like this occurs (via email or phone), who will help organize appropriate debriefing. Counseling resources are available.

Final words...
- A not so gentle reminder that residents ARE REQUIRED to fill out 5 faculty evaluations per rotation. This is MANDATORY and will be tracked by the program.
- On the first day of the rotation the senior admin resident will orient you to the hospital in person.

SJH Orientation Checklist
- Surgeon’s Lounge
- Changerooms and scrubs
  - Daily assignments on bulletin board
- Old OR Section
  - Cysto
  - Anesthesia teaching room
- New OR Section
  - ORs
  - Core
    - MH Cart
    - Crash Cart
    - Difficult airway cart/Airway adjuncts
    - Bronchs
    - Other adjuncts
- Front desk
- Accudose Machines
- PACU
- Block Rooms
- SDS/Patient holding

- Tim Horton’s
- Paging
- Anesthesia Office
  - Evaluations
  - Evaluation Drop Box
- ICU
- Labour and Delivery
  - ORs
- Call room
- Cafeteria
- Anesthesia trouble rounds room
Residents in the Clinic

When you are in the clinic, you will see patients (mostly) independently. Depending on your level of training, you will need to be supervised during some of your assessments; even senior residents will need to discuss several or even many of their patients with the attending faculty. As always, the principles of graded responsibility and common sense should prevail.

Although clinic experience is not an immediately “life or death” encounter as in the operating room, it is worth noting that, in the words of one of our clinical chiefs, “Poor assessments (in the clinic) result in OR cancellations and delays. Less impactful but just as important, poor assessments often result in colleagues taking on unnecessary risks or needing to reforge a doctor-patient relationship when suggesting alternate care. About half of all patient complaints stem from communication issues in the clinic. Some of these require formal and time-consuming mediation between staff and patient.” The preceding is not a specific comment on residents’ work; both faculty and residents need to ensure that their work in the clinic receives the same level of diligence as their work in the operating room.

Residents need to be supervised and evaluated in the clinic. It may take some pro-active action on your part. I would suggest discussing it with faculty first thing in the morning so that a plan can be arrived upon regarding how to make that happen.

The minimum requirements are:

PGY2: **One-two observation(s) in the day is a minimum.** In addition to this, direct presentation and discussion of any moderate-highly complex patient would be expected.

PGY4-5: For more senior residents, no observation is required but please ensure you are formally presenting at least 2 complex cases.

Please discuss any relevant patient with your faculty member(s). The guidelines are not meant as a limiting factor, rather to ensure that the encounters are such that meaningful evaluation and feedback can take place.

For all residents, please present an evaluation form for completion. Candice has them in the office, which will make it easy for residents at the MUMC clinic. I’m sure it could be emailed on request to those at SJH. All of the clinic evaluations for your academic year will be collated as one and an overall (separate) ITER will be completed based on those evaluations. **PLEASE ENSURE YOU ARE GETTING YOUR CLINIC EVALUATIONS COMPLETED.**

The following is the content of the letter that has been sent to faculty (July 2014):

A brief note to bring attention to the need for resident supervision and evaluation in the pre-operative clinics.

When residents are in the clinic, their performance must be assessed and evaluated as with any other clinical encounter. It poses a greater challenge as direct observation does not occur as naturally in the clinic as it does in the operating room environment. Nonetheless, I would request that junior residents (PGY2’s) be observed directly for at least one, preferably two of their patient assessments at each time they are in the clinic. Observation can be shared amongst staff in settings where more than one staff person is in the clinic. When their performance is directly observed, feedback can be given based on their performance with the
patient as well based on their overall assessment and generation of plan. In addition to their observed
encounter(s), junior residents should be liberally presenting and discussing the patients that they see with
their supervising faculty member(s).

More senior residents should be presenting at least 2 cases (preferably more) in a formal fashion to faculty
during their clinic day; challenging cases should be selected in these instances. For the case of senior
residents, evaluation and feedback would be based on their presentation of the case (assessment and
generation of the plan).

As always, residents should be seeking faculty guidance as required on any patient they see, according to the
complexity of the case, their own experience level and the comfort level of the attending staff person. The
request above is a minimal request and is not meant to constrain or restrict resident-faculty interaction in the
clinic.

Residents should present an evaluation form to the most appropriate faculty member at the end of the day.

I will also be reminding the residents of these guidelines so everyone is on the same page. Please contact me
with any questions or concerns.

Best regards
Karen Raymer

July 30, 2014.
Please see below on Behalf of Dr. Kan Ma,

To Department of Anesthesia,

**Perioperative Manual iBook** is a scholarly project that Dr. Cappello and I, in collaboration with Dr. Ling, Dr. Dower, Dr. Raymer and Dr. Kolesar have been working on for the past while.

The interface compiles the some of the most recent and relevant perioperative guidelines in Anesthesia and allows for quick and easy access on any mobile device.

We often refer to existing guidelines to aid our clinical decisions (ex. how long to hold dabigatran for someone with CrCl of 47, or when to order stressed-dose steroid, or when to order postop oximetry bed for suspected OSA). It takes time to dig up the relevant guidelines on the internet, then find the specific page and the specific info we need.

What we lack in Anesthesia is a centralized source of information, a one-stop-shop where we can browse through these guidelines.

**Perioperative Manual iBook** aims to address such question, by summarizing information and presenting in such manner that is easy for reader to access on any mobile gadgets. References to published guidelines and textbooks are provided at the end of each section.

**iBook  (iPad, MacBook user)**

1) Click to download
   https://drive.google.com/file/d/0B_JVswp3XOfib0RoLTNSUmV6LTQ/view?usp=sharing

2) Click . New window will pop up. The page will be blank for 1-2mins. Please be patient.

3) After download, **Open in "iBooks" app** (can be downloaded at App Store)

4) iBook will launch. You must view in landscape.

**PDF (iPhone, and all other smart-phones and tablets that support PDF)**

1) Click to download
   https://drive.google.com/file/d/0B_JVswp3XOfib0RoLTNSUmV6LTQ/view?usp=sharing

2) Open on any smart-phones and tablets that support PDF

3) Contents page (page 2) allow you to click and navigate to specific section

This is version 1.0, our very first attempt at this endeavour. If you have any technical issues or any concerns regarding the format or the contents go the manual, please feel free to contact heung.ma@medportal.ca. We always welcome feedbacks to make this a better tool.
Adjuvant Informatics Corp.

Acute Pain Service Manager

User Manual

November 2004

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1. APS Manager™ Basics

Learn how to use Adjuvant Informatics APS Manager™ documentation and other resources, and set up the APS Manager™ workspace to suit your acute pain service.

1.1 Welcome to APS Manager™

APS Manager™ is the most comprehensive clinical database solution for managing acute pain. Developed by anesthesiologists and field tested since 2001, APS Manager™ has been designed to meet the administration, data collection and quality assurance, and research needs that are unique to your acute pain service.

This section covers the following topics:

Logging into APS Manager™
Changing the APS Manager™ password

1.1.1 Logging into APS Manager™

1. Do one of the following:
   - Select Start > Programs > Adjuvant Informatics > APS Manager™ from the Windows Start Menu.
   - In the Windows desktop, double-click the APS Manager™ icon.

   The APS Manager™ Login dialog box appears.

2. In the facility list, select the facility you want to open.

3. Select the physician that is on-call on the acute pain service today.

4. If necessary, enter the correct password.

5. Click the Enter button.
1.1.2 Changing your password

To protect patient confidentiality, you can use a password to prevent unauthorized access to APS Manager™. This is a global password and is available to all users of APS Manager™.

How to change the APS Manager™ password

1. With the APS Manager™ Login dialog box open.
2. Click the Change Password button.
3. Enter the old password. Leave this field blank if you are entering the password for the first time.
4. Enter the new password.
5. Enter the new password again.
6. Click OK.

1.1.3 Changing your license key

To protect patient confidentiality, you can use a password to prevent unauthorized access to APS Manager™. This is a global password and is available to all users of APS Manager™.

How to change the APS Manager™ password

1. Select Help > About from the menu
2. In the License key section, click the Update button.

   The License key dialog appears.

3. Enter the new license key.
4. If satisfied with your changes, click the OK.
5. Click OK.
1.1.4 APS Manager™ Help System

The APS Manager™ help system is accessible through the Help menu. All APS Manager™ Help appears in the Help viewer provided by Microsoft HTML Help.
1.2 Exploring the Workspace

To get the most our of your APS Manager™ experience, you should understand the basic concepts behind the APS Manager™ workspace and how to set preferences that fit your acute pain service.

- The workspace layout
- APS Manager™ workspace elements
- The APS Enrollments window
- The APS Events window
- The Search toolbar
- The APS Events toolbar
- Reports in APS Manager™
- Using context specific edit fields
- Using toolbars

1.2.1 The Workspace Layout

APS Manager™ provides an all-in-one-window integrated layout. This layout was designed as a portal to the day-to-day operations of an acute pain service.
Related topics:

**APS Manager™ Workspace elements**

### 1.2.2 APS Manager™ Workspace Elements

This section briefly describes some elements of the APS Manager™ workspace.

**The Search toolbar** lets you search for APS enrollments using the most commonly used search criteria.

**The Events toolbar** contains buttons that provide access to the most commonly performed tasks.
The APS Enrollments window displays the current set of enrollments. Generally, the enrollments displayed in this window are the patients currently enrolled on your pain service; however, this list can also display the enrollments that were found as a result of a specific query.

Enrollment Details/Current Status window displays a snapshot of the currently selected enrollment, providing the most up-to-date information about the patient's status.

The APS Events window displays the set of events, in chronological order, that have occurred for the enrollment that is currently selected in the APS enrollments window.

1.2.3 The APS Enrollments window

The APS enrollments window displays a list of enrollments that are currently being managed. Generally, the enrollments displayed in the list will correspond to the patients that are active in your acute pain service. However, the enrollments window may also be used to display the result of an enrollment query. In this case, the caption bar at the top of the enrollments window will describe the query that was performed.

By default, the enrollments displayed in the window are sorted by their location (Ward/Room/Bed). You can change the order in which the enrollments are displayed by clicking your mouse on the appropriate column header.

To open an enrollment, double-click the enrollment item in the list.

Note: To display the list of enrollments that correspond to the patients currently active in your acute pain service, just click the 'Today' button in the toolbar.

Related topics

[Working with enrollments]
1.2.4 The APS Events Window

The APS events window displays the list of events for the enrollment that is currently selected in the APS enrollments window. These events include the enrollment, orders for patient controlled analgesia, orders for epidural analgesia and regional blocks, orders for adjuncts, visits, critical incidents and discharge from the service.

Note: To view all APS enrollments for the patient whose enrollment is currently selected, just click the 'APS History' button.

Related topics:

Working with APS Manager™

1.2.5 The Events Toolbar

The Events toolbar contains common commands and options related to managing your current enrollments and, in particular, the enrollment that is currently selected in the APS enrollments window.
The following commands appear in the Events Toolbar:

**Enroll a Patient** allows you to add a new patient to your acute pain service.

**Create a PCA Order** lets you create a new order for patient controlled analgesia for the patient whose enrollment is currently selected.

**Create an Epidural Order** lets you create a new order for epidural analgesia for the patient whose enrollment is currently selected. Note: To create an order for a regional block, click the small down arrow to the right of 'Epidural' to display the list of available regional block orders.

**Discontinue a Drug Order** allows you to discontinue the drug order that is currently selected in the events window.

**Visit a Patient** allows you to record the visit for the patient whose enrollment is currently selected.

**Report an Incident** lets you record the details of a critical incident/notable event for the patient whose enrollment is currently selected.

**Discharge a Patient** lets you discharge the patient, whose enrollment is currently selected, from the acute pain service.

**View Today's Enrollments** refreshes the enrollments window to display the patients that are currently enrolled in your acute pain service.

**Print Patient List** lets you print a report listing the patients that are currently enrolled in your acute pain service. Note: By default, clicking this button will print a detailed active patients report; however, this button can be configured to print a concise active patients report.

**Print 'Event' Report** lets you print a report that is associated with the event that is currently selected in the events window. This can be a progress report, PCA order form, epidural/regional block order form, or incident report.

**Related topics:**

[Working with APS Manager™](#)

### 1.2.6 The Search Toolbar

The search toolbar provides you with the most commonly used enrollment queries. Using these standard queries you can quickly find any enrollments that were entered during the past year. You can also focus your search for enrollments for a specific ward or for patients that have had a critical incident.
The following queries are supported by the search toolbar:

**Active patients by date** searches for the enrollments that were active on your service on a specific date, week or month.

**Active patients by ward** searches for the enrollments that were active on your service for a specific ward either today, yesterday, during the past week or the past month.

**Critical incidents** searches for enrollments in which a critical incident occurred during today, yesterday, the past week, past month or past year.

Note: If the search toolbar is not visible, and you would like to use it, select View > Toolbars > Search Toolbar.

Related topics:

- Using the Search toolbar
- Exploring your acute pain service
- Displaying toolbars

### 1.2.7 Reports in APS Manager™

APS Manager can generate several types of reports to help you run your acute pain service.

The **Active Patients List** provides a list, sorted by location, of each patient currently enrolled in the acute pain service. There are two forms of this report. The detailed version provides rounding physicians and nurses with an extensive description of each patient’s current status. Conversely, the concise version provides a much simpler overview of each patient's status.

The **Progress report** provides a comprehensive description of events, in chronological order, that have occurred while a patient has been enrolled in the acute pain service.
The Activity report provides a tally of all the events that occurred in the acute pain service over a specified period of time or for some user defined query.

The Incident report presents a detailed description of a critical incident/notable event.

The Incident Summary report provides both a tally of the types of incidents/notable events that have occurred to patients enrolled in the acute pain service over a specified period of time as well as a detailed description of each incident that occurred.

The Personal Billing report provides an itemized list of billable events for a specific physician or group of physicians.

The Group Billing report provides administrators with a list of billable events for all physicians that contribute part of their events to a group fund.

Related topics:

- Visiting patients with the Active Patients report
- Charting a patient's progress with the Progress note
- How busy is your acute pain service.htm
- Reporting critical incidents
- Getting your billing information

1.2.8 Using context specific edit fields

To simplify data entry, APS Manager™ contains specialized edit context sensitive edit fields. The behaviour of context sensitive edit fields changes depending on the type of data being entered and the content of other fields within the same context. For example, a field used to enter a drug dosage always accepts a measurement but the units of the measurement are determined by the associated drug field.

This section contains the following topics:

- Working with date fields
- Working with physician and nurse fields.
- Working with drug fields.
- Working with measurement fields.
- Understanding required and optional fields.
1.2.8.1 Working with date and time fields

The need to specify date and time values is a common occurrence in APS Manager™. To simplify the entry of date and time values and minimize incorrect data, APS Manager™ contains specialized date and time fields.

All empty date fields in APS Manager™ display a hint as to the order of the day, month and year parts when using the keyboard to enter date values.

Many of the dates used in APS Manager™ are associated with activities that occur only once during a patients stay in the acute pain service. For example, the date that a person sits up in bed and the date the epidural catheter was removed.

The appropriate date can be applied to these fields simply by clicking the box next to the date field or by pressing the spacebar when the box is focused. Similarly, the date field can be cleared by clicking the box when it is checked.

Yet another way to enter dates is to click the arrow in date field or press the down arrow key when the date field is focused.

Once the date drop down is visible you can use either the keyboard or mouse to navigate the calendar and select the appropriate date. To close the drop down without selecting a date just press the Escape key or click the mouse outside the boundaries of the drop down window.
1.2.8.2 Working with physicians and nurse fields

Many of the forms and dialogs contained in APS Manager™ require you to select individuals from your staff roster. To make it easier to select physicians and nurses and reduce data entry errors, APS Manager™ provides specialized physician and nurse fields.

When you start typing in the nurse and physician fields, APS Manager™ will look up all the physician or nurse whose name matches the text that you have entered. Once the physician you want is selected in the drop down, you can press the Tab key to automatically selected that person.

Alternatively, you can click the green arrow in the field or press the spacebar to display a drop down list that you can use to select the staff member you want.

If the staff member you want is not in the list, click the Add button. Enter the physician or nurse’s information into the dialog box that appears and click Add.

Related topics:

  Declaring a physician's roles
  Working with physicians
  Working with nurses
1.2.8.3 Working with drug fields

When creating medication orders in APS Manager™, you must select one or more drugs to be prescribed. To make this step easier, APS Manager™ uses a specialized drug edit field.

You will notice when selecting a drug, only those drugs that are applicable to the current context are visible. For example, when selecting a drug for the antiemetic field, only antiemetic drugs are displayed. This optimization is made possible by assigning one or more indications to a drug when it is added to the formulary. For more information see working with drug indications. Only drugs with indications that correspond to the context of the edit field will be displayed.

Note: You will notice that when a drug is selected, other fields used in the same context, such as dosages and frequency, may be affected by the selection. For example, if the selected drug has a standard adult dosage and you are prescribing the drug to an adult patient, the dosage will be automatically entered into the dosage field.

Tip: When you start typing in a drug field, APS Manager™ will automatically search the drugs associated with the fields and select the drug that matches what you have entered. If the drug selected by APS Manager™ is correct, just press the Tab key and the drug will be automatically selected.

Related topics:

Working with drugs
1.2.8.4 Working with measurement fields

There are many fields present in APS Manager™ that are used to record measured values, which include such items as drug dosages, weights and vital statistics. Measured values consist of a numerical value and set of units that give the numerical value meaning, for example 2.0 mg.

To prevent errors associated with entering a value for a measurement without specifying the units, and vice versa, APS Manager™ uses a specialized measurement fields.

Every measurement fields is assigned a unit(s) which is automatically applied to the value entered into the field. For example, if the SI unit milligrams is assigned to the PCA bolus dose field and you enter the value 2, the value will automatically be saved as 2 mg.

Some fields, such as the epidural infusion rate, are always assigned a single unit(s), in this case milliliters per hour. Other fields, such as the PCA bolus dose, may have different unit(s) assigned to them depending on their context. For example, if you select a PCA drug that is dosed in milligrams then all values entered into the PCA bolus dose field will be automatically registered as milligrams. Similarly, if you select a PCA drug that is dosed in micrograms, then all values will be automatically registered as micrograms.

1.2.8.5 Understanding required, optional and ignored fields

The edit fields contained in APS Manager™ are special in that they allow you to configure what fields are necessary and what fields can be ignored.

To ensure that critical information is entered, some fields are classified as required. Required fields can be identified by the small green square displayed in the bottom left corner of the field.

To save any of the forms contained in APS Manager™, you must fill in all of the fields that are required. If you are unsure what fields are missing from the from, just click the What's Missing button.

Every acute pain service is different and information that is important in one service may not be important to another. To manage this requirement, APS Manager™ lets you specify what
fields are optional and what fields can be ignored. Optional fields can be identified by the small yellow square in the bottom left corner. When using the keyboard to fill in the form, the tab key can be used to advance from one field to another. Fields that are optional will be included in the tab order.

Alternatively, ignored fields will not be included in the tab order and will be skipped over. Ignored fields can be identified by the small red square in the bottom left corner.

Although you cannot change which fields are required, you can ignore an optional field by clicking the small yellow square. Similarly, you can make an ignored field optional by clicking the small red square.

1.2.9 Using Toolbars

APS Manager™ contains several tools to help you manage the daily operations of an acute pain service.

The Events toolbar provides an easy way to manage the patients enrolled in the acute pain service by providing easy access to most commonly performed tasks. The Search toolbar enables you to quickly find a specific patient, or group of patients, using the most common search criteria.

This section covers the following topics:

Displaying toolbars
Using the Search toolbar
1.2.9.1 Displaying Toolbars

The Events and Search toolbars help with the daily management of your acute pain service. You can choose to display the toolbars as necessary.

To display or hide the Events toolbar

Select View > Toolbars > Events Toolbar

To display or hide the Search toolbar

Select View > Toolbars > Search Toolbar

Related topics

The Events toolbar
The Search toolbar

1.2.9.2 Using the Search Toolbar

The Search toolbar enables you to quickly find a specific enrollment, or collection of enrollments, using the most commonly used search criteria. The result of each search will cause a new collection of enrollments to be displayed in the Enrollments window.

Finding enrollments active on a specific date or sequence of dates

In the Search toolbar, double-click 'Active Patient's by date' and do one of the following:

If the date you want occurred during the past couple of days, click either Today or Yesterday.
If you want all enrollments for the past seven days, click Past Week.
If you want a specific date that occurred during seven days, double-click 'Past Week' and click the date you want.
If you want all enrollments for the past 30 days, click 'Past Month'.
If you want a specific date that occurred during the past 30 days, double-click 'Past Month' and click the date you want.
If you want a specific date that occurred during the past 180 days, double-click 'Past Year and click the date you want.
Finding enrollments active on a ward for a specific date or sequence of dates

In the Search toolbar, double-click 'Active Patient's by ward' and do one of the following:

If you want the enrollments active on specific ward as of today, click the ward you want.

If you want the enrollments active on a specific ward for the past 7 days, double-click the ward and click 'Past Week'.

If you want the enrollments active on a specific ward for the past 30 days, double-click the ward and click 'Past Month'.

Finding enrollments with critical incidents for a specific date or sequence of dates

In the Search toolbar, double-click 'Critical Incidents' and do one of the following:

To view all of the incidents that occurred today click 'Today'.

To view all of the incidents that occurred yesterday, click 'Yesterday'.

To view all of the incidents that occurred in the past seven days, click 'Past Week'.

To view all of the incidents that occurred in the past 30 days, click 'Past Month'.

To view all of the incidents that occurred in the past 365 days, click 'Past Year'.

Note: To make the Enrollments window display the patient's currently enrolled in the acute pain service, click the 'Today' button in the Events toolbar or press the Ctrl and T keys at the same time.

Related topics

The Enrollments Window
2. Setting Up APS Manager™

This chapter contains the following sections:

- Describing Your Acute Pain Service

2.1 Defining Your Acute Pain Service with APS Manager™

For APS Manager™ to be effective, you need to first describe your acute pain service. This process includes defining your hospital network, assigning staff to the acute pain service and building a drug formulary. With this foundation in place you will be able to efficiently and accurately manage the day-to-day operations of your service.

This section contains the following subsections:

- Describing your hospital network
- Describing the people in your service
- Building a drug formulary

2.1.1 Describing your hospital network

This subsection covers the following topics:

- Working with facilities
- Working with wards
2.1.1.1 Working with facilities

Adding a new hospital to the network:

1. Select Setup > Facilities from the menu. The Facilities dialog box appears.
2. Click the Add button. The Facility dialog box appears.
3. Enter the attributes that describe the facilities. **Tip:** You will not be able to save the facility unless you give it a name.
4. Click Add.
5. Click OK.

Changing a hospital's attributes:

1. Select Setup > Facilities from the menu. The Facilities dialog box appears.
2. In the facilities list, select the facility that you want to change.
3. Click the Edit button.
4. Make your changes in the dialog box that appears.
5. If satisfied with your changes, click Update.
6. Click OK.

Removing a facility from the network:

1. Select Setup > Facilities from the menu. The Facilities dialog box appears.
2. In the facilities list, select the facility that you want to change.
3. Click the Delete button, then confirm that you want to delete the facility.
4. Click OK.

**Warning:** If you remove a hospital from APS Manager™, you will no longer be able to view any data associated with it.
2.1.1.2 Working with wards

Adding a new ward to the current facility:

1. Select Setup > Wards from the menu.
   The Wards dialog box appears.

2. Click the Add button.
   The Ward dialog box appears.

3. Enter the name of the ward and a brief description. For example, PACU and Post Anesthetic Care Unit.
4. Click the Add button.
5. Click OK.

Changing a ward:

1. Select Setup > Wards from the menu.
   The Wards dialog box appears.
2. In the wards list, select the ward that you want to change.
3. Click the Edit button.
4. Make your changes in the dialog box that appears.
5. If satisfied with your changes, click Update.
6. Click OK.
Removing a ward from the current facility:

1. Select Setup > Wards from the menu.
   The Wards dialog box appears.
2. In the wards list, select the ward that you want to change.
3. Click the Delete button, then confirm that you want to delete the ward.
4. Click OK.

   **Note:** Deleting a ward will not affect any events that make reference to that ward. It will simply make the deleted ward unavailable when creating new events.

2.1.2 Describing the People in your Acute Pain Service

This subsection covers the following topics:

- Working with physicians
- Understanding a physician's roles
- Working with nurses

2.1.2.1 Working with physicians

Many different physicians interact with the acute pain service. These include anesthesiologists, surgeons and family physicians. However, when recording events in APS Manager™ you work with small groups of physicians with specific roles.

In order to handle these needs, each physician in APS Manager™ has a set or roles which determine when that physician can be used. For example, a physician with the combined roles of APS Physician and Anesthesiologist will be available when creating drug orders and visiting patients. Alternatively, a physician with the role of Surgeon, will be available when describing a patient's surgery.

A physician's roles are specified when they are added to APS Manager™; however, they can be changed at any time.
Adding a new physician to the acute pain service:

1. Select Setup > Physicians from the menu.
   The Physicians dialog box appears.

2. Click the Add button
   The Physician dialog box appears.

3. Enter the physician's attributes.
4. Click Add.
5. Click OK.

Changing a physician's attributes:

1. Select Setup > Physicians from the menu.
   The Physicians dialog box appears.
2. Select the physician that you want to view.
3. Click the Edit button.
4. Make your changes in the dialog box that appears.
5. If satisfied with your changes, click Update.
6. Click OK.
Removing a physician from the acute pain service:

1. Select Setup > Physicians from the menu.
   The Physicians dialog box appears.
2. Select the physician that you want to view.
3. Click the Delete button, then confirm that you want to delete the physician.
4. Click OK.

   Note: Deleting a physician will not affect any previous events that reference the physician. It will just make the physician unavailable when creating any new events.

Related topics

   Understanding a physician's roles
   Working with physician specialties

2.1.2.2 Understanding a physician's roles

Many different physicians interact with the acute pain service. These include anesthesiologists, surgeons and family physicians. However, when recording events in APS Manager™ you work with small groups of physicians with specific roles.

In order to handle these needs, each physician in APS Manager™ has a set or roles which determine when that physician can be used. For example, a physician with the combined roles of APS Physician and Anesthesiologist will be available when creating drug orders and visiting patients. Alternatively, a physician with the role of Surgeon, will be available when describing a patient's surgery.

A physician's roles are specified when they are added to APS Manager™; however, they can be changed at any time.

Roles:
- [ ] Surgeon
- [x] Anesthesiologist
- [x] APS physician
- [ ] Family physician

Tip: Typically the primary physicians in your acute pain service will have the combined roles of Anesthesiologist and APS physician.

Tip: If the physician that you want to select does not appear in a drop down box it may be that they do not have a role that corresponds to that field.
2.1.2.3 Working with nurses

Adding a new nurse to the acute pain service:

1. Select Setup > Nurses from the menu.
   The Nurses dialog box appears.
   ![Nurses dialog box](image1)

2. Click the Add button.
   The Nurse dialog box appears.
   ![Edit Nurse Details](image2)

3. Enter the attributes that describe the nurse you want to add.
4. Click Add.
5. Click OK.

Changing a nurse's attributes:

1. Select Setup > Nurses from the menu.
   The Nurses dialog box appears.
2. In the nurses list, select the nurse whose attributes you want to change.
3. Click the Edit button.
4. Make your changes in the dialog box that appears.
5. If satisfied with your work, click Update.
6. Click OK.
Removing a nurse from the acute pain service:

1. Select Setup > Nurses from the menu. The Nurses dialog box appears.
2. In the nurses list, select the nurse that you want to remove.
3. Click the Delete button, and confirm that you want to delete the nurse.
4. Click OK.

Note: Deleting a nurse will not affect any previous visits that reference the nurse. It will just make the nurse unavailable when creating any new visits.

2.1.2.4 Working with specialties

When adding a new physician, it is helpful to assign the physician a primary specialty.

Adding a New Specialty:

1. Select Setup > Specialties from the menu. The specialties dialog box appears.
2. Click the Add button. The surgical class dialog box appears.
3. Enter a name for the specialty.
4. If you are satisfied with your work, click Add.
5. Click OK.
Changing a specialty:

1. Select Setup > Specialties from the menu.
2. In the specialties list, select the specialty that you want to change.
3. Make your changes in the dialog box that appears.
4. If you are satisfied with your work, click Update.
5. Click OK.
   
   **Note:** Changing a specialty will affect all physicians that make reference to it.

Deleting a specialty:

1. Select Setup > Specialties from the menu.
2. In the specialties list, select the specialty that you want to delete.
3. Click the Delete button, then confirm that you want to delete the specialty.
   
   **Note:** Deleting a specialty will not affect any physicians that make reference to it. It will simply make the specialty unavailable when adding new physicians.

2.1.3 Building a Drug Formulary

Describing the collection of medications used in your acute pain service is one of the most important tasks in setting up APS Manager™. With a properly configured drug formulary, you have the ability to create standardized medication orders, reduce dosing errors and avoid incidents involving drug allergies.

This subsection contains the following topics:

- Working with drugs
- Understanding with drug indications
- The Drug Information dialog
- Working with default drug orders.
2.1.3.1 Understanding drug indications

When creating orders for patients enrolled in the acute pain service, you work with many different types of drugs. Furthermore, many drugs, such as morphine and fentanyl, are used in a variety of modalities which determine how they are administered. APS Manager™ attempts to minimize this complexity by using Indications to describe where a drug may be used.

When adding a new drug to the formulary, you give it an indication that is used by APS Manager™ to determine where the drug may be selected. For example, a drug with the Indication PCA narcotic can only be selected when creating an order for IV patient-controlled analgesia. Alternatively, a drug with the indication Local anesthetic can only be selected when creating orders for either continuous regional infusion or epidural patient-controlled analgesia.

Typically a drug will have only a single Indication assigned to it. However, some adjuncts may have the combined Indications of NSAID and Other pain adjunct so that they will be available in multiple fields.

When adding a new drug that is administered by more than one modality, it is important to specify the correct indication. This is primarily due to the fact that different modalities require a drug to be administered using different units. For example, an IV bolus of morphine is typically measured in milligrams while an epidural infusion of morphine is typically measured in milligrams per hour. This behaviour can be described in APS Manager™ by adding the drug more than once, with each instance of the drug specifying a different Indication and Dosage Units.
2.1.3.2 The Drug Information Dialog

The drug information dialog is used to record the attributes of a drug and provide a guideline as to how the drug should be administered.

The first section of the drug information dialog allows you to describe the drug. In particular, APS Manager™ identifies drugs by their name (either generic or brand), their concentration and the route they are administered. This allows you to describe multiple stock concentrations of the same drug and clearly identify the route the drug is administered.

The second section of the drug information dialog allows you to describe how dosages of the drug are determined. This section allows the user to select the preferred units for administering the drug and specify standard dosages for both adult and pediatric patients.

Tip: Some fields in drug information dialog can be used as a guideline when ordering the drug. The frequency, adult dosages, pediatric dosages and dosage units will automatically be applied to an order when the drug is selected. For example, you could specify a standard range of 5 to 10 mgs for IV Prochlorperazine and a standard frequency of q4h prn. These values would automatically be selected each time you select prochlorperazine for an adult patient.

Related topics

Working with drugs
Understanding drug indications
2.1.3.3 Working with Drugs

Adding a new drug to the formulary:

1. Select Setup > Drugs from the menu.
   The Formulary dialog box appears.

2. Click the Add button.
   The drug information dialog appears.
3. Enter the attributes that describe the drug.
4. Click the Add button.
5. Click OK.

Note: If appropriate, the values entered into the frequency and dosage fields will automatically be added to the drug order form, when the drug is selected.

Note: When creating a drug order, a warning will be given if an entered dosage exceeds the maximum dosage determined for the selected drug.

Changing a drug in the formulary:

1. Select Setup > Drugs from the menu.
   The Formulary dialog box appears.
2. In the drug list, select the drug that you want to change.
3. Click the Edit button.
4. Make your changes in the dialog box that appears.
5. If satisfied with your changes, click Update.
6. Click OK.
Removing a drug from the formulary:

1. Select Setup > Drugs from the menu.
   The Formulary dialog box appears.
2. In the drug list, select the drug that you want to change.
3. Click the Delete button, then confirm that you want to delete the drug.
4. Click OK.
   **Note:** Deleting a drug will not affect any medication orders that make reference to that drug. It will simply make the drug unavailable when creating new medication orders.

2.1.3.4 Standardizing drug orders

Although there are many similarities in the way hospitals manage patients on their acute pain service, there are also many subtle differences in the way that drug orders are prescribed. Accordingly, APS Manager™ allows you to describe default drug orders that can be used as a template when a new order is created.

Changing a default drug order:

1. Select Setup > Default Forms > Default Drug Orders from the menu.
2. Select the category of drug order that you want.
3. Change the drug order to suit the defaults that you want to use.
   **Note:** The enforcement of required fields is disabled when creating default orders. This allows you to select a default drug without having to specify the dosage, range, etc.
   Repeat steps 2 and 3 for any other drug categories.
4. Click OK.

**Note:** Default drug orders will not be applied to new orders for pediatric patients.

**Note:** Parts of default drug order may be excluded if in conflict with a patient's allergies.

Related topics:

- [The IV patient controlled analgesia order form](#)
- [The Epidural/Regional/Epidural PCA order forms](#)
3. Working with APS Manager™

APS Manager™ has been designed from the ground up to model the day-to-day operations of a busy acute pain service. Fittingly, you should find that many of the tasks that you are used to performing correspond to a feature in APS Manager™.

This chapter contains the following sections:

- Enrolling Patients in the Acute Pain Service
- Managing a Patient's Treatment Plan
- Visiting Your Patients
- Responding to Critical Incidents
- Exploring Your Acute Pain Service

3.1 Managing enrollments with APS Manager™

Patient enrollment is the process of registering a patient with APS Manager™ and describing the medical condition that brought them to the acute pain service.

Once a patient is enrolled, you will have the ability to create medication orders, update the patient's status by recording visit information and report any critical incidents that may occur.

This section contains the following topics:

- The Enrollment form
- Working with enrollments
- Defining a standard enrollment
- Discharging a patient

3.1.1 The Enrollment Form

The enrollment form provides an interface for adding a new patient and recording the reasons for their stay in the acute pain service.
The enrollment form has the following sections:

**The Patient demographics section** lets you enter the patient's name and vitals. This section also contains a section for entering the patient's home address which can be useful when APS Manager™ is used to create billing information.

**The APS section** lets you enter the date that the patient was admitted to the hospital and enrolled into the acute pain service as well as their location within the hospital.

**The Surgical Procedures section** lets you manage the patient's surgical information. For more information, see [Working with surgical procedures](#).

**The Allergies section** lets you manage any allergies that the patient may have that may be relevant to their enrollment in the acute pain service. For more information, see [Working with allergies](#).

**Tip:** To ensure that the enrollment form is complete, you will be prevented from saving the form until all of the required fields have been entered. All required fields have a small green dot in their bottom left corner. If you are not sure why the form cannot be saved, just press the What's Missing button.

**Tip:** You can save the enrollment form and create a new drug order by clicking one of the buttons in the bottom left corner of the form.
3.1.2 Working with enrollments

Enrolling a patient in the acute pain service:

1. Do one of the following:
   - Select Events > Enroll Patient from the menu
   - Click the Enroll button in the Events toolbar
   - Press the Ctrl and E keys at the same time.

   The Enrollment form appears.

2. Select the Health program.

3. Enter the patient's Health number. If the patient has been previously enrolled in the service or APS Manager™ is connected to the hospital's Admission, Discharge and Transfer (ADT) system, you will be able to select the patient from the drop down list that appears when you begin typing.

4. Fill out the remaining fields in the form as required.

5. Click OK.

For more information on enrolling patients in the acute pain service see Working with Surgical Procedures and Working with Allergies.

Opening an enrollment:

In the Enrollments window, double-click the enrollments that you want.

The Enrollment Form will appear.

Deleting an enrollment:

1. In the Enrollments window, select the enrollment that you want to delete and do one of the following:
   - Select Events > Delete, then confirm that you want to delete the enrollment.
   - Press the Delete key, then confirm that you want to delete the enrollment.

2. Click the Yes button.

   Note: You will not be allowed to delete an enrollment that has any orders, visits or incidents.

Related topics

The Enrollment form
Describing the patients that use the pain service
3.1.3 Defining a standard enrollment

In the absence of a connection to the hospital's Admission, Discharge and Transfer (ADT) system, enrolling a patient is probably the most time consuming event that you will have to enter into APS Manager™. To help make this task quicker, APS Manager™ lets you set up a default enrollment that will be used as a template each time a new enrollment is created.

**How to change the default enrollment:**

1. Select Setup > Default Forms > Default Enrollment from the menu.
   
   The default Enrollment form appears.
2. Change the default enrollment as desired.

   **Tip:** The default enrollment form is useful for setting the region from which most of your patients originate from.
3. Click OK.

**Related topics:**

- Enrolling patients in the acute pain service.
- The Enrollment Form
3.1.4 Discharging a Patient

APS Manager™ provides users with the ability to record the date that a patient was discharged from the acute pain service and the date the patient was discharged from the hospital.

**Discharging a patient from the APS:**

1. In the Enrollments window, select the patient that you want to discharge and do one of the following:
   - Select Events > Discharge.
   - Click the Discharge button in the Events toolbar.
   - Press the Ctrl and D keys at the same time.
   The Discharge Patient dialog box appears.
2. Enter the date that the patient was discharged from the acute pain service. By default, this date will default to today.
3. Click OK.
   **Note:** The discharged patient will remain in the Enrollment list for the remainder of the day they were discharged; however, they will not be included in the printouts of the Active Patients Report.

   **Tip:** If you mistakenly discharge a patient, you can undo the discharge by pressing the Undo Discharge button in the Events toolbar.

**Discharging a patient from the hospital:**

1. In the Enrollments window, select the patient that you want to discharge and do one of the following:
   - Select Events > Full Discharge.
   - Click the Full Discharge button in the Events toolbar.
   - Press the Ctrl and D keys at the same time.
   The Discharge Patient dialog box appears.
2. Enter the date that the patient was discharged from the hospital. By default, this date will default to today.
3. Click OK.

**Related topics:**

- [The Active Patients Report](#)
- [The Enrollments window](#)
3.1.4.1 Working with Surgical Procedures

The Surgical Procedures section in the Enrollments form lets you manage the surgeries that have occurred during a patient's stay in the acute pain service. This includes any surgeries that led to the patient's enrollment in the service, as well as any additional procedures that occurred after they were enrolled.

<table>
<thead>
<tr>
<th>Date (d/m/y)</th>
<th>Time</th>
<th>Surgery</th>
<th>Surgeon</th>
<th>Urgency</th>
<th>ASA</th>
<th>Anesthetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/05/2004</td>
<td>09:19</td>
<td>lt. Femoral Osteotomy</td>
<td>Dr. M. Aese</td>
<td>Elective</td>
<td>1</td>
<td>General</td>
</tr>
</tbody>
</table>

**Tip:** The background colour of each line in the surgical procedures list is a hint to whether the surgery was elective, urgent or an emergency.

**Assigning a new surgery to a patient**

1. Do one of the following:
   - Click the New Surgery button in the Surgical Procedures toolbar.
   - In the surgical procedures list, double-click an empty row.
   - The Surgery information dialog appears.
2. Fill in the surgical procedure form.
3. Click OK.

**Changing a surgery assigned to a patient**

1. Do one of the following:
   - In the surgical procedures list, select the allergy that you want to change and click the Change Surgery button.
   - In the surgical procedures list, double-click the surgery that you want to change.
2. Make your changes in the dialog box that appears.
3. If satisfied with your changes, click Update.
4. Click OK.

**Deleting a surgery assigned to a patient.**

1. In the surgical procedures list, select the surgery you want to delete.
2. Click the Delete Surgery button.
3.1.4.2 The Surgery Information Dialog

The surgery form provides a means for describing a surgical procedure for a patient enrolled in the acute pain service.

![Surgical Procedure Form]

**Note:** You will not be allowed to save the Surgery form until all required fields have been entered. If you are unsure what fields are missing, just click the What's Missing button.

**Related topics:**

- Working with surgical classes
### 3.1.4.3 Working with Surgical Classes

**Adding a new surgical class:**

1. Select Setup > Surgical Classes from the menu.

   The surgical classes dialog appears:

   ![Surgical Classes Dialog](image)

   2. Click the Add button.

      The surgical class dialog box appears.

   ![Add New Surgical Class](image)

   3. Enter a name for the surgical class.

   4. If you are satisfied with your work, click Add.

   5. Click OK.

**Changing a surgical class:**

1. Select Setup > Surgical Classes from the menu.

2. In the surgical classes list, select the surgical class that you want to change.

3. Make your changes in the dialog box that appears.

4. If you are satisfied with your work, click Update.

5. Click OK.

   **Note:** Changing a surgical class will affect all enrollments that have surgical procedures that make reference to it.
Deleting a surgical class:

1. Select Setup > Surgical Classes from the menu.
2. In the surgical classes list, select the surgical class that you want to delete.
3. Click the Delete button, then confirm that you want to delete the surgical class.

   **Note:** Deleting a surgical class will not affect any enrollments that make reference to it. It will simply make the surgical class unavailable when creating new enrollments.

3.1.4.4 Assigning an Allergic Reaction to a Patient

To help you improve the quality of care in your acute pain service, APS Manager™ lets you record any patient allergies that may be of concern when creating orders for medications. A patient's allergy information is accessed through the patient's enrollment form.

<table>
<thead>
<tr>
<th>Allergy</th>
<th>Severity</th>
<th>Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heparin</td>
<td>Moderate</td>
<td>Hives</td>
</tr>
<tr>
<td>Penicillin</td>
<td>Mild</td>
<td>Rash</td>
</tr>
</tbody>
</table>

Assigning a new allergy to a patient:

1. Do one of the following:
   - Click the New Allergy button in the Allergies toolbar.
   - In the allergies list, double-click an empty row.
   - The Patient Allergies dialog box appears.
2. Enter the allergy that you want to assign to the patient.
   - **Tip:** If the allergy that you want to assign does not appear in the drop down list, enter a name that describes the allergy.
3. Select the severity of the allergy and the type of reaction.
   - **Tip:** You can enter any description you want in the Type of reaction field.
4. Click OK.
Changing an allergy assigned to a patient:

1. Do one of the following:
   - In the allergies list, select the allergy that you want to change and click the Change Allergy button.
   - In the allergies list, double-click the allergy that you want to change.

2. Make your changes in the dialog box that appears.

3. If satisfied with your changes, click OK.

Deleting an allergy assigned to a patient:

1. In the allergies list, select the allergy you want to delete.

2. Click the Delete Allergy button.

Related topics:

- The allergic reaction information dialog
- The Enrollment form

3.1.4.5 The Allergic Reaction Information Dialog

The allergy form provides a way for you to describe any patient allergies that may be of concern when ordering medications for the patient.

![Patient Allergy - PENICILLIN](image)

**Note:** You have the option to let APS Manager™ warn you when you try to prescribe any drugs that conflict with a patient's allergies. To enable/disable this option select Setup > Preferences from the menu and click on Enable allergy checking.

**Tip:** If the allergy that you want to add is not in the drop down list, just enter the name into the allergy field and press that tab key.
Related topics

Managing a list standard allergies

3.1.4.5 Working with Allergies

Adding a new allergy:

1. Select Setup > Allergies from the menu.
   The Allergies dialog box appears.
2. Describe the allergy.
   
   **Tip:** If describing a drug allergy click the Rx button to view all of the medications that are present in the formulary.
3. If satisfied with you work, click OK.
   The allergy will be available when assigning an allergic reactions to a patient.

Changing an allergy:

1. Select Setup > Allergies from the menu.
2. In the allergies list, select the allergy that you want to change.
3. Click the Edit button.
4. Make your changes in the dialog box that appears.
5. If satisfied with you work, click OK.

Deleting an allergy:

1. Select Setup > Allergies from the menu.
2. In the allergies list, select the allergy that you want to delete.
3. Click the Delete button, then confirm that you want to delete the allergy.
4. If satisfied with you work, click OK.

Related topics:

The Allergies form
3.2 Developing a Treatment Plan with APS Manager™

APS Manager™ lets you describe in detail the orders for analgesia and adjunct medications that a patient may receive during their stay in the acute pain service.

This section covers the following topics:

- Creating an order for IV patient controlled analgesia
- Creating an order for regional analgesia
- Creating an order for adjunct medication
- Working with medication orders
- Discontinuing a drug order.
- Managing multiple drug orders.
- Printing a drug order form.

3.2.1 Creating an order for IV Patient Controlled Analgesia

Related topics:

1. Do one of the following:
   - Select Events > PCA Order from the menu.
   - Click the PCA button in the Events toolbar.
   - Press the Ctrl and P keys at the same time.
   
   The IV Patient Controlled Analgesia (PCA) order form appears.

2. Fill out the order form.
3. Click OK.

   **Note:** If you want to create an order for continuous IV analgesia, select the desired analgesic and enter a value in the continuous infusion rate field.

Related topics:

- Working with medication orders
3.2.2 Creating orders for regional analgesia

APS Manager™ lets you create medication orders for several different types of regional analgesia, including epidural, nerve block, intrathecal and intrapleural.

**Creating a new order for epidural analgesia:**

1. Do one of the following:
   - Select Events > Regional Orders > Epidural Order from the menu.
   - Click the Epidural button in the Events toolbar.
   - Press the Ctrl and R buttons at the same time.
   
   The [Epidural Order form](#) appears.

2. Fill out the form.

3. Click OK.

   **Note:** If you want to create an order for Epidural Patient Controlled Analgesia, just fill in the PCA section of the epidural order form.

**Creating a new order for a nerve block:**

1. Do one of the following:
   - Select Events > Regional Orders > Nerve Block Order from the menu.
   - Click the arrow to the right of the Epidural button in the Events toolbar and click Nerve Block Order from the popup menu.

   The [Nerve Block order form](#) appears.

2. Fill out the form.

3. Click OK.

**Creating a new order for intrathecal analgesia:**

1. Do one of the following:
   - Select Events > Regional Orders > Intrathecal Order from the menu.
   - Click the arrow to the right of the Epidural button in the Events toolbar and click Intrathecal Order from the popup menu.

   The Intrathecal [order form](#) appears.

2. Fill out the form.

3. Click OK.

**Creating a new order for intrapleural analgesia:**

1. Do one of the following:
   - Select Events > Regional Orders > Intrapleural Order from the menu.
Click the arrow to the right of the Epidural button in the Events toolbar and click Intrapleural Order from the popup menu.

The Intrapleural order form appears.

2. Fill out the form.
3. Click OK.

Related topics:

Working with medication orders
Discontinuing a medication order

3.2.3 Creating an order for adjunct medication

In some cases you may want to keep a patient enrolled on the acute pain service, even though they have no active orders for either PCA or regional analgesia. APS Manager™ helps you to manage the treatment plan of these patients by allowing you to create orders for adjunct medication.

1. Select Events > Adjunct Order from the menu.
   
The Adjunct order form appears

2. Fill out the order form.
3. Click OK.

   **Caution:** If you create an order for adjunct medication while a patient has active orders for either PCA or epidural analgesia, the new order will override the Adjunct medications prescribed in the previous orders.

Related topics:

Working with medication orders
Discontinuing a medication order
3.2.4 Working with medication orders

Opening a medication order:

In the Events window, double-click the order that you want to open.

**Note:** Making changes to an order does not create a new order. If the patient's orders need to be updated in response to changes in their condition, we suggest that you create a new drug order. This practice will provide a more accurate depiction of the patient's stay on the pain service.

Deleting a medication order:

1. In the Events window, select the medication order that you want to delete.
2. Do one of the following:
   - Select Events > Delete from the menu, then confirm that you want to delete the order.
   - Press the Delete key, then confirm that you want to delete the order.

**Note:** You will be prevented from deleting an order that has subsequent visits.

Related topics:

- Creating orders for IV Patient Controlled Analgesia
- Creating orders for regional analgesia
- Creating orders for adjunct medication
- Discontinuing a medication order
- Managing multiple orders
3.2.5 Discontinuing a medication order

Every drug order created in APS Manager™ has a date/time field for specifying when it was ordered and a date/time field for specifying when it was discontinued. These two date/time values are then used to determine what orders are active at any given time during a patient's stay in the acute pain service.

To discontinue a drug order:

1. In the Events window, select the order that you want to discontinue and do one of the following:
   - Select Events > Discontinue Order from the menu.
   - Click the discontinue button in the Events toolbar.
   - Press the Ctrl and X buttons at the same time.

   or

1. Open the drug order form.
2. Enter the date and time that the order was discontinued.

   **Tip:** Click the unchecked box next to the discontinued fields to set the date and time fields to the current time.

To reactivate a discontinued drug order:

1. Open the drug order form.
2. Clear the date and time field when the order was discontinued.

   **Tip:** Click the checked box next to the discontinued fields to clear the date and time fields.

   **Caution:** It is only appropriate to reactivate a drug order if it was discontinued by accident. If you want to reactivate a drug order in response to changes in a patient's condition, it is suggested that you create a new drug order to reflect these changes.

**Note:** All active orders will be automatically discontinued when the patient is discharged from the acute pain service.

**Related topics:**

- Creating and order for IV patient controlled analgesia.
- Creating an order for regional analgesia.
- Managing multiple orders
3.2.6 Managing multiple drug orders

In response to changes in the status of a patient during their stay in the acute pain service, it may be necessary to change their treatment plan. When this need arises, APS Manager™ lets you discontinue any previous orders and start a new order or manage multiple orders at the same time. For example, a patient may begin their stay in the pain service with an order for IV patient controlled analgesia. At some subsequent date, and order for epidural analgesia may be started while the first order is still in effect. Subsequently, both active orders may be discontinued.

When you create a new order, APS Manager™ will ask you whether you want to discontinue any previous orders prior to saving the new order. If you select yes, then all previous orders will be stopped when you save the new order. If you select no, then the patient will have multiple orders active at the same time.

3.2.7 Printing a drug order form

1. In the Events window, select the order that you want to print and do one of the following:
   Select Reports > Order Form from the menu.
   Click the Order Form button in the Events toolbar.
2. Select your print options in the dialog box that appears, then click Start.
3.2.8 Order Forms

This section provides information about the dialog boxes and topics introduced in this chapter.

3.2.8.1 The Epidural/Epidural PCA order form

The Epidural order form let you record the details of a orders for both epidural and epidural patient-controlled analgesia.
The epidural order form has the following sections:

**The Order section** lets you record the physician that was responsible for the order and when the order was active.

**The PRN section** lets you select the drug to be administered intermittently to manage breakthrough pain.

**The Infusion section** lets you select the local anesthetic and/or narcotic analgesia being administered and the initial infusion rate. This section also lets the physician to provide additional guidelines for increasing/decreasing the infusion rate based on changes in the patient's condition.

**The PCA section** lets your record the pump settings for epidural patient-controlled analgesia.

**The Alerts section** allows the physician to specify certain conditions at which the on-call acute pain service physician should be contacted.

**The Adjuncts section** lets you record any adjunct medications that were prescribed in addition to the analgesic.

**The Orders section** lets you record any comments that you wish to make concerning the order.

**Note:** You will not be allowed to save the form until all of the required fields have been entered. If you are unsure what required fields are missing, click the What's Missing button.

**Note:** You will be prevented from saving the epidural order form until all required fields have been entered. If you are unsure which fields are required, click the What's Missing button.

**Tip:** When entering data retrospectively, use the New Visit button to save the form and create a new visit.

**Related topics:**

[Working with default drug orders.](#)
3.2.8.2 The IV patient controlled analgesia order form

The IV/PCA order form lets you record the details of an order for IV patient-controlled analgesia and continuous IV analgesia.

The IV/PCA order form has the following sections:

**The Order section** lets you record the physician that was responsible for the order and when the order was active.

**The PCA Settings** section lets your record the drug being prescribed and the pump settings that were ordered.

**The Adjuncts section** lets you record any adjunct medications that were prescribed in addition to the analgesic.

**The Orders section** lets you record any comments that you wish to make concerning the order.

**Note:** You will not be allowed to save the form until all of the required fields have been entered. If you are unsure what required fields are missing, click the What's Missing button.
Related topics:

[Creating orders for IV Patient Controlled Analgesia](#)

### 3.2.8.3 The Nerve Block order form

The nerve block order form let you record the details of an order for a nerve block.
The nerve block order form has the following sections:

**The Order section** lets you record the physician that was responsible for the order and when the order was active.

**The PRN section** lets you select the drug to be administered intermittently to manage breakthrough pain.

**The Infusion section** lets you select the local anesthetic and/or narcotic analgesia being administered and the initial infusion rate. This section also lets the physician to provide additional guidelines for increasing/decreasing the infusion rate based on changes in the patient's condition.

**The PCA section** lets your record the pump settings for epidural patient-controlled analgesia.

**The Alerts section** allows the physician to specify certain conditions at which the on-call acute pain service physician should be contacted.

**The Adjuncts section** lets you record any adjunct medications that were prescribed in addition to the analgesic.

**The Orders section** lets you record any comments that you wish to make concerning the order.

**Note:** You will be prevented from saving the Nerve Block order form until all required fields have been entered. If you are unsure which fields are required, click the What's Missing button.

**Tip:** When entering data retrospectively, use the New Visit button to save the form and create a new visit.

**Related topics:**

[Working with default drug orders]
3.2.8.4 The Intrathecal order form

The Intrathecal order form let you record the details of an order for intrathecal analgesia.

The intrathecal order form has the following sections:

**The Order section** lets you record the physician that was responsible for the order and when the order was active.

**The PRN section** lets you select the drug to be administered intermittently to manage breakthrough pain.

**The Infusion section** lets you select the local anesthetic and/or narcotic analgesia being administered and the initial infusion rate. This section also lets the physician to provide additional guidelines for increasing/decreasing the infusion rate based on changes in the patient's condition.

**The PCA section** lets your record the pump settings for epidural patient-controlled analgesia.

**The Alerts section** allows the physician to specify certain conditions at which the on-call acute pain service physician should be contacted.
The Adjuncts section lets you record any adjunct medications that were prescribed in addition to the analgesic.

The Orders section lets you record any comments that you wish to make concerning the order.

Note: You will be prevented from saving the intrathecal order form until all required fields have been entered. If you are unsure which fields are required, click the What's Missing button.

Tip: When entering data retrospectively, use the New Visit button to save the form and create a new visit.

Related topics:

Working with default drug orders.

3.2.8.5 The Intrapleural order form

The Intrapleural order form let you record the details of an order for intrapleural analgesia.
The intrapleural order form has the following sections:

**The Order section** lets you record the physician that was responsible for the order and when the order was active.

**The PRN section** lets you select the drug to be administered intermittently to manage breakthrough pain.

**The Infusion section** lets you select the local anesthetic and/or narcotic analgesia being administered and the initial infusion rate. This section also lets the physician to provide additional guidelines for increasing/decreasing the infusion rate based on changes in the patient's condition.

**The PCA section** lets your record the pump settings for epidural patient controlled analgesia.

**The Alerts section** allows the physician to specify certain conditions at which the on-call acute pain service physician should be contacted.

**The Adjuncts section** lets you record any adjunct medications that were prescribed in addition to the analgesic.

**The Orders section** lets you record any comments that you wish to make concerning the order.

**Note:** You will be prevented from saving the intrapleural order form until all required fields have been entered. If you are unsure which fields are required, click the What's Missing button.

**Tip:** When entering data retrospectively, use the New Visit button to save the form and create a new visit.

**Related topics:**

[Working with default drug orders.]
3.2.8.6 The Adjunct order form

The adjunct order form let you record the details of an order for adjunct medications.

Note: You will be prevented from saving the adjunct order form until all required fields have been entered. If you are unsure which fields are required, click the What's Missing button.

Tip: When entering data retrospectively, use the New Visit button to save the form and create a new visit.
3.3 Visiting Patients Enrolled in the Acute Pain Service

APS Manager™ provides several features to help rounding physicians and nurses visit patients enrolled in the acute pain service. These features make it easier for staff to find their patients, follow their status and notify other staff to changes in a patient's treatment plan.

This section covers the following topics:

- Performing rounds with the Active Patients report
- The Visit form
- Working with visits
- The Clinical Progress Note

3.3.1 Performing rounds with the Active Patient reports

The Active Patient reports provide rounding physicians and nurses with the information necessary to visit the patients currently enrolled in the acute pain service. These reports will help your staff locate their patients and keep track of each patient's treatment.

APS Manager™ provides two versions of this report. The concise report provides the location of each patient enrolled in the service in addition to their current treatment modality and surgical history. In addition to this information, the detailed report provides up-to-date information on the patient's treatment plan and side effects and contains any memos that were left by APS staff during a patient's past visit.

Printing The Detailed Active Patients report:

Do one of the following:

- If the comprehensive version is the default, click the Patient List button in the Events toolbar.
- Click the down arrow next to the Patient's List button in the Events toolbar and select Detailed Patient's List

Printing the Concise Active Patients report:

Do one of the following:

- If the concise version is the default, click the Patient List button in the Events toolbar.
- Click the down arrow next to the Patient's List button in the Events toolbar and select Concise Patient's List
Changing the default style of the Active Patients report:

   The Report Options dialog box appears.
2. In the Active Patient's List section select either Comprehensive or Concise.
3. Click OK.

Tip: If APS Manager™ is not connected to your Admission, Discharge and Transfer (ADT) server, you will want to update the location of any patients that were transferred before printing the Active Patients report.

### 3.3.2 The Visit Form

The visit form provides rounding physicians and nurses with an interface for recording the status of patients enrolled in the pain service. The visit form is organized into several sections, with each section focusing on a specific aspect of the visit.
The Visit form keeps track of a patient's diet and activities. Once you enter an activity, such as 'Sitting Up', it will be automatically added to subsequent visits.

To minimize the chance of entering erroneous data, the PCA section of the Visit form will only be enabled if the patient's current treatment plan contains active orders for either IV or epidural patient controlled analgesia. Similarly, the Regional section and regional specific side-effects will only be enabled if the patient's current treatment plan contains orders for regional analgesia.

The Visit form also provides a section for recording comments that can be used as reminder for yourself or other staff that may be involved in monitoring the patient's condition. Messages entered in the Plan field will appear in the patient's progress report. Messages entered in the Memo field will appear in the Comprehensive Active Patients report.

**Tip:** If you select either Respiratory Depression or Hypotension as a side-effect, APS Manager™ will automatically create a critical incident event.

**Related topics:**
- The Active Patient's report
- Managing Critical Incidents

### 3.3.3 Working with Visits

Using APS Manager™ you can create new visits as well is view, change and delete visits.

**To open a visit:**

1. In the Enrollments window, click the enrollment to display the events for the patient whose visit you want to open.
2. In the Events window, double-click the visit you want.
   The Visit form will appear.

**To create a new visit:**

1. In the Enrollments window, click the enrollment for which you want to create a new visit.
2. Do one of the following:
   - Select Events > Visit from the menu.
   - Click the Visit button in the events toolbar.
   - Press the Ctrl and V keys at the same time.
The Visit form will appear.
3. Fill in the form.
4. Click OK.

The new visit will be added to the Events window.

To delete a visit:

1. In the Enrollments window, click the enrollment for which you want to delete a visit.
2. In the Events window click the visit that you want to delete and do one of the following:
   - Select Events > Delete from the menu, then confirm that you want to delete the visit.
   - Press the Delete key, then confirm that you want to delete the visit.

   Caution: If you delete a visit, you will not be able to retrieve it.

3.3.4 Charting with the Patient Clinical Progress Note

APS Manager™ provides rounding physicians and nurses with the ability to generate a detailed clinical progress note for patients enrolled in the acute pain service. The clinical progress note provides staff with a detailed summary of each event that has occurred since the patient was enrolled in the service.

<table>
<thead>
<tr>
<th>DATE [program/yy]</th>
<th>TIME AND ISSUE</th>
<th>PATIENT CARE NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENROLLMENT</td>
<td>20/46/566</td>
<td>Surgery, rt. hemicolectomy; Diagnosis: pneumothoraces Sur. Dr. R. Spear</td>
</tr>
<tr>
<td>PCA ORDER</td>
<td>20/46/565 1251</td>
<td>morphine (5 mg/hr), bolus dose: 1 mg, lockout: 8 min 5-10 mg q6h pm 25-50 mg q6h pm Dr. J. Buckley</td>
</tr>
<tr>
<td>APS VISIT</td>
<td>20/46/565 1532</td>
<td>Pain at rest: 1/10; Pain with activity: 3/10 Diet: rp0 Sedation alert: Other mild nausea APS Physician: Dr. G. Adee</td>
</tr>
<tr>
<td>DISCHARGE</td>
<td>20/46/567 1633</td>
<td>Pain at rest: 3/10; Pain with activity: 6/10; Not Satisfied Diet: n/d x Stead Sedation alert: Other mild nausea, mild pruritus, urinary retention APS Physician: Dr. B. Rollin</td>
</tr>
</tbody>
</table>

Printing the Clinical Progress Note:

1. In the Enrollments window, select the patient on which you want to report.
2. Select Reports > Clinical Progress Note.
3. Select your printing option in the dialog box that appears, then click Start.
3.4 Responding to Notable Events & Critical Incidents

To enhance patient care, APS Manager™ supports the reporting of Critical Incidents. The reporting of Critical Incidents provides the acute pain service with several advantages.

- The ability to identify clinically significant trends or clusters of incidents that may indicate systemic problems.
- The ability to identify and respond to systemic problems that may be overlooked by individual case reviews.
- The ability to analyze individual critical incidents with the aim of revealing potential problems before serious harm occurs.

This sections covers the following topics:

- Working with Critical Incidents.
- The Critical Incident and Critical Incident Summary reports.
3.4.1 The Critical Incident form

The Critical Incident form provides the means to effectively report and manage incidents that occur in the acute pain service. The critical incident form has several sections, with each section focusing on a specific aspect of the incident.

Related topics:

Working with Critical Incidents
3.4.2 Working with Critical Incidents

Opening a critical incident:

In the Events window, double-click the critical incident you want to open.

Creating a new critical incident:

1. With the correct enrollment selected in the Enrollments window, do one of the following:
   - Select Events > Critical Incident from the menu.
   - Click the Critical button in the Events toolbar.
   - Press the Ctrl and I keys at same time.
   The Critical Incident form should appear.
2. Fill in the form.
3. Click OK.

Deleting an critical incident:

1. In the Events window, select the incident that you want to delete and do one of the following:
   - Select Events > Delete from the menu, then confirm that you want to delete the incident.
   - Press the Delete key, then confirm that you want to delete the visit.
3.4.3 The Critical Incident report and Critical Incident Summary Report

The Critical Incident report and Critical Incident Summary report provide an excellent avenue for notifying the staff of the incidents that have occurred. The Incident report provides a detailed description of a single report. The Incident Summary report provides a summary of all the incidents that occurred over a sequence of dates followed by Incident Reports for each incident that occurred.

How to print a Critical Incident report:

1. In the Events window, select the critical incident that you want to report and do one of the following:
   - Select Reports > Incident Report from the menu.
   - Click the Incident Report button in the Events toolbar.

   The Print Options dialog box appears.

2. Click Start.

How to print the Critical Incident Summary report:

1. Select Reports > Critical Incident Summary from the menu.

2. Enter the start and end dates. All incidents that occurred between the start and end dates will be reported.

   **Tip:** Click the Today, Week, Month, Year buttons to set the start and end dates to today, the past week, the past month and the past year, respectively.

3. Click OK.

   The Print Options dialog box appears.

4. Click Start.
3.5 Exploring your acute pain service

This section covers the following topics:

- Customizing your search options
- How busy is your acute pain service

3.5.1 Customizing your search options

Most of the time when using APS Manager™ your will be working with the patients that are currently enrolled in the acute pain service. However, sometimes you will want to find a specific enrollment, or set of enrollments, that match some criteria that you are interested in. For example, you may be interested in finding all of the incidents of respiratory depression in a specific ward or every patient that experienced severe nausea. APS Manager™ provides a facility for performing these types of user-defined queries, thus giving you an unprecedented look into the day-to-day operation of your service.

The Custom Query dialog provides users with a vast array of options that can be selected when querying the activities of your acute pain service.

The query options are categorized into the different aspects of the acute pain service. You have the flexibility to choose as many options that you like in any category that you like. The more options that you select, the more specific the query will become. APS Manager™ will find all of the enrollments that have attributes or subsequent activities that match the options that you selected.
For example, the example to the right will find all enrollments that were followed by an order for epidural analgesia, in which 50 mcg or more of fentanyl was prescribed for breakthrough pain, which resulted in respiratory depression.

**Finding enrollments that match a set of options:**

1. Select View > Find from the menu.
   The Custom Queries dialog box appears.
2. Select the options that correspond to the enrollments that you want to find.
3. If satisfied with the query options you have selected, click OK.
4. The enrollments that match the options in your query will be displayed in the Enrollments window.

**Related topics:**

- [Using the Search toolbar](#)
- [How busy is your acute pain service?](#)

### 3.5.2 How busy is your acute pain service?

**Printing the Activity report for a sequence of dates:**

1. Select Reports > APS Activity Report from the menu.
   The APS Activity Report dialog box appears.
2. Enter the dates that you want to collect activity data for.
   **Tip:** You can use the Today, Week, Month and Years buttons to quickly select a sequence of dates.
3. Select either the Weekly or Daily option.
4. Click OK.
5. Select your printer options in the dialog box that appears, then click Start.

**Printing the Activity report for a group of enrollments:**

1. Select View > Find from the menu.
2. Select the options that correspond to the enrollments you want to find. For more information on finding enrollments, see Finding Enrollments with Advanced Find.
3. If satisfied with your options, click OK.
The enrollments that match your query options will be displayed in the Enrollments window.

4. Select Reports > APS Activity Report from the menu.

   The APS Activity Report dialog box appears.

5. Select the Based on enrollments in the main window option.

6. Enter the dates that you want to collect activity data for.

   **Tip:** You can use the Today, Week, Month and Years buttons to quickly select a sequence of dates.

7. Select either the Weekly or Daily option.

8. Click OK.

9. Select your printer options in the dialog box that appears, then click Start.
3.6 Managing your billing with APS Manager™

APS Manager™ provides several features to help busy physicians and anesthesia departments coordinate their activities with fee-for-service billing.

This section contains the following topics:

- Understanding personal and group billing
- Choosing your billing options.
- Getting your billing information

3.6.1 Understanding personal and group billing

APS Manager™ supports two different billing models: personal billing and group billing. Personal billing contains all billable activities that a physician performs in the acute pain service for which he can receive reconciliation. Group billing contains all billable activities that a group of physicians may contribute so that a specially instituted group fund can receive reconciliation.

By default, group billing is disabled and each physician will receive reconciliation for every billable activity that they have performed.

When group billing is enabled, either a fixed number or a percentage of the group's billable activities will be diverted to the special group fund. This has the effect of reducing the billable activities for each physician in the group.
3.6.2 Choosing your billing options

How to service codes and fees for anesthesia consultations:

1. Select Setup > Report Options from the main menu.
2. Make your changes in the dialog box that appears.
3. If satisfied with your work, click OK.

Enabling Group billing:

1. Select Setup > Report Options from the main menu.
   The Setup Reports dialog box appears.
2. Select the Enable Group Billing checkbox.
3. Select either fixed number [of visits] per day or percentage [of visits] per day.
4. Enter the number or percentage of visits you want the group to accumulate each day.
5. Select whether you want to include weekend activities in the group.
6. Enter the date the group billing goes into effect.
6. If satisfied with your changes, click OK.

Excluding a physician from Group billing:

1. Select Setup > Physicians from the menu.
2. In the physicians list, select the physician that you want to exclude from group billing.
3. Click the Edit button.
4. In the dialog box that appears select the Excluded from group billing option.
5. Click Update.
6. Click OK.
3.6.3 Getting your billing information

Printing a physician's personal billing information:

   The Personal Billing Report dialog box appears.
2. Select the Single Physician option.
3. Select the physician you want to print the report for.
4. Enter the dates you want to report.
5. Click OK.
6. Select your printer options in the dialog box that appears, then click Start.

Printing a department’s personal billing information:

   The Personal Billing Report dialog box appears.
2. Select the All Physicians option.
3. Enter the dates you want to report.
4. Click OK.
5. Select your printer options in the dialog box that appears, then click Start.

Printing a department’s group billing information:

   The Group Billing Report dialog box appears.
2. Enter the dates you want to report.
3. Click OK.
4. Select your printer options in the dialog box that appears, then click Start.
Instructions for SJH APS:

- need to use a computer with APS manager icon previously loaded (eg anesthesia office, PACU)
- click on APS manager icon on desktop
- login using staff persons name, password is 'aps'

There isn't any way I know of yet to access this from home or personal computer. Let me know if you think we need more details.
Each resident is responsible for completing the sections where indicated (highlighted for clarity) for discussion at annual promotions meeting with Program Director (PD) or designee. Some data is recorded by the Program Assistant (PA) or the Reviewer (PD or designate), as indicated.

Complete the form throughout the year as the elements are completed. Progress on the portfolio will be discussed and reviewed at the biannual meeting with the PD. Based on the results of the biannual meeting, promotion to the next level will be recommended or flagged for hold-back to the post-graduate office. Final recommendation will come after end-of-year meeting. Timing of meetings will be based on the individual resident’s year-end. Comments in any section may be used by resident or PD/designee. Do not click “save and submit” as the form will not be fully completed until the time of the year-end review. Through the year, just click “save”.

Completion of sections as follows:
- Resident
- Program Assistant
- Year-end reviewer (PD or designate)

Medical Expert

- Successfully completed all required PGY1 rotations (ITERs)
  Comments: __________________________________________________________
  __________________________________________________________

- Learning Contract Enhanced Educational Plan or Remediation?
  (N/A □)
  Comments: __________________________________________________________
  __________________________________________________________

- Blue card (supervised epidurals)- submit to Candice when complete
  Comments: __________________________________________________________
  __________________________________________________________

- Simulation sessions as per Summer Transitions program for PGY1.
  Any concerns/evaluations?
Manager

- Completed CanMEDS “Manager Task” form for following a patient through perioperative course of day surgery during Blocks 1, 2, 12, or 13; (Forms available on web-eval as writeable pdf’s.)

Professional

**Attendance:** logged electronically by resident in web-eval; summary chart to be completed below by resident; attendance audited by PA

<table>
<thead>
<tr>
<th>Mandatory Sessions</th>
<th># Present</th>
<th># Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGY1 Wed am summer teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core PGY1/2 teaching sessions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAD days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble Rounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed am Dept or Hospital Rounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journal Clubs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident Retreats</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Updated CV
  - resident to bring paper copy to annual review
  - resident to email copy to PA

**McMaster CV Template:**

- Updated Logbook (ACUDA online program). Resident to keep logbook up to date; Ensure that hospital and U number is entered in the open field for auditing purposes (no other patient-identifiers). PA will run report for annual review.
Resident meets the standards of professionalism as outlined by the McMaster Postgrad Office’s code of conduct for learners and professionalism policy. McMaster Postgrad Policies

Comments: ________________________________________________________________

Communicator/Collaborator

*6 completed “reflection” forms for full PGY1 year covering one or more of the CanMEDS competencies (to be reviewed with faculty mentor); forms available on web-eval as writeable pdf’s.

Comments: ________________________________________________________________

Distribution of “360 Evaluations” to achieve 8 evaluations completed by medical colleagues; Resident will distribute surveys, available on web-eval. Please note, distinct surveys have been created for PGY1, 3 (off-service) vs. PGY 2, 4, 5 (Anesthesia rotations). The eligible reviewers are indicated on the forms. Completed surveys will be sent back directly to PA who will provide them for review.

# completed forms received to date __________

Comments: ________________________________________________________________

Distribution of “360 Evaluations” to achieve 8 evaluations completed by allied health colleagues. Resident will distribute surveys, available on web-eval. Please note, distinct surveys have been created for PGY1, 3 (off-service) vs. PGY 2, 4, 5 (Anesthesia rotations). The eligible reviewers are indicated on the forms. Completed surveys will be sent back directly to PA who will provide them for review.

# completed forms received to date __________

Comments: ________________________________________________________________

Participated in at least one committee/organization, which demonstrates your contribution to the community as a physician, during PGY1 year (eg: RTC, PAIRO, CAS, IHI, charity, Undergrad OSCE, teaching or admissions, etc.) Provide details below.
Health Advocate

☐ Attend one Radiation Safety Presentation:

Date and location: ______________________________________________

OR If you cannot attend the HHS/SJH Radiation Safety presentation…

☐ Certificate demonstrating completion of an online Radiation Safety Course (bring certificate to year-end review)

(Boston’s online tutorial and quiz: http://dccwww.bumc.bu.edu/fluoroscopy/default.htm#training)

NB: Boston course should be done on a PC computer (not Mac)

Comments: _________________________________________________

Scholar

☐ Completion of required Research Training Course and Completion of Research Project Proposal; identification of research mentor

Comments: _________________________________________________

☐ Give at least one academic presentation during PGY1 year on any rotation (could include anesthesia clerkship teaching session in Block 12 or 13)

Date and details: _____________________________________________

Date and details: _____________________________________________

☐ Miscellaneous academic achievements/contributions

Details: _______________________________________________________

RESIDENT PROMOTED TO PGY2?  Yes ☐  ☐ No
GENERAL COMMENTS:

☐ Wellness strategies/issues:

☐ Resident Strengths:

☐ Areas requiring attention; follow-up; attention (e.g. incomplete items, areas of concern; open learning contracts or remediation):

Resident Signature (at time of review): ________________________________

Signature of Reviewer (PD or designate): ______________________________

Program Director Signature: ________________________________

Date: ________________________________

Note: Promotion portfolio is comprised of formative and summative elements. Promotion is directly based on the summative elements (ITERs) that evaluate residents across all CanMeds competencies. Compliance with the Post-grad Professionalism codes and policies is also a key component that would have direct impact on promotability. However, the totality of the portfolio, including the formative elements, will be considered in promotion and may be used to flag concerns and identify the need for development of a remedial action plan. Please review the new Post-graduate Policy for Evaluation which incorporates a multi-dimensional approach to evaluation and promotion.
Each resident is responsible for completing the sections where indicated (highlighted for clarity) for discussion at annual promotions meeting with Program Director (PD) or designate. Some data is recorded by the Program Assistant (PA) or the Reviewer (PD or designate), as indicated.

Complete the form throughout the year as the elements are completed. Progress on the portfolio will be discussed and reviewed at the biannual meeting with the PD. Based on the results of the biannual meeting, promotion to the next level will be recommended or flagged for hold-back to the post-graduate office. Final recommendation will come after end-of-year meeting. Timing of meetings will be based on the individual resident’s year-end. Comments in any section may be used by resident or PD/designate. Do not click “save and submit” as the form will not be fully completed until the time of the year-end review. Through the year, just click “save”.

Completion of sections as follows:

Resident  Program Assistant  Reviewer (PD or designate)

Resident Name: ________________________________

Medical Expert

☑ Successfully completed all required PGY2 rotations (ITERS)

Comments: __________________________________________

____________________________________________________

☐ ☐ Learning Contract Enhanced Educational Plan or Remediation? (N/A ☑)

Comments: __________________________________________

____________________________________________________

☑ Completion of Ultrasound Course with Dr. Forero (protected time in PGY3/4 must be arranged by resident to complete missed sessions); Resident to indicate below which if any sessions have been missed in both PGY1 and PGY2 years. If there is a session that has not been attending at least once, resident must arrange to attend in PGY3 year (protected time provided).
Fall Program Orals  
Date: ____________________________
Scores: Qu.1 ____  Qu. 2 ____  Qu. 3 _____ Qu. 4 _____
Comments: ____________________________________________

Spring Program Orals  
Date: ____________________________
Scores: Qu.1 ____  Qu. 2 ____  Qu. 3 _____ Qu. 4 _____
Comments: ____________________________________________

AKT-6 Exam completed: Percentage correct (total) and Percentile- flag if less than 15\textsuperscript{th} percentile for LC or remediation:

Comments: ____________________________________________

In house MCQ scores:

Test 1 (September) ____  Test 2 (Winter) ____  Test 3 (June) _____
Comments: ____________________________________________

Simulation sessions

Candice to provide simulation evals for review

Comments: ____________________________________________

Manager

Fulfill administrative duties as admin resident at JHCC (IF APPLICABLE); Candice to provide admin evals if available

Comments: ____________________________________________
Professional

**Attendance:** logged electronically by resident in web-eval; summary chart to be completed below by resident; attendance audited by PA)

<table>
<thead>
<tr>
<th>Mandatory Sessions</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGY2 Wed pm summer teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core teaching Thurs pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble Rounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depart/Hospital Rounds Wed am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journal Clubs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident Research Exchange Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident Retreats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGME MAD events</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Updated CV
  
  
  - resident to bring paper copy to annual review
  - resident to email copy to PA

  Comments: ____________________________________________

  ____________________________________________

- Updated Logbook (ACUDA online program); Resident to keep logbook up to date; Enter hospital and U number in open text field (no other identifiers) for auditing purposes. PA will run report for annual review.

  Comments: ____________________________________________

  ____________________________________________

- Completed web-eval “to-do’s” which include 5 faculty evals/rotation

- Resident meets the standards of professionalism as outlined by the McMaster Postgrad Office’s code of conduct for learners and professionalism policy. [McMaster Postgrad Policies](#)
Collaborator

Distribution of “360 Evaluations” to achieve 8 evaluations completed by medical colleagues; Resident will distribute surveys, available on web-eval. Survey forms will also be available in Anesthesia lounges. Please note the eligible reviewers as indicated on the forms. Completed surveys will be sent back directly to PA who provide for review.

# completed forms received to date___________

Comments: ____________________________________________________________
__________________________________________________________

Distribution of “360 Evaluations” to achieve 8 evaluations completed by allied health colleagues. Resident will distribute surveys, available on web-eval. Survey forms will also be available at OR front desk. Please note the eligible reviewers as indicated on the forms. Completed surveys will be sent back directly to PA who will provide for review.

# completed forms received to date ______________

Comments: ____________________________________________________________
__________________________________________________________

Participated in at least one committee/organization, which demonstrates your contribution to the community as a physician, during PGY2 year (eg: RTC, PAIRO, CAS, IHI, charity, Undergrad Med teaching, OSCE or admissions, etc.) Provide details below.

Comments: ____________________________________________________________
__________________________________________________________

Communicator

Optional completion of Institute for Health Care Improvement PS 103 Course “Teamwork & Communication”

Comments: ____________________________________________________________
__________________________________________________________
At a minimum, one presentation at a journal club meeting or Department rounds:
Date:__________ Location:__________ Topic:__________
Date:__________ Location:__________ Topic:__________

Health Advocate

*6 completed “reflection” forms for full PGY2 year covering one or more of the CanMEDS competencies (to be reviewed with faculty mentor) forms available on web-eval as writeable pdf’s.

Comments: ________________________________________________
__________________________________________________________

Optional completion of Institute for Health Care Improvement PS 103 Course “Introduction to Safety”

Comments: ________________________________________________
__________________________________________________________

Scholar

Research project – topic selection complete, commencing, literature search and protocol submission

Comments: ________________________________________________
__________________________________________________________

Presentation of Research Project Proposal at the annual McMaster/UWO Resident Research Exchange Day (may be deferred to PGY4)

☐ yes  ☐ not yet

Comments: ________________________________________________
__________________________________________________________

Completed at least one anesthesia clerkship teaching sessions (evaluations for review to be provided by Candice)
Presentation at (minimum of) one summer foundations or one core teaching session; evaluations will be sent out to attending residents through web-eval. Candice to provide evals for meeting.

Date and details: __________________________________________

Date and details: __________________________________________

Comments: ________________________________________________

Miscellaneous academic achievements/contributions

Comments: ________________________________________________

RESIDENT PROMOTED TO PGY3?  Yes ☐    No ☐

GENERAL COMMENTS:

Wellness Strategies/ Issues:

Career Planning:

Resident Strengths:

Areas requiring attention: follow-up; remediation (e.g. incomplete items, areas of concern; open learning contracts or remediation):
Resident Signature (at time of review): __________________________

Signature of Reviewer (PD or designate): __________________________

Signature of PD if not above: __________________________

Date: __________________________

Note: Promotion portfolio is comprised of formative and summative elements. Promotion is directly based on the summative elements (ITERs) that evaluate residents across all CanMeds competencies. Compliance with the Post-grad Professionalism codes and policies is also a key component that would have direct impact on promotability. However, the totality of the portfolio, including the formative elements, will be considered in promotion and may be used to flag concerns and identify the need for development of a remedial action plan.

Please review the new Post-graduate Policy for Evaluation which incorporates a multi-dimensional approach to evaluation and promotion.
Each resident is responsible for completing the sections where indicated (highlighted for clarity) for discussion at annual promotions meeting with Program Director (PD) or designate. Some data is recorded by the Program Assistant (PA) or the Reviewer (PD or designate), as indicated. Complete the form throughout the year as the elements are completed. Progress on the portfolio will be discussed and reviewed at the biannual meeting with the PD. Based on the results of the biannual meeting, promotion to the next level will be recommended or flagged for hold-back to the post-graduate office. Final recommendation will come after end-of-year meeting. Timing of meetings will be based on the individual resident’s year-end. Comments in any section may be used by resident or PD/designate. Do not click “save and submit” as the form will not be fully completed until the time of the year-end review. Through the year, just click “save”.

Completion of sections as follows:
- Resident
- Program Assistant
- Year-end reviewer (PD or designate)

Resident Name: ____________________________

Medical Expert

- Successfully completed all required PGY3 rotations; resident must ensure all off-service ITERs are complete.
  Comments: _______________________________________________________________  
  __________________________________________________________________________
  __________________________________________________________________________

- Learning Contract Enhanced Educational Plan or Remediation? (N/A □)
  Comments: _______________________________________________________________  
  __________________________________________________________________________
  __________________________________________________________________________

- Fly In Call – daily evaluation forms (resident to submit to PA)
  PA to post fly-in dailies to med-eval.
  Comments: _______________________________________________________________  
  __________________________________________________________________________
  __________________________________________________________________________
Fall Program Orals (*Optional) Date: _______________________
Scores: Qu.1 ____ Qu. 2 ____ Qu. 3 _____ Qu. 4 _____
Comments: ____________________________________________

Spring Program Orals (*Optional) Date: _______________________
Scores: Qu.1 ____ Qu. 2 ____ Qu. 3 _____ Qu. 4 _____
Comments: ____________________________________________

ABA Exam completed: Scaled Score/Percentile: flag if less than 15th percentile for LC or remediation:
Comments: ____________________________________________

In house MCQ scores:
Test 1 (September) ____ Test 2 (Winter) ____ Test 3 (June) ______
Comments: ____________________________________________

Completion of Ultrasound Course with Dr. Forero (protected time in PGY3/4 must be arranged by resident to complete missed sessions from PGY1/2 year
Comments- all sessions complete? ________________________

Professional

Attendance: logged electronically by resident in webeval; summary chart to be completed below by resident; attendance audited by PA)

<table>
<thead>
<tr>
<th>Mandatory Sessions</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGY3 Wed pm summer teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core teaching Wed pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident retreats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGME MAD events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journal Clubs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident research exchange day</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Updated CV


- resident to bring paper copy to annual review
- resident to email copy to PA

Comments: __________________________________________________________
________________________________________________________

Updated Logbook (ACUDA online program). Resident to keep logbook up to date; Ensure that hospital and U number is entered in the open field for auditing purposes (no other patient-identifiers). PA will run report for annual review.

Comments: __________________________________________________________
________________________________________________________

Resident meets the standards of professionalism as outlined by the McMaster Postgrad Office’s code of conduct for learners and professionalism policy. McMaster Postgrad Policies

Collaborator

Distribution of “360 Evaluations” to achieve 8 evaluations completed by medical colleagues; Resident will distribute surveys, available on web-eval. Please note the eligible reviewers as indicated on the forms. Completed surveys will be sent back directly to PA who will provide those results for review.

# completed forms received to date________

Comments: __________________________________________________________
________________________________________________________

Distribution of “360 Evaluations” to achieve 8 evaluations completed by allied health colleagues. Resident will distribute surveys, available on web-eval. Please note the eligible reviewers as indicated on the forms. Completed surveys will be sent back directly to PA.
who will anonymously collate the results and provide those results for review.)

☐ # completed forms received to date ______________

Comments: __________________________________________
____________________________________________________

☐ Participated in at least one committee/organization, which demonstrates your contribution to the community as a physician, during PGY2 year (eg: RTC, PAIRO, CAS, IHI, charity, Undergrad teaching, admissions or OSCE, etc.) **Provide details below.**

Comments: __________________________________________
____________________________________________________

**Health Advocate**

☐ Optional completion IHI Open School Course “Communication with patients after adverse events”

Comments: __________________________________________
____________________________________________________

**Communicator/Manager**

☐ 6 completed “reflection” forms for full PGY3 year covering one or more of the CanMEDS competencies (to be reviewed with faculty mentor); forms available on web-eval as writeable pdf’s

Comments: __________________________________________
____________________________________________________

**Scholar**

☐ Give at least one academic presentation during PGY3 year on any rotation

Date:__________ Location:__________ Topic:__________

Date:__________ Location:__________ Topic:__________
Comments: ________________________________________________________________

☐ Research project – methodology complete, data collection underway (at minimum)

Comments: ________________________________________________________________

☐ Miscellaneous academic achievements/contributions

Comments: ________________________________________________________________

RESIDENT PROMOTED TO PGY4?  Yes ☐      No ☐

GENERAL COMMENTS:

☐ Wellness Strategies/ Issues:

☐ Career Planning: Meeting with Dr. Buckley complete?  Yes ☐      No ☐

☐ Community Elective planning for PGY4 year?

☐ Discuss timing of fellowship applications (many required by early PGY4 year)
Resident Strengths:

Areas requiring attention; follow-up; attention (e.g. incomplete items, areas of concern; open learning contracts or remediation):

Resident Signature (at time of review): ________________________________

Signature of Reviewer (PD or designate): _______________________________

Signature of PD if not above: ________________________________

Date: ________________________________

Note: Promotion portfolio is comprised of formative and summative elements. Promotion is directly based on the summative elements (ITERs) that evaluate residents across all CanMeds competencies. Compliance with the Post-grad Professionalism codes and policies is also a key component that would have direct impact on promotability. However, the totality of the portfolio, including the formative elements, will be considered in promotion and may be used to flag concerns and identify the need for development of a remedial action plan. Please review the new Post-graduate Policy for Evaluation which incorporates a multi-dimensional approach to evaluation and promotion.
Each resident is responsible for completing the sections where indicated *(highlighted for clarity)* for discussion at annual promotions meeting with Program Director (PD) or designate. Some data is recorded by the Program Assistant (PA) or the Reviewer (PD or designate), as indicated.

Complete the form throughout the year as the elements are completed. Progress on the portfolio will be discussed and reviewed at the biannual meeting with the PD. Based on the results of the biannual meeting, promotion to the next level will be recommended or flagged for hold-back to the post-graduate office. Final recommendation will come after end-of-year meeting. Timing of meetings will be based on the individual resident’s year-end. Comments in any section may be used by resident or PD/designate. Do not click “save and submit” as the form will not be fully completed until the time of the year-end review. Through the year, just click “save”.

**Completion of sections as follows:**
- **Resident**
- **Program Assistant**
- **Year-end reviewer (PD or designate)**

**Resident Name:** ____________________________

**Medical Expert**

- **Successfully completed all required PGY4 rotations:**
  
  Comments: __________________________________________
  __________________________________________
  __________________________________________

- **Learning Contract Enhanced Educational Plan or Remediation?**
  *(N/A □)*

  Comments: __________________________________________
  __________________________________________
  __________________________________________

- **Fall Program Orals**
  Date: ________________________________

  Scores: Qu.1 ____ Qu. 2 ____ Qu. 3 ____ Qu. 4 ____

  Comments: __________________________________________

- **Spring Program Orals**
  Date: ________________________________

  Scores: Qu.1 ____ Qu. 2 ____ Qu. 3 ____ Qu. 4 ____
Comments: 

**ABA Exam completed** (flag if less than 15th percentile for LC or remediation):

Scaled Score/Percentile: __________________________

Comments: ______________________________________________________________________________________

**AKT-24 Exam completed:** (flag if less than 25th percentile for LC or remediation): Percentage correct (total) and Percentile:

Comments: ______________________________________________________________________________________

**In house MCQ scores:**

Test 1 (September) ____ Test 2 (Winter) ____ Test 3 (June) ____

Comments: ______________________________________________________________________________________

**Simulation sessions**

Candice to provide simulation evals for review

Comments: ______________________________________________________________________________________

**Completion of Ultrasound Course with Dr. Forero** (protected time in PGY3/4 must be arranged by resident to complete missed sessions)

Comments- all sessions complete? __________________________

**Manager**

**Fulfill duties as admin resident** (Evaluation forms will be sent through web-eval to the residents rotating with each admin resident; Candice to provide evaluations for review if applicable.)
Professional

**Attendance:** logged electronically by resident in web-eval; summary chart to be completed below by resident; attendance audited by PA

<table>
<thead>
<tr>
<th>Mandatory Sessions</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core teaching Wed pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble Rounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dept/Hospital Rounds Wed am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journal Clubs</td>
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<tr>
<td>Resident Research Exchange Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident Retreats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGME MAD events</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Updated CV

  McMaster CV Template:
  - resident to bring paper copy to annual review
  - resident to email copy to PA

- Updated Logbook (ACUDA online program); Resident to keep logbook up to date; Ensure that hospital and U number is entered in the open field for auditing purposes (no other patient-identifiers). PA will run report for annual review.

- Resident meets the standards of professionalism as outlined by the McMaster Postgrad Office’s code of conduct for learners and professionalism policy. [McMaster Postgrad Policies](https://www.mcmaster.ca/postgraduate)
Completed web-eval “to-do’s” which include 5 faculty evals/rotation

Collaborator

- Participated in at least one committee/organization, which demonstrates your contribution to the community as a physician, during PGY4 year (eg: RTC, PAIRO, CAS, IHI, charity, Undergrad Med admissions, teaching or OSCE, etc.) Provide details below.

Comments: 

Distribution of “360 Evaluations” to achieve 8 evaluations completed by medical colleagues; Resident will distribute surveys, available on web-eval. Forms will also be available in Anesthesia lounges. Please note the eligible reviewers as indicated on the forms. Completed surveys will be sent back directly to PA who will provide for review.

- # completed forms received to date _________

Distribution of “360 Evaluations” to achieve 8 evaluations completed by allied health colleagues. Resident will distribute surveys, available on web-eval. Forms will also be available at OR front desk. Please note the eligible reviewers as indicated on the forms. Completed surveys will be sent back directly to PA who will provide for review.

- # completed forms received to date _________

Communicator

- 6 completed “reflection” forms for full PGY4 year covering one of more of the CanMEDS competencies (to be reviewed with staff mentor); forms available on web-eval as writeable pdf’s.

Comments: 

Health Advocate

- Optional completion of an online HHS Safety Occurrence Reports (attach CanMEDS Safety Occurrence Report CanMEDS task forms as documentation)
Scholar

- Met the minimum research requirements of the residency program
  Comments: _______________________________________________________
  _______________________________________________________

- Presentation of Research Project Proposal at the annual McMaster/UWO Resident Research Exchange Day (optional if already done in PGY2)
  
  - PGY2
  - PGY4
  Comments: _______________________________________________________

- Presentation at (minimum of) one clerkship teaching session (Candice to provide evaluations for review if available)
  Date and details: _________________________________________________
  Comments: _______________________________________________________

- Completed at least one summer teaching session for PGY3’s. (Candice to provide evaluations for review).

- Miscellaneous academic achievements/contributions
  Comments: _______________________________________________________

RESIDENT PROMOTED TO PGY5?  Yes ☐      No ☐

GENERAL COMMENTS:
- Wellness Strategies/ Issues:
Career Planning (e.g. fellowship, clinical scholar, community practice, locums):

Resident Strengths:

Areas requiring attention: follow-up; remediation (e.g. incomplete items, areas of concern; open learning contracts or remediation):

Resident Signature (at time of review): _____________________________
Signature of Reviewer (PD or designate): ___________________________
Signature of PD if not above: ________________________________
Date: ________________________________

Note: Promotion portfolio is comprised of formative and summative elements. Promotion is directly based on the summative elements (ITERs) that evaluate residents across all CanMeds competencies. Compliance with the Post-grad Professionalism codes and policies is also a key component that would have direct impact on promotability. However, the totality of the portfolio, including the formative elements, will be considered in promotion and may be used to flag concerns and identify the need for development of a remedial action plan. Please review the new Post-graduate Policy for Evaluation which incorporates a multi-dimensional approach to evaluation and promotion.
PGY5 ANESTHESIA RESIDENT PROMOTION PORTFOLIO
2016-2017

Version 1.0 April 6, 2016. KR

Each resident is responsible for completing the sections where indicated (highlighted for clarity) for discussion at annual promotions meeting with Program Director (PD) or designate. Some data is recorded by the Program Assistant (PA) or the Reviewer (PD or designate), as indicated.

Complete the form throughout the year as the elements are completed. Progress on the portfolio will be discussed and reviewed at the biannual meeting with the PD. Based on the results of the biannual meeting, promotion to the next level will be recommended or flagged for hold-back to the post-graduate office. Final recommendation will come after end-of-year meeting. Timing of meetings will be based on the individual resident’s year-end. Comments in any section may be used by resident or PD/designate. Do not click “save and submit” as the form will not be fully completed until the time of the year-end review. Through the year, just click “save”.

Completion of sections as follows:
Resident  Program Assistant  Year-end reviewer (PD or designate)

Resident Name: ________________________________

Medical Expert

☑ Successfully completed all required PGY5 rotations – general & subspecialty

Comments: __________________________________________________________________________
_____________________________________________________________________________________

☑ Learning Contract Enhanced Educational Plan or Remediation? (N/A ☐)

Comments: __________________________________________________________________________
_____________________________________________________________________________________

☑ Completion of 5 “Junior Staff” days during second half of PGY5 – evaluations completed by surgeon and circulating nurse. Resident to submit daily evals to PA who will collate for year-end review and post to webeval.

Comments: __________________________________________________________________________
_____________________________________________________________________________________
Fall Program Orals  
Date: ____________________________
Scores:  Qu.1 ____  Qu. 2 ____  Qu. 3 _____ Qu. 4 _____
Comments: ________________________________________

Spring Program Orals  
Date: ____________________________
Scores: Qu.1 ____  Qu. 2 ____  Qu. 3 _____ Qu. 4 _____
Comments: ________________________________________

In-house MCQ score:
Test 1 (September) ______
Comments: _______________________________________________________________________

Simulation sessions
Candice to provide simulation evals for review
Comments: _______________________________________________________________________

Manager

Fulfill duties as admin resident if asssigned (Evaluation forms will be sent through web-eval to the residents rotating with each admin resident; Candice to provide evals if available.)
Comments: _______________________________________________________________________

Professional

**Attendance:** logged electronically by resident in web-eval; summary chart to be completed below by resident; attendance audited by PA

<table>
<thead>
<tr>
<th>Session</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in group exam study on Thursdays academic day July-Dec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation in Thursday oral exam prep sessions organized by program (January through May)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble Rounds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Updated CV


- resident to bring paper copy to annual review
- resident to email copy to PA

Comments: 

Updated Logbook (ACUDA online program); Resident to keep logbook up to date; Ensure that hospital and U number is entered in the open field for auditing purposes (no other patient-identifiers). PA will run report for annual review.

Comments: 

Resident meets the standards of professionalism as outlined by the McMaster Postgrad Office’s code of conduct for learners and professionalism policy. [McMaster Postgrad Policies](#)

Completed web-eval “to-do’s” which include 5 faculty evals/rotation

Collaborator/Health Advocate/Communicator

- 6 completed “reflection” forms for full PGY5 year covering one of more of the CanMEDS competencies (to be reviewed with faculty mentor); forms available on web-eval as writeable pdf’s.

Comments: 

<table>
<thead>
<tr>
<th>Dept/Hospital Rounds Wed am</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal Clubs</td>
<td></td>
</tr>
<tr>
<td>Resident Research Exchange Day</td>
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<td>Resident Retreats</td>
<td></td>
</tr>
<tr>
<td>PGME MAD events</td>
<td></td>
</tr>
</tbody>
</table>
Provide leadership role in trouble rounds; to be evaluated by staff present (evaluation forms available on web-eval- print and submit to faculty at trouble rounds. Resident to submit completed evals to PA who will collate for year-end review and post summary to web-eval)

Comments: ____________________________________________

Miscellaneous academic achievements/contributions

Comments: ____________________________________________

Mid Year Review: RESIDENT IS ON TRACK FOR COMPLETION OF FITER IN FEBRUARY FOR SUBMISSION TO ROYAL COLLEGE

Yes ☐ No ☐

Year-end Review: RESIDENT HAS SUCCESSFULLY COMPLETED THE PROGRAM?

Yes ☐ No ☐

Resident Strengths:
Areas requiring attention: follow-up; remediation (e.g. incomplete items, areas of concern; open learning contracts or remediation):

Wellness Strategies/ Issues:

Career Planning:

Resident Signature: ______________________________

Program Director Signature: ______________________________

Date: ______________________________

Note: Promotion portfolio is comprised of formative and summative elements. Promotion is directly based on the summative elements (ITERs) that evaluate residents across all CanMeds competencies. Compliance with the Post-grad Professionalism codes and policies is also a key component that would have direct impact on promotability. However, the totality of the portfolio, including the formative elements, will be considered in promotion and may be used to flag concerns and identify the need for development of a remedial action plan. Please review the new Post-graduate Policy for Evaluation which incorporates a multi-dimensional approach to evaluation and promotion.
**The Resident Log Book (RLB)**

Since July 1st 2005 the McMaster Residency Program in Anesthesia has used the Resident Log Book system developed by Queens University and endorsed by all the Anesthesia Residency Training Program Directors across Canada. The Resident Log Book system is user friendly and allows the generation of a variety of types of reports for each resident. Resident activities can be compared with national and program benchmarks.

The Resident Log Book System can be located on the web at [www.residentlogbook.com](http://www.residentlogbook.com) and should be added to the “favourites” section on your web page. Each resident has been added to the system with their user name being last name plus first initial (example Raymerk). For the first time logging on each resident has been assigned a password, which is the same as the user name. This should be changed to a personalized password at the time of the first log on. All first time uses can log on as described above.

Completing the logbook is mandatory and is a key element of the promotions portfolios. The Royal College requires documentation of activity levels and training opportunities and has now mandated use of the logbook for all residents. Program Directors nationally have identified this as the best way to collect this information. Hospitals may request documentation of procedural competence before issuing privileges. And finally, competence-based medical education will require documentation of clinical experience.

The logbook should be completed as you go along, through each rotation. Please do not leave many weeks of entries to be done at once. The concern is that keeping patient stickers for a long period of time may lead to a confidentiality breach. As well, the program audits the logbooks on a regular basis so they should be kept up to date. This is particularly important for PGY5’s, where logbook entries are used to ensure appropriate case allocation. When entering data, please include the hospital site and patient U number (no other identifiers) so entries can be audited for accuracy.

Karen Raymer, July 2014
Summary of Resident Responsibilities
(Clinical and Academic)

The overall program expectations are specific to each year and are clearly outlined in the promotions portfolios. The portfolios should be referred to frequently throughout the year to ensure that the elements are being completed.

Welcome/orientation letters are sent to each resident at the start of a rotation. These letters are specific to the CTU site and contain very useful information on the residents’ role and practice at that site. Please read these orientation letters carefully, even if you have rotated at that site previously as some information may change. You are responsible for reading and applying the information that is provided to you. In addition, the CTU directors are very interested to receive your feedback and suggestions regarding your experience during your rotation.

Some of the common elements that form the core of the Anesthesiology Residency Program at McMaster University are discussed in more detail below:

1) Clinical Responsibilities: General Comments

a) The goal should be for the resident to take as much ownership of the cases as is possible. The degree of supervision and assistance from faculty will vary according to the PGY level (graded responsibility) but maximal learning will occur when the resident considers the cases to be “his (her) case” from the earliest stage. (See also section on Resident Supervision)

b) In-patients should be seen by the resident assigned to the case, usually the day/evening before the surgery. Issues should be discussed with the attending anesthesiologist for that case. Asking a fellow resident to see the in-patient pre-operatively achieves the service goal of having the patient seen, but does not achieve the educational goal of having one resident assess the patient, make a plan, then follow through on that plan.

If a resident is assigned to an emergency list as a regular day list assignment (which might happen during shut downs when list selection is limited), please be aware that at the HGH, the daytime ER will usually have the first case pre-booked at least one day in advance and will appear on the regular OR list. If you are assigned to one of these ER rooms as your regular daytime list assignment, please check the printed OR list and see the patient preoperatively as with any inpatient.

There will be times where it is not possible for the resident to see the in-patients the day or evening prior to the surgery. In this case, the resident should contact their staff person. In some cases, it may be appropriate to ask your on-call colleague to see an inpatient for you. This practice should be reserved for very rare situations, such as when a resident is returning from holiday on a late evening flight and has an in patient for the next day’s list. It adds to the burden of work for the on-call resident and doesn’t meet the educational goals described above.

c) The resident should arrive in the OR early in the morning, in time to review the patient and prepare the OR for the first case.
d) Work ethic: The number one factor that determines the faculty impression of the resident is that resident’s work ethic. Most residents have excellent work ethic. Nutrition/hydration breaks during an operating room list should be appropriately brief. Time attending to clinical duties outside of the OR (OB, trauma, consults) should not be longer than required. If the resident is attending a clinical situation outside of the OR for a period that is longer than expected, he/she should make telephone contact with the staffperson if possible, to make them aware.

e) If the resident must be absent from the OR for health reasons, an email must be sent to the following individuals at the earliest possibility prior to the absence:

- Program Coordinator (Candice Stroud)
- Administrative Resident
- CTU Director

It is not acceptable for the ill resident to merely call the OR to advise of their absence. They are required to send an email as outlined above. The admin resident, once notified, will ensure that the staff-person for the day is aware that the resident will not be attending that day due to illness. *It is also the responsibility of the admin resident to ensure that the program admin assistant (Candice) and the CTU director have been copied on the email.* Ensuring appropriate notification and documentation of sick days is a professionalism duty for both the sick resident and the admin resident. Candice will record the sick days on the google calendar.

f) If a resident’s list is cancelled or ends very early (before 1 pm), then that resident should find another available list, and approach that staffperson. *(Please note, the exception is the JH on-call resident, who is attached to the ER on-call room. If that room ends before 2 pm, the resident must find another room, in conjunction with the admin resident).* During shutdowns or unanticipated cancellations of scheduled operating room activity at one site, the residents at that site should move to other sites for clinical activity (as assigned by the admin residents in discussion with the CTU directors).

g) Buddy call is part of the regular call quota for the month for that senior resident; it is not an “extra call”. Therefore the senior resident should be taking advantage of available cases while buddying a junior colleague. The resident should present themselves to the on-call anesthesiologist for assignment. If two rooms are running, as often is the case at the HGH, the senior resident should attach themselves to one of those rooms. *(See Buddy Call policy). In the weeks immediately before the written exam, there is some latitude for the Senior Buddy to spend time studying. But this would be at the discretion of the attending Anesthesiologist. Other than in the immediate pre-exam period, the senior buddy should expect to be working clinically (when two rooms are running) and should convey that expectation to the attending.

If there is only one room running, then the junior resident should work in that room, with the senior resident making him/herself available to the staffperson for breaks, for a second pair of hands in difficult cases etc.
h) An appropriate handover must occur between residents for call changeover.

i) The staffperson will, in most cases, allow the resident to leave the hospital during an on-call shift, for academic events such as journal club and Reach for the Top. This decision would depend on the impact on patient wellbeing and is not guaranteed. If the resident is leaving while on call, they must advise paging services (and the staffperson who has okay’ed it). The resident should return to the hospital at the earliest opportunity.

j) Other than for the program events listed above, residents should not, under normal circumstances, leave their clinical duties to attend meetings, even those of an academic nature. These include: research meetings; make-up exams, meetings with mentors; Career Planning meeting with Dr. Buckley (for PGY3’s); meeting with the program director. **These meetings should be arranged during the academic day or on another day that is outside of clinical duties.** There are many of these sorts of meetings over the course of a year and cumulatively, they are disruptive to clinical exposure. In addition, the PARO contract provides 7 extra days (PL days) for academic activities. Some options for how to accommodate these meetings, appointments and responsibilities include:

- During unscheduled time during the academic day
- After clinical duties on a short day
- On a personal leave (PL) day. Please remember that PL days (“professional leave days”) were originally negotiated for use for academic activities such as research meetings or conferences.
- On a post-call day (later, after appropriate rest)
- A research meeting or a meeting with the PD could be planned for a day when the resident is assigned to the clinic, assuming that the meeting is at MUMC and the meeting would be one hour or less. Appropriate notification of clinic staff people (the day before) would be expected

If a resident must leave the operating room during a normal clinical day for any reason, including academic reasons as described above, he or she MUST email the CTU director (copying the admin resident) in advance to discuss it with them. It is not acceptable to simply make the arrangement with the staff attending for the day. The reason for this is that only the CTU director has the larger picture of the entire rotation. As well, the CTU director will be better able to judge if the request to leave a clinical day can be supported.

A specific policy exists for practice oral exams for PGY5’s. (See Practice Oral policy).

k) Regarding resident room assignments, please see the chapter on resident room assignments. If a resident is required to request an early list, this request should be made to the admin resident AND the CTU director by email. The program recognizes that early lists are sometimes required to accommodate appointments or meetings. It is anticipated that these requests would be relatively infrequent, in the order of 1-2 times per block.
2) Evaluations

a) Resident evaluations must be received regularly. It is the staff person's responsibility to evaluate every resident, every day, and the resident must be proactive in facilitating and ensuring that this occurs. It is optimal if the evaluation form can be looked at together at the beginning of the day. The number of evaluations received for a rotation is the best indication of the number of clinical days that the resident worked on that rotation.

Please note that there are specific evaluation forms available for days in clinic. The junior residents must request to be observed for 1-2 pre-op assessments per day when in clinic; senior residents must present at least 2 complex cases per day in clinic. It requires initiative on the part of the resident to ensure that the supervised clinic assessments take place. Please ensure that you receive a completed daily evaluation form after your day in the clinic. A formal ITER for clinic work will be completed at the end of the academic year.

Failure to return a less than favourable evaluation would be considered a major professionalism breach.

b) Staff must be evaluated by the residents on a regular basis. This is done anonymously. Each resident must complete at least 5 faculty evaluations per rotation. The feedback is forwarded to the faculty in summary form at least 6 months after the end of the year in which the evaluation occurred (ie 6-18 months after the encounter), such that the source of any comments is protected. Faculty expectations for supervision and professionalism are clearly communicated and any situations that deviate from those expectations should be brought to the attention of the CTU director and PD. Feedback from residents regarding faculty performance is taken very seriously by both the PD and the CTU directors.

c) Rotation evaluations must be completed. All feedback is followed up on in order to continuously improve the resident experience.

3) Educational Activities: Attendance at educational sessions is mandatory except if the resident is post-call or on vacation or leave. The resident is required to log his or her own attendance through medportal, including the summary table on the promotions portfolio document. Admin residents are required to take attendance at Wednesday morning rounds and at trouble rounds and submit this list to Candice. The chief resident or designate must provide an attendance list for Journal Clubs and for Retreats. Attendance at academic events is required both for Promotions as well as for academic support.

a) Wednesday morning rounds: City-wide rounds or Hospital-based rounds, depending on the week.

b) Trouble rounds: weekly, at each clinical site.

c) Journal club: approximately 2-3 per year, weekday evening.

d) Academic Core Program (Wednesday or Thursday)

e) Teaching commitments (Clerkship Program)
f) Simulation Sessions: Once the session is booked, the resident is required to attend and cannot book the day “off” after the fact. This is due to the complexity of the simulation scheduling and the need to select specific residents to match the scenario that is being run for the day. The timing expectations comply with PAIRO guidelines. Most simulation will occur on a dedicated academic day. Having the remainder of the simulation day “off” is a privilege. Consider the following adage: “If you’re on time, you’re late; if you’re early, you’re on time”. Please see the chapter on Simulation for more detail.

The academic sessions are designed to be interactive. They require diligent preparation on the part of the resident. Please plan at least one week ahead- by looking at the emailed objectives and references- in order to determine how much time will be required and plan your week accordingly. Some faculty will provide pre-tests; others will evaluate solely on the basis of participation. The academic program is designed around the National Curriculum, which is the template for the Royal College Written exam. Therefore, the 3 -year core program forms a scaffold on which to steadily build the required knowledge base for success at the RC exams and success as a practicing anesthesiologist. As with many things, the more you put into it, the more you get out of it. Being a passive attendee to sessions would be a missed learning opportunity.

4) Resident Log Book

The RLB is a mandatory activity. (Please see section on RLB.)

5) Program Exams

The program organizes biannual oral exams, which are mandatory for PGY 2, 4 and 5 (and optional for PGY3). The dates are announced well in advance such that vacation should be planned around it. These occur on a Saturday morning and involve between 12-16 faculty examiners/organizers. See program oral exam policy.

The residents participate in the American Board exam in PGY3 and 4 years. The residents are participating in the AK6 in PGY2 and the AK 24 in PGY4.

The program administers mandatory in-house MCQ exams three times per year, as follows:

- Late August/September: exam for PGY2-5 (all topics)
- January/February exams for PGY 2, 3, 4 based on level- specific curriculum material from previous 6 months Foundations program.
- June exams for PGY 2, 3, 4 based on level-specific curriculum material from previous 6 months Foundations program.

See section on in-house examinations for more details and regarding the guidelines concerning making up missed in –house exams.

6) Research Project

Please see section on Research. If a research elective is being contemplated, please see the specific guidelines around this well in advance of requesting the research elective (i.e. well in advance of
February when the elective requests are made. There are specific expectations regarding a research elective. One of the time sensitive factors is that REB approval (if applicable) must be in place prior to the elective being approved. Documented weekly progress check-ins with the project supervisor is also required during the elective.

7) **Exchange Day**

An academic presentation at Resident Research Exchange Day in June is expected of all residents at least once during their residency (see Research Chapter).

November, 2006
Pre-Operative Assessment of In-Patients

Please note that it is a program expectation that residents will see their own in-patients prior to surgery. This is outlined in the orientation letters for each site as well as in the most recent resident handbook that was circulated by Dr. Olivieri. It is a long-standing expectation. Seeing your own patient the night before and formulating a plan is an important part of the educational experience as well as the clinical care of the patient.

During shut-downs, you may be assigned to an emergency list during the week as your day assignment. Please note that the first case of the emergency list is almost always booked in advance (i.e. By late afternoon or early evening on the day before). Please ensure you check as the ER case patients are often complex. If you are doing a regular list and there is unbooked time on that list, please check back in the late afternoon, early evening to see if the slot has been filled- it usually will have been filled and often with an in-patient.

There will always be exceptions where you are unable to see your in-patient- in this case, please email or phone your staff person the day before to make them aware. It could be appropriate to ask your on-call resident colleague to see the patient but this does not obviate the need to communicate with your staff person.

Best regards,

Karen Raymer
These training requirements apply to those who begin training on or after July 1st, 2014.

MINIMUM TRAINING REQUIREMENTS

Five (5) years of approved residency training

1. One (1) year of basic clinical training, which must include:
   1.1. A minimum of one (1) month and not more than four (4) months in each of the following rotations:
      1.1.1. Internal Medicine and/or its subspecialties
      1.1.2. A surgical specialty
      1.1.3. Pediatrics
      1.1.4. Obstetrics and Gynecology
   1.2. No more than four (4) months of Anesthesiology. Anesthesiology training in the basic clinical year can only be credited in section 1

2. Four (4) years of Anesthesiology
   2.1. Two (2) years of approved residency in clinical Anesthesiology
      2.1.1. Eighteen (18) months, or longitudinal equivalent, of adult Anesthesiology, which must include general and regional anesthetic experience in:
          2.1.1.1. Outpatient surgical management
          2.1.1.2. Recognized general and subspecialty surgical procedures
          2.1.1.3. Associated emergency conditions
      2.1.2. Three (3) months or longitudinal equivalent of pediatric Anesthesiology
      2.1.3. Two (2) months or longitudinal equivalent of obstetrical Anesthesiology
      2.1.4. One (1) month or longitudinal equivalent of chronic pain management, which must include long-term ambulatory patient management
2.2. One (1) year of approved residency, at the R2 level or above, to be undertaken preferably after a year of clinical training in Anesthesiology

2.2.1. One (1) month of Cardiology or coronary care

2.2.2. One (1) month of Respirology

2.2.3. Three (3) months of adult Critical Care Medicine

2.2.4. Seven (7) months selected from:

2.2.4.1. Two (2) or more of the following, with a maximum of two (2) months in any one area:

2.2.4.1.1. Clinical Pharmacology and Toxicology

2.2.4.1.2. Diagnostic Radiology

2.2.4.1.3. Gastroenterology

2.2.4.1.4. General Internal Medicine

2.2.4.1.5. Hematology

2.2.4.1.6. Infectious Diseases

2.2.4.1.7. Internal Medicine

2.2.4.1.8. Medical Oncology

2.2.4.1.9. Nephrology

2.2.4.1.10. Neurology

2.2.4.1.11. Palliative Medicine

2.2.4.1.12. Respirology

2.2.4.1.13. Rheumatology

2.2.4.1.14. Other Royal College-recognized specialties and subspecialties approved by the program director

2.2.4.2. Additional critical care experience, not to exceed four (4) months in total, with a maximum of two (2) months in any of the following:

2.2.4.2.1. Adult Critical Care Medicine

2.2.4.2.2. Cardiovascular surgery intensive care

2.2.4.2.3. Coronary care

2.2.4.2.4. Emergency Medicine

2.2.4.2.5. Neonatology

2.2.4.2.6. Pediatric Critical Care Medicine
2.3. One (1) year selected from one or more of the following:

2.3.1. Anesthesiology
2.3.2. Clinician Educator Program
2.3.3. Clinician Investigator Program
2.3.4. Clinical Pharmacology and Toxicology
2.3.5. Critical Care Medicine
2.3.6. Pain Medicine
2.3.7. Palliative Medicine
2.3.8. Graduate level program relevant to Anesthesiology
2.3.9. Research experience in a clinical or basic science program
2.3.10. Up to six (6) months of elective, with approval of the program director

NOTES:

Note: This section should outline any exceptional or extraordinary clauses to the training requirements (e.g., other training options, agreements with American Certification Boards, discretion of a Program Director to extend length of training, etc.).

Royal College certification in Anesthesiology requires all of the following:

1. Successful completion of a 5-year Royal College accredited program in Anesthesiology;
2. Successful completion of the certification examination in Anesthesiology; and
3. Participation in a scholarly project related to Anesthesiology, as attested by the program director.

The program outlined above is to be regarded as the minimum training requirement. Additional training may be required by the program director to ensure that clinical competence has been achieved.

Those who have completed four (4) years’ residency in a non-Royal College anesthesiology program, within a jurisdiction acceptable to the Royal College and within acceptable time frames, and have been in a continuous practice of anesthesia for one or more years post-certification and maintained continuous enrolment with their certifying authority, may fulfill the requirements for section 2.2 with one of the following options:

- Additional Critical Care Medicine training, to a maximum of twelve (12) months;
- Acceptable training in Pediatrics at a senior level, to a maximum of six (6) months’ credit;
- One (1) year of other postgraduate clinical training (as outlined in the section on Other acceptable postgraduate clinical training in the Royal College’s Policies and Procedures for Certification and Fellowship) in Anesthesiology; or
• An additional year of acceptable anesthesiology specialty practice, which must be completed in an accredited, university-affiliated, academic department. The department head of that institution must be asked to complete a Final In-Training Evaluation Report (FITER) as a reference for the candidate.

OVERLAP TRAINING

Anesthesiology training may overlap and allow for credit in the following: Clinician Investigator Program, Clinician Educator Program, master's programs, Clinical Pharmacology and Toxicology, Critical Care Medicine, Palliative Medicine, and Pain Medicine.

There is considerable leeway (up to one (1) year) within the minimum training requirements for trainees to pursue avenues of training that may qualify for overlap training or training that will broaden their experience as clinical Anesthesiologists, enriching the specialty. This will require planning by the trainee. Active involvement of the program director of the overlap discipline is strongly encouraged. Training for the purpose of overlap training must be approved by the program director. Overlap training is supported and encouraged for the trainee who is making satisfactory progress in the primary discipline of Anesthesiology and who can satisfy the service requirements of the trainee position.

REVISED – Specialty Standards Review Committee – May 2014
Objectives of Training in the Specialty of Anesthesiology

2013
VERSION 1.0

This document applies to those who begin training on or after July 1st, 2013.

DEFINITION

Anesthesiology is a medical specialty responsible for the care of patients before, during and after surgical operations, labour and delivery, and certain interventional procedures. Anesthesiologists have unique skills and knowledge to support and in appropriate circumstances lead, the provision of resuscitation, critical care medicine, palliative care and pain medicine.

GOALS

Upon completion of training a resident is expected to be a competent Anesthesiologist, capable of assuming a consultant’s role in the specialty. The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in basic medical sciences and research. Residents must demonstrate the skills and attitudes to work efficiently within multidisciplinary and interprofessional teams.

The Anesthesiologist will demonstrate the necessary knowledge of: patient assessment, surgery, obstetrics, medical and surgical procedures, resuscitation, critical care medicine, acute and chronic pain, and the impact of medical and surgical conditions on anesthetic care to provide consultation to physicians and patients. He/she must be clinically competent in the provision of perioperative, peripartum and periprocedural anesthesic care across all age groups and all patient disease states.

Residents must demonstrate the requisite knowledge, skills, and attitudes for effective patient-centred care and service to a diverse population. In all aspects of specialist practice, the graduate must be able to address issues of gender, sexual orientation, age, culture, ethnicity and ethics in a professional manner. Residents must acquire the skills of self-assessment required for lifelong learning.

ANESTHESIOLOGY COMPETENCIES

At the completion of training, the resident will have acquired the following competencies and will function effectively as a:
Medical Expert

**Definition:**

As *Medical Experts*, Anesthesiologists integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centred care. *Medical Expert* is the central physician Role in the CanMEDS framework.

**Key and Enabling Competencies: Anesthesiologists are able to...**

1. **Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centred medical care**
   1.1. Perform a consultation, including the presentation of well-documented assessments and recommendations in written and/or verbal form in response to a request from another health care professional
   1.2. Demonstrate use of all CanMEDS competencies relevant to Anesthesiology
   1.3. Identify and appropriately respond to relevant ethical issues arising in patient care
   1.4. Demonstrate the ability to prioritize professional duties when faced with multiple patients and problems
   1.5. Demonstrate compassionate and patient-centred care
   1.6. Recognize and respond to the ethical dimensions in medical decision-making
   1.7. Demonstrate medical expertise in situations other than patient care, such as providing expert legal testimony or advising governments, as needed

2. **Establish and maintain clinical knowledge, skills and attitudes appropriate to Anesthesiology**

   Note: In the sections below *General Knowledge* indicates a level of knowledge sufficient for the clinical management of a condition. *Detailed Knowledge* refers to an in-depth understanding of an area, from basic science to clinical application, and possession of skills to manage independently a problem in the area.

   2.1. Apply knowledge of the clinical, socio-behavioural, and fundamental biomedical sciences relevant to Anesthesiology
      2.1.1. Fundamentals of Anesthesiology
         2.1.1.1. Basic Science
            2.1.1.1.1. Demonstrate knowledge of genomics, proteomics and metabolomics as they apply to Anesthesiology
            2.1.1.1.2. Describe the theoretical and molecular basis of the action of anesthetic agents
2.1.1.2. Anatomy

2.1.1.2.1. Demonstrate detailed knowledge of:
   2.1.1.2.1.1. Upper airway and proximal tracheobronchial tree across the age spectrum
   2.1.1.2.1.2. Factors that predict difficult intubation
   2.1.1.2.1.3. Impact of disease states on airway anatomy
   2.1.1.2.1.4. Anatomy and sonoanatomy of the cardiovascular system
   2.1.1.2.1.5. Anatomy and sonoanatomy of the neuraxial and peripheral nervous system
   2.1.1.2.1.6. Anatomy and sonoanatomy of the respiratory system

2.1.1.2.2. Demonstrate general knowledge of the anatomy of the:
   2.1.1.2.2.1. Central nervous system
   2.1.1.2.2.2. Musculoskeletal system
   2.1.1.2.2.3. Hepatobiliary and gastrointestinal systems
   2.1.1.2.2.4. Genitourinary system
   2.1.1.2.2.5. Endocrine system

2.1.1.3. Physiology

2.1.1.3.1. Demonstrate detailed knowledge of the physiology of the following across the age spectrum in health and disease:
   2.1.1.3.1.1. Upper airway and proximal tracheobronchial tree
   2.1.1.3.1.2. Respiratory system including the control of breathing
   2.1.1.3.1.3. Cardiovascular system
   2.1.1.3.1.4. Autonomic nervous system
   2.1.1.3.1.5. Central and peripheral nervous systems
   2.1.1.3.1.6. Renal system
   2.1.1.3.1.7. Endocrine system including but not limited to the perioperative stress response
   2.1.1.3.1.8. Hepatobiliary system
   2.1.1.3.1.9. Hematologic system
   2.1.1.3.1.10. Neuromuscular junction
   2.1.1.3.1.11. Maternal changes in pregnancy
   2.1.1.3.1.12. Transition from fetus to newborn
   2.1.1.3.1.13. Thermoregulation
   2.1.1.3.1.14. Allergic reactions and anaphylaxis
2.1.1.4. Pharmacology

2.1.1.4.1. Demonstrate detailed knowledge of pharmacokinetics, pharmacodynamics, mechanism of action, toxicity, routes of delivery and elimination of all common medications used for the purpose of:

2.1.1.4.1.1. General anesthesia
2.1.1.4.1.2. Local, regional and neuraxial anesthesia
2.1.1.4.1.3. Sedation
2.1.1.4.1.4. Reversal/antagonism of sedation and general anesthesia
2.1.1.4.1.5. Muscle relaxation (paralysis)
2.1.1.4.1.6. Reversal of muscle relaxation (paralysis)
2.1.1.4.1.7. Management of acute and chronic pain
2.1.1.4.1.8. Prophylaxis and treatment of anesthesia induced effects including but not limited to shivering, nausea and vomiting
2.1.1.4.1.9. Inotropy and acute blood pressure regulation
2.1.1.4.1.10. Uterine relaxation and in the management of uterine atony

2.1.1.4.2. Demonstrate general knowledge of pharmacokinetics, pharmacodynamics, mechanisms of action, routes of delivery and elimination, and adverse effects of medications with a significant impact on anesthesia care and surgery including:

2.1.1.4.2.1. Antibiotics
2.1.1.4.2.2. Medications which affect coagulation
2.1.1.4.2.3. Cardiovascular medications
2.1.1.4.2.4. Respiratory medications
2.1.1.4.2.5. Endocrine medications
2.1.1.4.2.6. Cancer chemotherapy
2.1.1.4.2.7. Glucocorticoid and anabolic steroids
2.1.1.4.2.8. Common recreational drugs
2.1.1.4.2.9. Herbal or over the counter products

2.1.1.4.3. Demonstrate detailed knowledge of teratogenicity and fetal effects of medications commonly used in the practice of Anesthesiology
2.1.1.5. Monitoring and Equipment

A. Monitoring

2.1.1.5.1. Demonstrate detailed knowledge of the principles and practices of measurement as they relate to:

2.1.1.5.1.1. Static pressure
2.1.1.5.1.2. Dynamic pressure
2.1.1.5.1.3. Signal processed pressure
2.1.1.5.1.4. Pressure transducers
2.1.1.5.1.5. Thermodilution
2.1.1.5.1.6. Flowmeters
2.1.1.5.1.7. Stethoscope
2.1.1.5.1.8. Ultrasound: M-mode; 2-D; Doppler; colour-flow Doppler
2.1.1.5.1.9. Electrical isolation in the OR
2.1.1.5.1.10. Passive electrical examination, including but not limited to electrocardiogram (ECG) and electroencephalogram (EEG)
2.1.1.5.1.11. Active electrical examination, including but not limited to somatosensory evoked potentials, motor evoked potentials and nerve stimulators used for monitoring neuromuscular junction
2.1.1.5.1.12. Difference between sound and electromagnetic waves
2.1.1.5.1.13. Beer-Lambert law
2.1.1.5.1.14. Raman scattering
2.1.1.5.1.15. Define the terms specific heat and calorie
2.1.1.5.1.16. Describe techniques for measuring temperature

2.1.1.5.2. Demonstrate detailed knowledge of function, sources of error and interpretation of monitors of:

2.1.1.5.2.1. Depth of anesthesia, including but not limited to processed EEG, and auditory evoked potentials
2.1.1.5.2.2. Respiratory system including but not limited to:
   2.1.1.5.2.2.1. Capnometry, pulse oximetry, arterial blood gases, co-oximetry, and spirometry

2.1.1.5.2.3. Neuromuscular Junction:
   2.1.1.5.2.3.1. Peripheral nerve stimulation and clinical implications of response to various stimulation patterns
2.1.1.5.2.4. Cardiovascular System:

2.1.1.5.2.4.1. Electrocardiography

2.1.1.5.2.4.2. Non-invasive arterial blood pressure measurement

2.1.1.5.2.4.3. Invasive arterial blood pressure measurement including but not limited to indications, contraindications, sites of cannulation, insertion techniques, complications and waveform analysis

2.1.1.5.2.4.4. Invasive central venous pressure measurement including but not limited to indications, contraindications, sites of cannulation, insertion techniques, complications and waveform analysis

2.1.1.5.2.4.5. Pulmonary artery pressure measurement

2.1.1.5.3. General knowledge of echocardiography: transthoracic (TTE) and transesophageal (TEE) including but not limited to indications, contraindications and complications

B. Equipment

2.1.1.5.4. Demonstrate a detailed knowledge of inhaled anesthetic delivery systems including safety mechanisms:

2.1.1.5.4.1. Physics of gas flow – gas laws

2.1.1.5.4.2. Storage and delivery of medical gases; air, oxygen (O₂), nitrous oxide (N₂O); helium

2.1.1.5.4.3. Function of a vaporizer

2.1.1.5.4.4. Anesthesia circuits

2.1.1.5.4.5. Carbon dioxide (CO₂) absorption

2.1.1.5.4.6. Gas scavenging

2.1.1.5.4.7. Perform a complete pre-use checklist

2.1.1.5.4.8. Troubleshoot intraoperative problems with gas machine based anesthesia delivery

2.1.1.5.5. Demonstrate general knowledge of ultrasound machines including:

2.1.1.5.5.1. Principles of ultrasound technology

2.1.1.5.5.2. Use of controls to optimize image

2.1.1.5.5.3. Ability to acquire image for central venous cannulation

2.1.1.5.5.4. Ability to acquire image for common regional anesthesia procedures
2.1.1.5.6. Demonstrate general knowledge of lasers including:
   2.1.1.5.6.1. Principles of the use of laser
   2.1.1.5.6.2. Different lasers used in areas where anesthesia care is provided
   2.1.1.5.6.3. Potential hazards of laser use and mitigating strategies

2.1.1.5.7. Demonstrate detailed knowledge of methods of cleaning and sterilization of equipment used by an Anesthesiologist

2.1.1.6. Infectious Diseases
   2.1.1.6.1. Demonstrate detailed knowledge of:
      2.1.1.6.1.1. Prevention of infection:
         2.1.1.6.1.1.1. Mechanisms of transmission of microorganisms, including but not limited to tuberculosis, methicillin resistant Staphylococcus aureus (MRSA), Clostridium difficile, viral hepatitis, human immunodeficiency virus (HIV), vancomycin resistant enterococcus (VRE)
         2.1.1.6.1.1.2. Isolation measures, including but not limited to universal precautions, contact precautions, droplet precautions, airborne precautions
         2.1.1.6.1.1.3. Aseptic technique
         2.1.1.6.1.1.4. Management of needle stick injuries
         2.1.1.6.1.1.5. Prevention and management of nosocomial infections
      2.1.1.6.1.2. Antibiotic prophylaxis
      2.1.1.6.1.3. Anesthetic implications for patients with immune deficiency syndromes

2.1.1.6.2. Demonstrate a general knowledge of pathophysiology and management of patients with:
   2.1.1.6.2.1. Regional sepsis
   2.1.1.6.2.2. Systemic infection
   2.1.1.6.2.3. Septic shock

2.1.1.7. Transfusion Medicine
   2.1.1.7.1. Demonstrate detailed knowledge of:
      2.1.1.7.1.1. Physiology of oxygen delivery and consumption
      2.1.1.7.1.2. Abnormal hemoglobin: congenital, acquired
      2.1.1.7.1.3. Acute anemia: estimate of blood loss
2.1.1.7.1.4. Chronic anemia
2.1.1.7.1.5. Hemolytic anemia
2.1.1.7.1.6. Polycythemia
2.1.1.7.1.7. Physiology of normal hemostasis:
   2.1.1.7.1.7.1. Role of the vasculature, platelets, coagulation factors
   2.1.1.7.1.7.2. Physiologic mechanisms to limit coagulation
   2.1.1.7.1.7.3. Laboratory assessment of coagulation system

2.1.1.7.1.8. Disorders of coagulation:
   2.1.1.7.1.8.1. Congenital and acquired disorders resulting in an increased risk of bleeding
   2.1.1.7.1.8.2. Congenital and acquired disorders resulting in an increased risk of thrombosis

2.1.1.7.1.9. Blood products and recombinant factors:
   2.1.1.7.1.9.1. Indications and risks of transfusion
   2.1.1.7.1.9.2. Complications and management of complications of transfusion
   2.1.1.7.1.9.3. Informed consent
   2.1.1.7.1.9.4. Identification and verification of patient and blood product
   2.1.1.7.1.9.5. Preparation and administration of blood product
   2.1.1.7.1.9.6. Transfusion compatibility in emergency situations

2.1.1.7.1.10. Demonstrate general knowledge of blood banking practices
2.1.1.7.1.11. Blood typing and cross match
2.1.1.7.1.12. Strategies to reduce the use of homologous blood products

2.1.1.8. Airway management
   2.1.1.8.1. Demonstrate detailed knowledge of:
   2.1.1.8.1.1. Basic airway management:
      2.1.1.8.1.1.1. Manoeuvres to establish airway patency
      2.1.1.8.1.1.2. Insertion of oropharyngeal and nasopharyngeal airways
      2.1.1.8.1.1.3. Bag – valve - mask ventilation
2.1.1.8.1.2. Advanced airway management:

2.1.1.8.1.2.1. Extraglottic airways including Laryngeal Mask Airway and other devices

2.1.1.8.1.2.1.1. Indications, contraindications and insertion techniques

2.1.1.8.1.2.1.2. Use as a conduit for endotracheal intubation

2.1.1.8.1.2.1.3. Use in difficult airway

2.1.1.8.1.2.2. Endotracheal intubation:

2.1.1.8.1.2.2.1. Indications for intubation

2.1.1.8.1.2.2.2. Route of intubation – nasal, oral, transtracheal

2.1.1.8.1.2.2.3. Manoeuvres to facilitate intubation, including but not limited to patient positioning and optimal external laryngeal manipulation

2.1.1.8.1.2.2.4. Blind nasotracheal intubation

2.1.1.8.1.2.2.5. Direct laryngoscopy – appropriate choice of blade for age and anatomy

2.1.1.8.1.2.2.6. Indirect laryngoscopy, including but not limited to rigid and flexible fiberoptic scopes and video laryngoscopes

2.1.1.8.1.2.2.7. Use of adjuncts to facilitate endotracheal tube placement, including but not limited to stylets and bougie

2.1.1.8.1.2.2.8. Confirmation of appropriate placement of endotracheal tube

2.1.1.8.1.2.2.9. Placement of double lumen tube

2.1.1.8.1.2.3. Complications of airway management

2.1.1.8.1.2.4. Prevention and management of pulmonary aspiration of gastric contents

2.1.1.8.1.2.5. Management of extubation

2.1.1.8.1.3. Management of the difficult airway

2.1.2. Perioperative medicine

2.1.2.1. Demonstrate detailed knowledge of:

2.1.2.1.1. Complete preoperative patient assessment

2.1.2.1.2. Risk stratification

2.1.2.1.3. Preoperative preparation of patients and strategies to optimize outcomes for surgical, obstetric, procedural and anesthesia care
2.1.2.1.4. Perianesthesia care during induction, maintenance and emergence from anesthesia
2.1.2.1.5. Selection of medications
2.1.2.1.6. Selection of equipment and monitoring techniques
2.1.2.1.7. Fluid management strategies
2.1.2.1.8. Patient positioning and risks associated with patient positioning
2.1.2.1.9. Common local and regional anesthesia techniques used as primary or supplementary anesthesia
2.1.2.1.10. Perioperative temperature regulation and management
2.1.2.1.11. Acute postoperative pain management
2.1.2.1.12. Acute postoperative care in the post-anesthetic care unit (PACU), management of common postoperative problems
2.1.2.1.13. Early postoperative recovery including but not limited to perioperative stress response, early mobilization, and fast track recovery programs
2.1.2.1.14. Prevention strategies for long-term post-surgical pain

2.1.3. Regional anesthesia
2.1.3.1. Demonstrate detailed knowledge of:
   2.1.3.1.1. Pharmacology of common local anesthetics and adjuvant medications used for the purpose of regional anesthesia
   2.1.3.1.2. Physiologic effects of neuraxial blockade
   2.1.3.1.3. Indications and contraindications for regional anesthesia
   2.1.3.1.4. Complications of regional anesthesia and management
   2.1.3.1.5. Technology used for nerve stimulation
   2.1.3.1.6. Technology used for ultrasound imaging
   2.1.3.1.7. Unique considerations for pediatric regional anesthesia
   2.1.3.1.8. Localization of plexuses and peripheral nerves by anatomic landmarks, paresthesia, nerve stimulation, and image guided techniques

2.1.3.2. Describe advantages, disadvantages and limitations of
   2.1.3.2.1. Intravenous regional anesthesia
   2.1.3.2.2. Spinal anesthesia
   2.1.3.2.3. Epidural anesthesia
   2.1.3.2.4. Major plexus blocks
2.1.4. Resuscitation and critical care medicine

2.1.4.1. Demonstrate detailed knowledge of differential diagnosis and management of:

2.1.4.1.1. Respiratory failure
   2.1.4.1.1.1. Management of invasive and non invasive respiratory support including but not limited to initiation, monitoring and weaning

2.1.4.1.2. Circulatory failure
   2.1.4.1.2.1. Hemodynamic management of circulatory failure including but not limited to fluids, vasopressors, inotropic therapy and mechanical therapy

2.1.4.1.3. Acute coronary syndromes

2.1.4.1.4. Arrhythmia including cardioversion and temporary pacing
   2.1.4.1.4.1. Management of patients with permanent pacemaker and/or implantable cardioverter defibrillator

2.1.4.1.5. Hypertensive crises

2.1.4.1.6. Fluid, electrolyte and acid-base disorders

2.1.4.1.7. Venous thromboembolic disease

2.1.4.1.8. Acute renal failure

2.1.4.1.9. Acute and chronic hepatic failure

2.1.4.1.10. Upper and lower gastrointestinal bleeding

2.1.4.1.11. Endocrine emergencies, including but not limited to diabetic, thyroid, hypercalcemia, adrenal insufficiency, diabetes insipidus, and syndrome of inappropriate anti-diuretic hormone (SIADH)

2.1.4.1.12. Poisoning and drug related complications

2.1.4.1.13. Serotonin syndrome, malignant hyperthermia, neuroleptic malignant syndrome

2.1.4.1.14. The trauma patient:
   2.1.4.1.14.1. Principles of advance trauma life support (ATLS), supportive care, evaluation and management of blunt and penetrating trauma
   2.1.4.1.14.2. Evaluation and management of the patient with a thermal injury
   2.1.4.1.14.3. Management of head trauma and raised intracranial pressure (ICP)
2.1.4.1.15. Intracranial ischemia and bleeding
2.1.4.1.16. Decreased level of consciousness and coma
2.1.4.1.17. Status epilepticus
2.1.4.1.18. Agitation and delirium
2.1.4.1.19. Principles of nutrition support for critically ill patients
2.1.4.1.20. Acute postoperative care after major surgery
2.1.4.1.21. Obstetrical critical care
2.1.4.1.22. Determination of brain death
2.1.4.1.23. Management of the organ donor
2.1.4.1.24. Ethical principles of critical care medicine

2.1.5. Pain Medicine

2.1.5.1. Acute pain

2.1.5.1.1. Demonstrate detailed knowledge of:

2.1.5.1.1.1. Anatomy and physiology of pain including but not limited to pain pathways, pain transduction, neuroendocrine stress response, and the affective and functional aspects of the pain experience

2.1.5.1.1.2. Assessment of acute pain

2.1.5.1.1.3. Pharmacology and use of analgesic agents Multimodal and regional analgesia

2.1.5.1.1.4. Patient controlled analgesia (PCA)

2.1.5.1.1.5. Non pharmacologic interventions

2.1.5.1.1.6. Use of analgesia to optimize postoperative outcomes

2.1.5.1.1.7. Addiction, tolerance and substance abuse as they relate to acute pain management

2.1.5.2. Chronic pain

2.1.5.2.1. Demonstrate general knowledge of:

2.1.5.2.1.1. Anatomy and physiology of pain including but not limited to pain pathways, pain transduction, neuroendocrine stress response, and the affective and functional aspects of the pain experience

2.1.5.2.1.2. Assessment of chronic pain

2.1.5.2.1.3. Nociceptive vs. neuropathic pain

2.1.5.2.1.4. Multidisciplinary pain management

2.1.5.2.1.5. Common pharmacologic strategies used in chronic pain management
2.1.5.2.1.6. Common non pharmacologic interventions in pain management
2.1.5.2.1.7. Common interventional pain management strategies and their indications

2.1.6. Obstetrics

2.1.6.1. Demonstrate detailed knowledge of:

2.1.6.1.1. Normal maternal physiology of pregnancy
2.1.6.1.2. Fetal and placental physiology
2.1.6.1.3. Intrapartum and postpartum neonatal resuscitation
2.1.6.1.4. Medical diseases during pregnancy and their peripartum management including but not limited to how the disease impacts the pregnancy, how the pregnancy impacts the disease and the obstetric implications and management of the disease

2.1.6.1.4.1. Hypertensive disorders of pregnancy
2.1.6.1.4.2. Respiratory disease
2.1.6.1.4.3. Cardiac disease
2.1.6.1.4.4. Morbid obesity
2.1.6.1.4.5. Endocrine disease
2.1.6.1.4.6. Hematologic and coagulation disorders

2.1.6.1.5. Labour analgesia including but not limited to anatomy and physiology of labour pain, and strategies for analgesia

2.1.6.1.6. Anesthesia for obstetric surgery:

2.1.6.1.6.1. Regional anesthesia for cesarean section
2.1.6.1.6.2. General anesthesia for cesarean section
2.1.6.1.6.3. Other obstetric surgery
2.1.6.1.6.4. Postoperative analgesia

2.1.6.1.7. Management of obstetrical complications
2.1.6.1.8. Anesthetic management of non-obstetric surgery during pregnancy
2.1.6.1.9. Anesthesia related morbidity and mortality in pregnant patients
2.1.6.1.10. Ethical principles of obstetric anesthesia
2.1.7. Specialty and subspecialty anesthesia

2.1.7.1. Demonstrate detailed knowledge and ability to provide anesthesia care for the following surgical specialties and special situations:

2.1.7.1.1. Ambulatory anesthesiology
2.1.7.1.2. Cardiovascular anesthesiology
2.1.7.1.3. Gastrointestinal anesthesiology
2.1.7.1.4. Gynecologic anesthesiology
2.1.7.1.5. Hepatobiliary anesthesiology
2.1.7.1.6. Neurosurgical anesthesiology
2.1.7.1.7. Ophthalmic anesthesiology
2.1.7.1.8. Orthopedic anesthesiology
2.1.7.1.9. Otolaryngology, head and neck surgery anesthesiology
2.1.7.1.10. Pediatric anesthesiology
2.1.7.1.11. Plastic surgery anesthesiology
2.1.7.1.12. Surgical oncology anesthesiology
2.1.7.1.13. Urologic anesthesiology
2.1.7.1.14. Thoracic anesthesiology
2.1.7.1.15. Transplant anesthesiology
2.1.7.1.16. Anesthesiology for morbidly obese patients
2.1.7.1.17. Anesthesiology for trauma
2.1.7.1.18. Geriatric anesthesiology
2.1.7.1.19. Anesthesiology in areas other than the operating room

2.1.7.1.19.1. Interventional radiology
2.1.7.1.19.2. Cardiac catheterization suite
2.1.7.1.19.3. Diagnostic imaging
2.1.7.1.19.4. Electroconvulsive therapy (ECT)
2.1.7.1.19.5. Procedural sedation, including but not limited to; burn dressing changes, pediatric procedures
2.1.7.1.19.6. Outpatient cardioversion
2.1.7.1.19.7. Endoscopy
3. **Perform a complete and appropriate assessment of a patient**
   3.1. Identify and explore issues to be addressed in a patient encounter effectively, including the patient’s context and preferences
      3.1.1. Explore and incorporate pre-existing medical conditions and their impact on the anesthetic and planned procedure
      3.1.2. Address any patient concerns related to the planned procedure
      3.1.3. Explore issues relevant to perioperative acute pain management
   3.2. Elicit a history that is relevant, concise and accurate to context and preferences for the purposes of prevention and health promotion, diagnosis and/or management
      3.2.1. Review past anesthetics and any concerns
      3.2.2. Review family history of anesthetic complications
      3.2.3. History of the condition leading to the surgical, obstetric or procedural intervention
      3.2.4. Review of systems and past health
   3.3. Perform a focused physical examination that is relevant and accurate for the purposes of prevention and health promotion, diagnosis and/or management
      3.3.1. Evaluation of the upper airway and proximal tracheobronchial tree by physical examination, endoscopy and diagnostic imaging
      3.3.2. Detailed examination of the cardiovascular and respiratory systems
      3.3.3. Detailed examination of the neurologic system
   3.4. Select medically appropriate investigative methods in a resource-effective and ethical manner
      3.4.1. Diagnostic imaging
      3.4.2. Cardiac function assessment
      3.4.3. Respiratory function assessment
      3.4.4. Arterial and venous flow studies including but not limited to assessment of coronary perfusion and deep venous thrombosis
      3.4.5. Renal function assessment
   3.5. Demonstrate effective clinical problem solving and judgment to address patient problems, including interpreting available data and integrating information to generate differential diagnoses and formulate management plans for:
      3.5.1. Anesthesia care with rationale for choices and alternatives
      3.5.2. Airway management with rationale for choices and alternatives
      3.5.3. Postoperative pain management
      3.5.4. Postoperative care and disposition
3.5.5. Regional anesthesia with rationale for choices and alternatives

4. Use preventive and therapeutic interventions effectively
   4.1. Implement a management plan in collaboration with a patient and the patient’s family
   4.2. Demonstrate appropriate and timely application of preventive and therapeutic interventions relevant to Anesthesiology, including but not limited to:
      4.2.1. Premedication
      4.2.2. Vascular access
      4.2.3. Non-invasive monitoring
      4.2.4. Invasive monitoring
      4.2.5. Prophylaxis and treatment of postoperative nausea and vomiting
      4.2.6. Pain management strategies
   4.3. Demonstrate in-depth knowledge regarding the risks and benefits of these procedures and therapies
   4.4. Ensure appropriate informed consent is obtained for procedures and therapies. Assess and manage complications of these procedures and therapies efficiently and effectively
      4.4.1. Local anesthetic toxicity
      4.4.2. Complications of regional anesthesia
   4.5. Ensure patients receive appropriate end-of-life care

5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic
   5.1. Demonstrate effective, appropriate, and timely performance of diagnostic procedures relevant to Anesthesiology including but not limited to:
      5.1.1. Arterial cannulation
      5.1.2. Central venous cannulation
      5.1.3. Placement of a pulmonary artery catheter
      5.1.4. Ultrasound guidance for vascular access and common regional blocks
      5.1.5. Endoscopy of the upper airway and proximal tracheobronchial tree
   5.2. Demonstrate effective, appropriate, and timely performance of therapeutic procedures relevant to Anesthesiology, including but not limited to
      5.2.1. Airway management
         5.2.1.1. Non-invasive airway and ventilation support
5.2.1.2. Extraglottic airway support

5.2.1.3. Endotracheal intubation, with and without adjuncts including but not limited to fiberoptic bronchoscope and videolaryngoscopes

5.2.1.4. Appropriate use of invasive airway management including but not limited to needle cricothyrotomy, surgical airway and retrograde intubation

5.2.2. Vascular access

  5.2.2.1. Arterial catheters
  5.2.2.2. Central venous catheters
  5.2.2.3. Pulmonary artery catheters

5.2.3 Neuraxial anesthesia/analgesia

  5.2.3.1. Spinal
  5.2.3.2. Epidural
  5.2.3.3. Combined spinal epidural

5.2.4. Peripheral nerve blockade

5.2.4. Resuscitation techniques

  5.2.4.1. Basic Cardiac Life Support
  5.2.4.2. Advanced Cardiac Life Support
  5.2.4.3. Neonatal resuscitation

5.3. Ensure appropriate informed consent is obtained for anesthesia care, regional anesthesia care and procedures

5.4. Document and disseminate information related to procedures performed and their outcomes

5.5. Ensure adequate follow-up is arranged for procedures performed

6. **Seek appropriate consultation from other health professionals, recognizing the limits of their expertise**

  6.1. Demonstrate insight into their own limits of expertise
  6.2. Demonstrate effective, appropriate, and timely consultation of another health professional as needed for optimal patient care
  6.3. Arrange appropriate follow-up care services for a patient and their family
    6.3.1. Appropriate disposition of the perioperative patient
Communicator

Definition:

As Communicators, Anesthesiologists effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

Key and Enabling Competencies: Anesthesiologists are able to...

1. Develop rapport, trust, and ethical therapeutic relationships with patients and families
   1.1. Recognize that being a good communicator is a core clinical skill for physicians, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction, adherence to treatment plans and improved clinical outcomes
   1.2. Establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy
   1.3. Respect patient confidentiality, privacy and autonomy
   1.4. Listen effectively
   1.5. Be aware of and responsive to nonverbal cues
   1.6. Facilitate a structured clinical encounter effectively

2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals
   2.1. Gather information about a disease and about a patient’s beliefs, concerns, expectations and illness experience
      2.1.1. Address and clarify any previous anesthetic problems
   2.2. Seek out and synthesize relevant information from other sources, such as a patient’s family, caregivers and other professionals

3. Convey relevant information and explanations accurately to patients and families, members of the anesthetic care team (ACT), colleagues and other professionals
   3.1. Deliver information to a patient and family, colleagues and other professionals in a humane manner and in such a way that it is understandable, encourages discussion and participation in decision-making
      3.1.1. Synthesize and discuss pertinent information regarding anesthetic considerations and appropriate anesthetic plan with the ACT
      3.1.2. Discuss special needs, including but not limited to monitoring, with nurses, ACT members and perfusionists in a professional and respectful manner
3.2. Ensure adequate information has been provided to the patient prior to undertaking an anesthetic or other invasive procedure

3.2.1. Provide anesthetic and postoperative analgesic options, along with their inherent risks, to the patient and their family members in clear language in order for them to make informed choices

3.3. Clearly state concerns in emergency situations, including but not limited to nature and severity of the problem, actions required of others and expected outcome

4. Develop a common understanding on issues, problems and plans with patients, families, and other professionals to develop a shared plan of care

4.1. Identify and explore problems to be addressed from a patient encounter effectively, including the patient’s context, responses, concerns, and preferences

4.2. Respect diversity and difference, including but not limited to the impact of gender, religion and cultural beliefs on decision-making

4.3. Encourage discussion, questions, and interaction in the encounter

4.4. Engage patients, families, and relevant health professionals in shared decision-making to develop a plan of care

4.4.1. Demonstrate knowledge of the pre-surgical safety checklist

4.4.2. Ensure clear and audible communication with surgeons, nurses and members of one’s ACT to facilitate patient care, safety and prevent errors

4.4.3. Delineate anesthetic concerns to the surgeon, especially if they involve a high risk patient, cancellation or postponement of the surgery pending further investigations

4.5. Address challenging communication issues effectively, such as obtaining informed consent, delivering bad news, and addressing anger, confusion and misunderstanding

4.5.1. Engage the patient and family in full disclosure of all anesthetic related complications

4.5.2. Delineate management strategies with regard to palliative patients who do not wish to be resuscitated

5. Convey effective oral and written information about a medical encounter

5.1. Maintain clear, accurate, and appropriate records of clinical encounters and plans

5.1.1. Ensure that anesthetic records are complete and legible

5.1.2. Ensure that anesthetic consultations contain clear, concise opinions and recommendations with regard to patient optimization, investigations required and risk

5.1.3. Document consent for invasive procedures where indicated
5.2. Present verbal reports of clinical encounters and plans
5.3. Present medical information to the public or media about a medical issue

Collaborator

Definition:

As Collaborators, Anesthesiologists effectively work within a health care team to achieve optimal patient care.

Key and Enabling Competencies: Anesthesiologists are able to...

1. Participate effectively and appropriately in an interprofessional health care team
   1.1. Describe the Anesthesiologist’s roles and responsibilities to other professionals
   1.2. Describe the roles and responsibilities of other professionals within the health care team with particular reference to the operating room, intensive care unit, emergency room and the pain service
   1.3. Recognize and respect the diversity of roles, responsibilities and competences of other professionals in relation to their own
       1.3.1. Leverage unique skills and competences of team members effectively to achieve optimal patient care
   1.4. Work with others to assess, plan, provide and integrate care for individual patients (or groups of patients)
   1.5. Work with others to assess, plan, provide and review other tasks, such as research problems, educational work, program review or administrative responsibilities
   1.6. Participate in interprofessional team meetings and contribute unique expertise to achieve optimal patient care
   1.7. Enter into interdependent relationships with other professions for the provision of quality care
   1.8. Describe the principles of team dynamics and utilize them to improve interprofessional collaboration
   1.9. Respect team ethics, including confidentiality, resource allocation and professionalism
   1.10. Demonstrate effective leadership in a health care team, as appropriate, especially in the context of work in the operating room during scheduled and urgent surgery

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2. Work with other health professionals effectively to prevent, negotiate and resolve interprofessional and multidisciplinary conflict

2.1. Demonstrate a respectful attitude towards other colleagues and members of an interprofessional and multidisciplinary team

2.2. Work with other professionals to prevent conflict

2.3. Employ collaborative negotiation to resolve conflict
   2.3.1. Demonstrate knowledge and skills in strategies to prevent and resolve conflict

2.4. Respect differences and address misunderstandings and limitations in other professionals

2.5. Recognize and address one’s own differences, misunderstanding and limitations that may contribute to interprofessional tension or conflict

2.6. Reflect on interprofessional and multidisciplinary team function
   2.6.1. Contribute expertise and skills to complete team tasks

Manager

Definition:

As Managers, Anesthesiologists are integral participants in health care organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the health care system.

Key and Enabling Competencies: Anesthesiologists are able to...

1. Participate in activities that contribute to the effectiveness of their health care organizations and systems
   1.1. Work collaboratively with others in their organizations
   1.2. Participate in systemic quality process evaluation and improvement, including but not limited to patient safety initiatives
      1.2.1. Participate actively in the development and use of surgical safety check lists, taking a leadership role when necessary
      1.2.2. Apply strategies locally employed with regard to minimizing wrong sided surgery and procedures particularly when performing regional anesthesia
   1.3. Describe the structure and function of the health care system as it relates to Anesthesiology, including the roles of physicians
      1.3.1. Demonstrate knowledge of the administrative structure of an operating room
   1.4. Describe principles of health care financing, including physician remuneration, budgeting and organizational funding
2. Manage their practice and career effectively

2.1. Set priorities and manage time to balance patient care, practice requirements, outside activities and personal life
   2.1.1. Set priorities and manage time in order to accomplish his/her work efficiently in the operating room and out of the operating room including but not limited to consultations in emergency room, obstetric unit, intensive care unit and ward
   2.1.2. Demonstrate insight into the effectiveness and efficiency of his/her work in the operating room and assess regularly the progress of surgeries

2.2. Manage a practice including finances and human resources
   2.2.1. Demonstrate knowledge of the management of operating rooms, both the conduct of individual rooms and the overall surgical suite
   2.2.2. Demonstrate knowledge of the contributors to anesthetic expenditures
   2.2.3. Demonstrate knowledge of the guidelines concerning anesthetic practice and equipment in Canada

2.3. Implement processes to ensure personal practice improvement
   2.3.1. Conduct morbidity and mortality reviews
   2.3.2. Refer in a timely manner to other staff Anesthesiologists or consultants when needed
   2.3.3. Manage stress level in a constructive manner, especially during emergencies
   2.3.4. Participate in the national and regional programs for ongoing maintenance of competence and quality improvement

2.4. Employ information technology appropriately for patient care
   2.4.1. Complete documentation for a patient encounter in a timely manner
   2.4.2. Utilize computerized, or on-line resources to prepare for and manage patient care as needed

2.5. Demonstrate knowledge of occupational hazards for Anesthesiologists and implement measures to minimize those risks

3. Allocate finite health care resources appropriately

3.1. Recognize the importance of just allocation of health care resources, balancing effectiveness, efficiency and access with optimal patient care
   3.1.1. Identify surgical emergencies and allocate resources appropriately
3.2. Apply evidence and management processes for cost-appropriate care
   3.2.1. Demonstrate ability to optimize the use of the available resources in the care of each patient

4. Serve in administration and leadership roles
   4.1. Chair or participate effectively in committees and meetings
   4.2. Lead or implement change in health care
      4.2.1. Describe qualities of effective leaders
      4.2.2. Describe the importance and responsibility of the Anesthesiologist regarding the pivotal role in the organization of the operating room working environment
   4.3. Plan relevant elements of health care delivery (e.g., work schedules)

Health Advocate

Definition:

As Health Advocates, Anesthesiologists responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.

Key and Enabling Competencies: Anesthesiologists are able to...

1. Respond to individual patient health needs and issues as part of patient care
   1.1. Identify the perioperative period as a significant opportunity for health behavior change
   1.2. Identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care:
      1.2.1. Advocate for and prescribe positive health behavior change, including but not limited to smoking cessation, and preoperative physical fitness, to improve post-surgical and post anesthesia outcomes
      1.2.2. Advocate for and prescribe pharmacologic intervention in the perioperative period, including but not limited to blood glucose management, to improve post-surgical and post anesthesia outcomes
      1.2.3. Discuss and implement blood conservation strategies to reduce exposure to allogeneic blood
      1.2.4. Identify the risks and potential benefits regarding perioperative care, postsurgical outcomes and chronic post-surgical pain with individual pain management strategies
      1.2.5. Advocate for resources for acute and chronic pain management, anesthesia care, surgical care, obstetric care and critical care
1.2.6. Champion patient safety initiatives in acute and chronic pain management, anesthesia care, surgical care, obstetric care and critical care

1.3. Ensure complete and appropriate follow up for patients seen in preoperative consultation including follow up of preoperative investigations and referral for care where appropriate

2. Respond to the health needs of the communities that they serve

2.1. Describe the practice communities that they serve

2.2. Identify opportunities for advocacy, health promotion and disease prevention in the communities that they serve, and respond appropriately

2.3. Appreciate the possibility of competing interests between the communities served and other populations

2.4. Advocate for access to care for patients with surgical illness, acute or chronic pain, obstetric care needs or critical care needs

3. Identify the determinants of health for the populations that they serve

3.1. Identify the determinants of health of the populations, including barriers to access to care and resources

3.2. Identify vulnerable or marginalized populations within those served and respond appropriately

3.2.1. Patients with chronic pain

4. Promote the health of individual patients, communities, and populations

4.1. Describe an approach to implementing a change in a determinant of health of the populations they serve

4.2. Describe how public policy impacts on the health of the populations served

4.2.1. Promote policies which create a just culture of patient safety

4.2.2. Promote policies which measure and support access to surgical care

4.2.3. Promote policies which benchmark patient outcomes in anesthesia, surgery, obstetrics, critical care and pain management

4.3. Identify points of influence in the health care system and its structure

4.3.1. Provide direction to hospital administrators regarding compliance with national practice guidelines and equipment standards for anesthesiology

4.3.2. Participate and provide leadership in the organization of effective and efficient service delivery models at the local, regional and provincial levels

4.4. Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity and idealism
4.5. Appreciate the possibility of conflict inherent in their role as a health advocate for a patient or community with that of manager or gatekeeper

4.6. Describe the role of the medical profession in advocating collectively for health and patient safety

Scholar

**Definition:**

As Scholars, Anesthesiologists demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

**Key and Enabling Competencies: Anesthesiologists are able to...**

1. **Maintain and enhance professional activities through ongoing learning**
   1.1. Describe the principles of maintenance of competence
   1.2. Describe the principles and strategies for implementing a personal knowledge management system
       1.2.1. Recognize the importance of continuing medical education strategies in future practice and plan its implementation in one’s own practice
   1.3. Recognize and reflect on learning issues in practice
   1.4. Conduct personal practice audits
   1.5. Pose an appropriate learning question and access and interpret the relevant evidence regarding the question
       1.5.1. Integrate and synthesize information learned and present it in an appropriate format to colleagues and other professionals
   1.6. Integrate new learning into practice
   1.7. Evaluate the impact of any change in practice on outcomes
   1.8. Document the learning process

2. **Critically evaluate medical information and its sources, and apply this appropriately to practice decisions**
   2.1. Describe the principles of critical appraisal
   2.2. Critically appraise retrieved evidence in order to address a clinical question
       2.2.1. Participate actively in journal club on anesthesiology literature
   2.3. Integrate critical appraisal conclusions into clinical care
3. **Facilitate the learning of patients, families, students, residents, other health professionals, the public and others, as appropriate**
   
   3.1. Describe principles of learning relevant to medical education
   
   3.2. Identify collaboratively the learning needs and desired learning outcomes of others
       
       3.2.1. Contribute to continual medical learning of other members of the anesthesia care team
       
   3.3. Select effective teaching strategies and content to facilitate others’ learning
   
   3.4. Demonstrate an effective lecture or presentation
   
   3.5. Assess and reflect on a teaching encounter
   
   3.6. Provide effective feedback
   
   3.7. Describe the principles of ethics with respect to teaching

4. **Contribute to the development, dissemination, integration and translation of new knowledge and practices**
   
   4.1. Demonstrate an understanding of the importance of basic sciences and clinical sciences research to the development of contemporary anesthesia
   
   4.2. Describe the principles of research and scholarly inquiry
   
   4.3. Describe the principles of research ethics
   
   4.4. Pose an appropriate learning or scholarly question
   
   4.5. Conduct a systematic search for evidence and interpret the relevant evidence
   
   4.6. Select and apply appropriate methods and document the process to address the question
   
   4.7. Demonstrate an understanding of the process to disseminate the findings of a study or research
   
   4.8. Critically analyze the applications of the findings to the practice of anesthesia
   
   4.9. Integrate new learning into practice
   
   4.10. Establish and maintain knowledge, skills and attitudes appropriate to fostering scientific inquiry
   
   4.11. Complete a scholarly project acceptable to the Residency Program Committee
Professional

Definition:

As Professionals, Anesthesiologists are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.

Key and Enabling Competencies: Anesthesiologists are able to...

1. Demonstrate a commitment to their patients, profession, and society through ethical practice
   1.1. Exhibit appropriate professional behaviors in practice, including honesty, integrity, commitment, compassion, respect and altruism
   1.2. Demonstrate a commitment to delivering the highest quality care and maintenance of competence
   1.3. Demonstrate a commitment to ensuring continuous care to patients including during on-call hours
   1.4. Recognize and appropriately respond to ethical issues encountered in practice
      1.4.1. Demonstrate knowledge of the legal and ethical rules regarding informed consent of patients including minors and patients under public guardianship
      1.4.2. Ensure, where possible, patients or their substitute decision makers have the opportunity for fully informed consent before every anesthetic encounter, surgical intervention or invasive technique
      1.4.3. Collaborate with other professionals regarding end of life care
   1.5. Manage conflicts of interest
   1.6. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law
      1.6.1. Demonstrate competence in maintaining patient confidentiality in daily practice
   1.7. Maintain appropriate boundaries with patients
   1.8. Respect autonomy and dignity of patients
   1.9. Recognize importance of disclosure of medical error and adverse events and participate in such disclosure when appropriate

2. Demonstrate a commitment to their patients, profession and society through participation in profession-led regulation
   2.1. Demonstrate knowledge and an understanding of the professional, legal and ethical codes of practice
   2.2. Fulfil the regulatory and legal obligations required of current practice
2.3. Demonstrate accountability to professional regulatory bodies
2.4. Recognize and respond to others’ unprofessional behaviors in practice
2.5. Participate in peer review

3. **Demonstrate a commitment to physician health and sustainable practice**
   3.1. Balance personal and professional priorities to ensure personal health and a sustainable practice
   3.2. Strive to heighten personal and professional awareness and insight

**REVISED** – Specialty Standards Review Committee – May 2013
CanMEDS 2015
Physician Competency Framework

This framework is proudly endorsed by 12 Canadian medical organizations
CanMEDS 2015
Physician Competency Framework

EDITORS
Jason R. Frank
Linda Snell
Jonathan Sherbino
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The Fellows of the Royal College of Physicians and Surgeons of Canada (Royal College) are committed to improving the health and care of Canadians. The Royal College delivers on this mission in part by setting high standards for medical education and practice. These standards are informed by the CanMEDS Physician Competency Framework, which contributes directly to the delivery of quality health care.

Since its launch in 1996, CanMEDS has become the most widely accepted and widely applied physician competency framework in the world. Each revision that it undergoes is guided by extensive empirical research and wide consultation, and is based on evidence of societal need, Fellows’ expertise and sound educational principles.

CanMEDS 2015 is the third edition of the framework and is in many ways our most significant revision. The Royal College began the CanMEDS renewal process as part of another multi-year initiative known as Competence by Design (CBD). CBD is an initiative to implement an enhanced model for competency-based medical education in residency training and specialty practice in Canada. Together the CanMEDS 2015 project and CBD resulted in rich new content within the CanMEDS Framework as well as new milestones to mark the progression of competence in each of the CanMEDS Roles across the continuum of medical education. The Milestones Guide, a companion resource, marks a major expansion of the CanMEDS vision and an important step toward integrating competency based curricula in postgraduate programs, as was recommended in 2012 by The Future of Medical Education in Canada Postgraduate Project, a Canadian collaborative initiative.¹

The development of this 2015 edition of the framework was a truly collaborative effort. It saw the participation of hundreds of dedicated medical educators, clinicians, learners, committee members, and staff. Moreover, numerous organizations involved in medical education in Canada and around the world also contributed their expertise, and we are proud to say that many of Canada’s leading medical education organizations formally endorse the CanMEDS 2015 Framework.

It is with great pleasure that we present the CanMEDS 2015 Physician Competency Framework. We trust that it will be useful to all those who care about physician competence and quality health care.

Kevin Imrie, MD, FRCPC, FACP
President

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Executive Director, Office of Specialty Education and Deputy CEO
The evolution of the CanMEDS Framework

How much has happened in these 50 years — a period more remarkable than any, I will continue to say… I am thinking of those revolutions in science which have… changed the position and prospects of [humankind]…

— Benjamin Disraeli, 1873

Medical education is changing rapidly, and CanMEDS is part of that story. CanMEDS is, at its heart, an initiative to improve patient care by enhancing physician training. From the beginning, its main purpose has been to articulate a comprehensive definition of the abilities needed for all domains of medical practice and thus provide a strong foundation for medical education.

In the early 1990s, Fellows of the Royal College of Physicians and Surgeons of Canada, with support from the charitable institution Associated Medical Services, leveraged the important work of the Educating Future Physicians for Ontario project to develop a competency framework for specialist physicians. The result, the CanMEDS Framework, was formally approved by the Royal College in 1996 and subsequently updated in 2005. CanMEDS is now used in dozens of countries on five continents, in medicine and in other health care professions, making it the most recognized and most widely applied health care profession competency framework in the world. The Royal College continues to be the steward and sponsor of the framework, and the current iteration was prepared with input from major medical institutions around the world.

In Canada, CanMEDS forms the basis for all Royal College educational standards for specialty education. The College of Family Physicians of Canada has in recent years formally integrated an adaptation known as CanMEDS-FM (CanMEDS–Family Medicine) into the training of all family physicians in Canada. CanMEDS has also been adopted by the Collège des médecins du Québec, the Medical Council of Canada, the Canadian Medical Association and Canada’s medical schools. The use of a national competency-based framework for medical training is one reason why the Canadian medical education system is regarded as among the strongest in the world.
The CanMEDS 2015 project: objectives and principles

To help prepare physicians meet societal needs in a dynamic and increasingly demanding health care environment, those stewarding CanMEDS remain committed to keeping the framework current and to facilitating its implementation in the real world of medical education and practice.

The CanMEDS 2015 project set out to meet the following objectives, while working within the existing CanMEDS Roles:

1. Add new themes emerging in health care, such as patient safety, eHealth and handover.
2. Address the needs of front-line educators who had asked for practical changes and updates that make it easier to teach and assess the CanMEDS Roles.
3. Develop new competency milestones that support the practical application of the framework in residency training programs and throughout a physician’s career.

To meet these objectives, the participants in the CanMEDS 2015 revision process adopted the following guidelines as foundational to their work:

- The process is one of revision and renewal: improvement, not reinvention, is the goal.
- The primary target audiences comprise trainees, front-line teachers, program directors of various curricula and clinician educators who design programs.
- The competency constructs need to be grounded in theory and best practices, while their presentation needs to be realistic and related to the daily practice of any physician.
- Competencies are to be articulated in a generic manner to facilitate their adaptation by all specialties.
- Concepts that are relevant to multiple Roles will be articulated in the Role where they are the most prominent. Although redundancy and overlap are accepted, and even expected, the framework itself will avoid repetition while ensuring the appropriate integration of Roles.

“With the many changes occurring in the medical workforce, there is a pressing need to make sure that CanMEDS 2015 reflects the values of the next generation of physicians.”

Source: CanMEDS 2015 Consultations. Written submission.
The CanMEDS 2015 project and the Competence by Design initiative

The CanMEDS 2015 project is foundational to another key initiative of the Royal College known as Competence by Design. Competence by Design is a multi-year project to implement an enhanced model for competency-based medical education (CBME) in residency training and specialty practice in Canada. Both CanMEDS and Competence by Design are part of a worldwide trend toward CBME now under way.

The aim of the Competence by Design project is to transform Canadian medical training. The move to competency-based medical education is seen as a mechanism to enhance the practice readiness of graduates and ensure they leave supervised training with the skills needed to continue their learning throughout their professional career. This requires a move away from traditional time-based immersions with an emphasis on a single point in time assessment to a system of demonstrating performance regularly in real situations and settings. Through the CanMEDS 2015 Framework, and the associated CanMEDS milestones, educators now have useful markers of progression to use as the basis for meaningful feedback to learners. Learners will use this feedback to both enhance and record their educational progress.

The Royal College’s Competence by Design project is ready to provide leadership for medical education worldwide. Working in collaboration with a consortium of key partners in Canada, we are bringing the implementation of CBME within reach. Competence by Design will influence the delivery of medical education in Canada and beyond.

COMPETENCY-BASED MEDICAL EDUCATION: KEY DEFINITIONS

Competency-based medical education (CBME): An approach to designing medical training that is focused on outcomes in the form of the abilities of graduates

Competency: An observable ability of a health care professional that develops through stages of expertise from novice to master clinician

Entrustable professional activity (EPA): A key task of a discipline that can be entrusted to an individual who possesses the appropriate level of competence

Milestone: The expected ability of a health care professional at a stage of expertise

“The movement to identify competencies over the physician’s practice lifetime is an important CanMEDS evolution, enabling the application of the framework beyond residency [and the] entry to practice.”

Source: CanMEDS 2015 Consultations. Written submission.
The CanMEDS 2015 project: a collaborative methodology

Those who use the CanMEDS Framework in education and practice need to be confident that it is a valid and practical foundation for excellence in patient care. Since its beginning in the 1990s, CanMEDS has been the product of an evidence-informed, collaborative process involving hundreds, if not thousands, of Royal College Fellows, family physicians, educators, learners and other expert volunteers.

Its development has involved countless hours of literature reviews, stakeholder surveys, focus groups, interviews, consultations, consensus-building exercises, debate and work on educational design. Many people in Canada and around the world feel that the strength of the CanMEDS Framework lies in the fact that it was derived explicitly from societal needs.

For the CanMEDS 2015 project, the Royal College engaged as diverse a cadre of experts and partners as possible to ensure that the new version of the framework was comprehensive and practical. In early 2013, the Royal College commissioned a series of committees and 13 Expert Working Groups (EWGs), which then set out to revise aspects of CanMEDS. Participants were recruited for a range of reasons, including their subject matter expertise, their perspective on a particular stage of physician development (e.g. learning in practice), their understanding of the health care and medical education systems, and their geography. A list of committee and EWG members is found at the end of this document.

To engage the profession, we chose an elaborate global consensus process as our methodology. Each EWG was tasked with reviewing the recent literature and reports relevant to a subdomain of CanMEDS and reporting back their recommendations for new standards. All of these working group reports can be found on the web. As was done for the original 1996 framework, we conducted focus groups and surveys with health care professionals and members of the public to get a variety of perspectives on the abilities people expect and need from their physicians. A National and an International Advisory Committee each gave iterative feedback as reports came in. An overarching Integration Committee performed the Herculean task of editing the vast data into successive versions of a coherent new framework. Finally, a dedicated group of bilingual physicians chaired by Dr. Andrée Boucher wrote a version of the framework and milestones en français.

The CanMEDS 2015 Framework was developed in collaboration with 12 medical education organizations as part of their work on the CanMEDS 2015 National Advisory Committee. Each of the Association of Faculties of Medicine of Canada, the Canadian Federation of Medical Students, the Canadian Medical Association, the Canadian Medical Protective Association, the Canadian Patient Safety Institute, the Collège des médecins du Québec, the College of Family Physicians of Canada, the Fédération des médecins résidents du Québec, the Fédération médicale étudiante du Québec, the Federation of Medical Regulatory Authorities of Canada, the Medical Council of Canada and the Resident Doctors of Canada has endorsed the use of the CanMEDS 2015 Physician Competency Framework to inform each organization's work, adapting it for their own specific context.

Key Contributors to the CanMEDS 2015 Project:
- CanMEDS 2015 National Advisory Committee
- CanMEDS 2015 Integration Committee
- 13 CanMEDS 2015 Expert Working Groups
- CanMEDS 2015 International Advisory Committee
- Royal College French Advisory Committee
Acknowledgments

This update to the Royal College CanMEDS Physician Competency Framework as well as the development of competency milestones could not have been accomplished without the participation of hundreds of dedicated medical educators, clinicians, residents, medical students, committee members, and staff.

This effort was about revision and renewal, not reinvention, and we therefore also gratefully acknowledge the work of the contributors to the 1996 and 2005 editions.

We greatly appreciate the dedicated work of the many members of the Expert Working Groups, the Integration Committee, the National Advisory Committee and the International Advisory Committee, all of whom are listed at the end of this document.

The commitment and expertise of the chairs of the Expert Working Groups deserve special mention. Thank you to Farhan Bhanji, Andrée Boucher, Ming-Ka Chan, Deepak Dath, Leslie Flynn, Bart Harvey, Kendall Ho, Eddy Lang, Alan Neville, Anna Oswald, Denyse Richardson, Jonathan Sherbino, Linda Snell and Brian Wong. Sincere thanks also to Elaine Van Melle for her scholarly and research support to the Expert Working Groups and Royal College staff throughout the project.

We also recognize the important work of the CanMEDS 2015 Project Secretariat. We thank the team for its contribution to this truly collaborative and consultative review process.

Finally, we thank all of the other participants in the CanMEDS 2015 project: the Royal College French Advisory Committee, ePanelists, focus group participants, survey respondents and the hundreds of participants in town hall meetings. Their input helped ensure the utility and validity of the CanMEDS 2015 Framework and the associated CanMEDS Milestones Guide.

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Key features of the CanMEDS 2015 project: content changes by Role

The following summaries highlight general changes and changes by Role as a result of the CanMEDS 2015 project.

General changes

- There is a renewed emphasis on the overall coherence of the framework, and on accessible language that supports practical application.
- Role descriptions and definitions are expressed in simpler, more direct language.
- Areas of overlap between Roles are minimized, resulting in a 3.5% decrease in the number of key competencies and a 29.4% decrease in the number of enabling competencies; although aspects of a shared plan of care may pertain to more than one Role, the competencies of a given Role are written specifically for that Role alone.
- The addition of complementary milestones provides clearly defined targets to guide learning and assessment and mark the progression of competence throughout a physician’s career.
- Competencies and milestones describe the abilities to be demonstrated in practice, as distinct from the information or content related to aspects of a Role.
- Competencies related to safeguarding and enhancing patient safety are integrated throughout the framework and milestones, as recommended by the Patient Safety and Quality Improvement EWG and validated in early consultations.
- Competencies associated with eHealth are integrated throughout the framework and milestones, as recommended by the eHealth EWG and validated in consultations.
- There is a new online glossary of key terms associated with the framework.
- A new CanMEDS diagram reflects the quality improvements achieved in the 2015 revisions.

Medical Expert

- The definition, description and first key competency of the Medical Expert Role highlight the importance of integrating the six Intrinsic Roles.
- The concepts of complexity, uncertainty and ambiguity are now more explicit.
- The Role reflects some of the complexity in decision-making and clinical reasoning that occurs before, during and after the completion of procedures.
- A key competency addresses the evolving recognition of patient safety and continuous quality improvement as important components of medical expertise at the bedside.

Communicator

- The scope of the Communicator Role now focuses exclusively on the interaction between physicians and their patients, including patients’ families.*
- Patient-centred and therapeutic communication is emphasized.
- Communication with other colleagues in the health care professions is now covered explicitly in the Collaborator Role.
- The concept of cultural safety is now explicit.

* Throughout the CanMEDS 2015 Framework and Milestones Guide, references to the patient’s family are intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.
KEY CHANGES

Collaborator
- A new key competency addresses handovers and care transitions.
- The concept of collaboration among physicians is given explicit emphasis.
- A relationship-centred model of care is used to organize these competencies.
- Value is placed on including the patient’s perspective in the shared decision-making process.
- Collaboration is reflected more broadly, to extend beyond the context of a formalized health care team.

Leader
- A name change for the Role from “Manager” to “Leader” reflects an emphasis on the leadership skills needed by physicians to contribute to the ongoing improvement of health care.
- Competence in patient safety and quality improvement has a new emphasis, including contributing to a culture that promotes patient safety.
- Emphasis is placed on the development of skills to achieve balance between professional practice and personal life.
- Resource allocation is conceived as a function of good stewardship.
- Competence in health informatics is viewed as crucial for medical leaders and managers and as vital to the delivery of health care.

Health Advocate
- Now includes an expanded and refined definition and description.
- Includes the notion of partnership in advocacy.

Scholar
- The “lifelong learner” component of the Scholar Role is organized into three enabling competencies that reflect (1) the need for a personal learning plan, (2) the use of data from a variety of sources to guide learning, and (3) the importance of collaborative learning.
- The concepts of patient safety and a safe learning environment are explicit in the “teacher” component of the Role.
- A new key competency on evidence-informed practice is included.
- There is a new emphasis on skills in structured critical appraisal.
- The concept of research is broader, emphasizing that physicians not only participate in research but also are involved in the dissemination of research findings.

Professional
- Key competencies are organized to reflect the commitment of the physician to the patient, to society and to the profession.
- There is now an increased emphasis on physician health and well-being.
- The emerging concept of professional identity formation is woven throughout the Professional Role.13

“We urge you to try and organize issues in one category only, to avoid duplication and repetition — this will assist with applying this framework, e.g. tracking data, creating templates, providing feedback, creating practice improvement plans, and [facilitating] Continuing Professional Development.”
Source: CanMEDS 2015 Consultations. Written submission.

“There are a number of themes that should be expressed across all Roles... we particularly support the decision to include patient safety...”
Source: CanMEDS 2015 Consultations. Written submission.
Introducing milestones

Unlike previous editions, CanMEDS 2015 is part of a larger project: Competence by Design (CBD). CBD is a move away from credentialing physicians solely on the basis of time spent on rotations and activities in favour of ensuring achievement on the basis of attained milestones of competence.

The addition of complementary milestones is arguably the biggest change between the 2005 and the 2015 versions of the CanMEDS Framework. The milestones are presented separately in the CanMEDS Milestones Guide, a companion document that can be found online. Unlike the CanMEDS Framework, which will change infrequently, the Milestones will undergo continual revision as educators modify them for their discipline. The Milestones Guide provides opportunity for dialogue among educators working across the continuum of learning (i.e., undergraduate, postgraduate, continuing professional development). Descriptions used in the Milestones Guide can help educators enhance the learners’ transition from one stage of learning to the next.

The 2005 Framework describes the competencies expected of trainees at the end of their formal education (i.e., at the point when they are “ready” to enter practice). Although all trainees and their program directors know from the start what competencies are expected of them by the end of their training, until now no standard expectations have been articulated for other phases of their career. The milestones introduce descriptions of the abilities expected of a trainee or physician at defined stages of professional development.

The Royal College uses milestones to:

- mark the progression of competence throughout a physician’s career;
- provide clearly defined targets to guide learning and assessment — targets that are based in real-life, meaningful learning experiences;
- enable learners to focus their learning activities more effectively; and
- enable assessors (and programs) to know when a learner has achieved a given milestone or set of milestones and is truly ready to move to the next stage of training or development.

The CanMEDS 2015 Milestones are a guide to help medical educators describe the progression of competence for each discipline. We do not expect that educators will use all of the milestones when tailoring the CanMEDS Framework to their discipline or educational context.

MILESTONES AND THE COMPETENCY-BASED APPROACH

By introducing a next-generation competency-based medical education (CBME) model into trainee learning and specialty practice, the CBD initiative breaks down specialist education into a series of integrated stages, starting with the transition to discipline and moving through practice. (See diagram on p. 13).

Each stage incorporates milestones that define the specific abilities expected at certain points within a physician’s career. By focusing on learning rather than time, the CBD approach is helping the Royal College align medical education with the realities of today’s practice and thus ensure that physicians have the competencies they need at every stage of their career.

“We believe that in the future, expertise rather than experience will underlie competency-based practice and ... certification.”

(Aggarwal & Darzi 2006)
MEDICAL EDUCATION PHASES AND STAGES

Physicians develop competencies at different stages during discipline-specific residency and throughout practice.

Discipline-specific residency. This phase is the period in which a physician trainee builds upon the foundational abilities acquired in medical school to learn the competencies needed for practice. It comprises four advancing stages: transition to discipline, foundations of discipline, core of discipline, and transition to practice.

- Transition to discipline. In many cases this is a new addition to the residency phase of medical education. This stage emphasizes the orientation and assessment of new trainees arriving from different medical schools and programs (including outside Canada). Although this stage does exist in some form in many residency programs (e.g. residency “boot camps”), the CBD approach formalizes the assessment and orientation process, ensuring a level playing field for residents as they begin their specialist training. This stage may require a day, a month, or two months, depending on the needs of each program and of individual learners.

- Foundations of discipline. The second stage in the residency phase covers broad-based competencies that every trainee must acquire before moving on to more advanced discipline-specific competencies. This may involve rotating through a number of clinical settings so the trainee can acquire a breadth of foundational abilities to prepare for core training.

- Core of discipline. The third stage in the residency phase covers the core competencies that make up the majority of a discipline.*

- Transition to practice. In the final stage in the residency phase of medical education, the senior trainee should demonstrate readiness to make the transition to autonomous practice: for example, acting as a chief resident, running an ambulatory clinic, performing procedures with increasing autonomy, and teaching others. Royal College certification will be granted upon the successful completion of the “transition to practice” stage.

Continuing professional development (CPD). A physician maintains and enhances competence throughout practice in the following ways:

- Maintenance of competence. A physician engages in CPD to remain up-to-date and sustain expertise within his or her scope of practice.

- Advanced expertise. The physician acquires new or expanded skills and abilities so that his or her practice can evolve over time in response to practice needs and interests.

- Transition out of professional practice. In this last stage, physicians adapt to the final practice period and their changing health care role.

---

* Royal College examination: The CBD approach proposes that the Royal College examination be taken at the end of the “core of discipline” stage, rather than at the end of the training stage, where it currently sits. Moving the exam will ensure trainees are able to focus on further clinical training in their final year, allowing them to use their final supervised training time to hone competencies. Emphasis could then be placed on increasingly independent work and skills — creating physicians who are truly ready for independent practice.
Medical Expert

DEFINITION
As Medical Experts, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centred care. Medical Expert is the central physician Role in the CanMEDS Framework and defines the physician’s clinical scope of practice.

DESCRIPTION
As Medical Experts who provide high-quality, safe, patient-centred care, physicians draw upon an evolving body of knowledge, their clinical skills, and their professional values. They collect and interpret information, make clinical decisions, and carry out diagnostic and therapeutic interventions. They do so within their scope of practice and with an understanding of the limits of their expertise. Their decision-making is informed by best practices and research evidence, and takes into account the patient’s circumstances and preferences as well as the availability of resources. Their clinical practice is up-to-date, ethical, and resource-efficient, and is conducted in collaboration with patients and their families,* other health care professionals, and the community. The Medical Expert Role is central to the function of physicians and draws on the competencies included in the Intrinsic Roles (Communicator, Collaborator, Leader, Health Advocate, Scholar, and Professional).

KEY CONCEPTS
Agreed-upon goals of care: 2.1, 2.3, 2.4, 3.2, 4.1
Application of core clinical and biomedical sciences: 1.3
Clinical decision-making: 1.4, 1.6, 2.2
Clinical reasoning: 1.3, 1.4, 2.1, 3.1
Compassion: 1.1
Complexity, uncertainty, and ambiguity in clinical decision-making: 1.6, 2.2, 2.4, 3.2, 3.3, 3.4
Consent: 3.2
Continuity of care: 2.4, 4.1
Duty of care: 1.1, 1.5, 2.4
Integration of CanMEDS Intrinsic Roles: 1.2
Interpreting diagnostic tests: 2.2
Medical expertise: all enabling competencies
Patient-centred clinical assessment and management: 1.4, 2.2, 2.4, 3.1, 3.3, 3.4, 4.1, 5.2
Patient safety: 1.5, 3.4, 5.1, 5.2
Prioritization of professional responsibilities: 1.4, 1.5, 2.1, 3.3, 5.1
Procedural skill proficiency: 3.1, 3.3, 3.4
Quality improvement: 5.1, 5.2
Self-awareness of limits of expertise: 1.4, 3.4
Timely follow-up: 1.4, 2.2, 4.1
Working within the health care team: 1.3, 1.4, 2.1, 2.4, 3.3, 4.1, 5.1

* Throughout the CanMEDS 2015 Framework and Milestones Guide, references to the patient’s family are intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.
### Key competencies

<table>
<thead>
<tr>
<th>PHYSICIANS ARE ABLE TO:</th>
<th>Enabling competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Practise medicine within their defined scope of practice and expertise</strong></td>
<td>1.1 Demonstrate a commitment to high-quality care of their patients</td>
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<tr>
<td></td>
<td>1.2 Integrate the CanMEDS Intrinsic Roles into their practice of medicine</td>
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<td></td>
<td>1.3 Apply knowledge of the clinical and biomedical sciences relevant to their discipline</td>
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<td>1.4 Perform appropriately timed clinical assessments with recommendations that are presented in an organized manner</td>
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<td>1.5 Carry out professional duties in the face of multiple, competing demands</td>
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<td></td>
<td>1.6 Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice</td>
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<tr>
<td><strong>2. Perform a patient-centred clinical assessment and establish a management plan</strong></td>
<td>2.1 Prioritize issues to be addressed in a patient encounter</td>
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<tr>
<td></td>
<td>2.2 Elicit a history, perform a physical exam, select appropriate investigations, and interpret their results for the purpose of diagnosis and management, disease prevention, and health promotion</td>
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<td></td>
<td>2.3 Establish goals of care in collaboration with patients and their families, which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation</td>
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<td>2.4 Establish a patient-centred management plan</td>
</tr>
<tr>
<td><strong>3. Plan and perform procedures and therapies for the purpose of assessment and/or management</strong></td>
<td>3.1 Determine the most appropriate procedures or therapies</td>
</tr>
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<td></td>
<td>3.2 Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure or therapy</td>
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<td>3.3 Prioritize a procedure or therapy, taking into account clinical urgency and available resources</td>
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<td>3.4 Perform a procedure in a skilful and safe manner, adapting to unanticipated findings or changing clinical circumstances</td>
</tr>
<tr>
<td><strong>4. Establish plans for ongoing care and, when appropriate, timely consultation</strong></td>
<td>4.1 Implement a patient-centred care plan that supports ongoing care, follow-up on investigations, response to treatment, and further consultation</td>
</tr>
<tr>
<td><strong>5. Actively contribute, as an individual and as a member of a team providing care, to the continuous improvement of health care quality and patient safety</strong></td>
<td>5.1 Recognize and respond to harm from health care delivery, including patient safety incidents</td>
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<td>5.2 Adopt strategies that promote patient safety and address human and system factors</td>
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</tbody>
</table>
Communicator

**DEFINITION**

As Communicators, physicians form relationships with patients and their families* that facilitate the gathering and sharing of essential information for effective health care.†

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**DESCRIPTION**

Physicians enable patient-centred therapeutic communication by exploring the patient’s symptoms, which may be suggestive of disease, and by actively listening to the patient’s experience of his or her illness. Physicians explore the patient’s perspective, including his or her fears, ideas about the illness, feelings about the impact of the illness, and expectations of health care and health care professionals. The physician integrates this knowledge with an understanding of the patient’s context, including socio-economic status, medical history, family history, stage of life, living situation, work or school setting, and other relevant psychological and social issues. Central to a patient-centred approach is shared decision-making: finding common ground with the patient in developing a plan to address his or her medical problems and health goals in a manner that reflects the patient’s needs, values, and preferences. This plan should be informed by evidence and guidelines.

Because illness affects not only patients but also their families, physicians must be able to communicate effectively with everyone involved in the patient’s care.

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**KEY CONCEPTS**

- **Accuracy:** 2.1, 3.1, 4.2, 5.1
- **Active listening:** 1.1, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 4.1, 4.3
- **Appropriate documentation:** 2.1, 5.1, 5.2, 5.3
- **Attention to the psychosocial aspects of illness:** 1.6, 2.1, 2.2, 4.1
- **Breaking bad news:** 1.5, 3.1
- **Concordance of goals and expectations:** 1.6, 2.2, 3.1, 4.3
- **Disclosure of harmful patient safety incidents:** 3.2
- **Effective oral and written information for patient care across different media:** 5.1, 5.2, 5.3
- **Efficiency:** 2.3, 4.2, 5.2
- **Eliciting and synthesizing information for patient care:** 2.1, 2.2, 2.3
- **Empathy:** 1.1, 1.2, 1.3
- **Ethics in the physician–patient encounter:** 3.2, 5.1
- **Expert verbal and non-verbal communication:** 1.1, 1.4
- **Informed consent:** 2.2
- **Mutual understanding:** 1.6, 3.1, 4.1
- **Patient-centred approach to communication:** 1.1, 1.6, 2.1, 3.1
- **Privacy and confidentiality:** 1.2, 5.1
- **Rapport:** 1.4
- **Relational competence in interactions:** 1.5
- **Respect for diversity:** 1.1, 1.6, 2.2, 4.1
- **Shared decision-making:** 1.6, 4.1, 4.3
- **Therapeutic relationships with patients and their families:** 1.2, 1.3, 1.4, 1.5, 1.6
- **Transition in care:** 5.1, 5.2, 5.3
- **Trust in the physician–patient relationship:** 1.1, 5.2, 5.3

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* Throughout the CanMEDS 2015 Framework and Milestones Guide, references to the patient’s family are intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardian, and substitute decision-makers.

† Note that the Communicator Role describes the abilities related to a physician–patient encounter. Other communication skills are found elsewhere in the framework, including health care team communication (Collaborator) and academic presentations (Scholar).
### Key competencies

**PHYSICIANS ARE ABLE TO:**

| 1. Establish professional therapeutic relationships with patients and their families | 1.1 Communicate using a patient-centred approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion |
| 1.2 Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety |
| 1.3 Recognize when the values, biases, or perspectives of patients, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly |
| 1.4 Respond to a patient's non-verbal behaviours to enhance communication |
| 1.5 Manage disagreements and emotionally charged conversations |
| 1.6 Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances |

| 2. Elicit and synthesize accurate and relevant information, incorporating the perspectives of patients and their families | 2.1 Use patient-centred interviewing skills to effectively gather relevant biomedical and psychosocial information |
| 2.2 Provide a clear structure for and manage the flow of an entire patient encounter |
| 2.3 Seek and synthesize relevant information from other sources, including the patient’s family, with the patient’s consent |

| 3. Share health care information and plans with patients and their families | 3.1 Share information and explanations that are clear, accurate, and timely, while checking for patient and family understanding |
| 3.2 Disclose harmful patient safety incidents to patients and their families accurately and appropriately |

| 4. Engage patients and their families in developing plans that reflect the patient’s health care needs and goals | 4.1 Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe |
| 4.2 Assist patients and their families to identify, access, and make use of information and communication technologies to support their care and manage their health |
| 4.3 Use communication skills and strategies that help patients and their families make informed decisions regarding their health |

| 5. Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy | 5.1 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements |
| 5.2 Communicate effectively using a written health record, electronic medical record, or other digital technology |
| 5.3 Share information with patients and others in a manner that respects patient privacy and confidentiality and enhances understanding |
Collaborator

**DEFINITION**
As Collaborators, physicians work effectively with other health care professionals to provide safe, high-quality, patient-centred care.

**DESCRIPTION**
Collaboration is essential for safe, high-quality, patient-centred care, and involves patients and their families,* physicians and other colleagues in the health care professions, community partners, and health system stakeholders.

Collaboration requires relationships based in trust, respect, and shared decision-making among a variety of individuals with complementary skills in multiple settings across the continuum of care. It involves sharing knowledge, perspectives, and responsibilities, and a willingness to learn together. This requires understanding the roles of others, pursuing common goals and outcomes, and managing differences.

Collaboration skills are broadly applicable to activities beyond clinical care, such as administration, education, advocacy, and scholarship.

**KEY CONCEPTS**
- Collaboration with community providers: 1.1, 1.2, 1.3
- Communities of practice: 1.3, 3.2
- Conflict resolution, management, and prevention: 2.2
- Constructive negotiation: 2.2
- Effective consultation and referral: 1.2, 1.3, 3.1, 3.2
- Effective health care teams: all enabling competencies
- Handover: 3.1, 3.2
- Interprofessional (i.e. among health care professionals) health care: all enabling competencies
- Intraprofessional (i.e. among physician colleagues) health care: all enabling competencies
- Recognizing one’s own roles and limits: 1.2, 3.1
- Relationship-centred care: all enabling competencies
- Respect for other physicians and members of the health care team: 2.1, 2.2
- Respecting and valuing diversity: 1.2, 2.1, 2.2
- Shared decision-making: 1.3
- Sharing of knowledge and information: 1.3, 3.1, 3.2
- Situational awareness: 1.1, 1.2, 2.2, 3.1, 3.2
- Team dynamics: 1.1, 2.2, 3.1
- Transitions of care: 3.1, 3.2

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* Throughout the CanMEDS 2015 Framework and Milestones Guide, references to the patient’s family are intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.
### Key competencies

**PHYSICIANS ARE ABLE TO:**

1. **Work effectively with physicians and other colleagues in the health care professions**
   - 1.1 Establish and maintain positive relationships with physicians and other colleagues in the health care professions to support relationship-centred collaborative care
   - 1.2 Negotiate overlapping and shared responsibilities with physicians and other colleagues in the health care professions in episodic and ongoing care
   - 1.3 Engage in respectful shared decision-making with physicians and other colleagues in the health care professions

2. **Work with physicians and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts**
   - 2.1 Show respect toward collaborators
   - 2.2 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports a collaborative culture

3. **Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care**
   - 3.1 Determine when care should be transferred to another physician or health care professional
   - 3.2 Demonstrate safe handover of care, using both verbal and written communication, during a patient transition to a different health care professional, setting, or stage of care
Leader

DEFINITION
As Leaders, physicians engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.

DESCRIPTION
The CanMEDS Leader Role describes the engagement of all physicians in shared decision-making for the operation and ongoing evolution of the health care system. As a societal expectation, physicians demonstrate collaborative leadership and management within the health care system. At a system level, physicians contribute to the development and delivery of continuously improving health care and engage with others in working toward this goal. Physicians integrate their personal lives with their clinical, administrative, scholarly, and teaching responsibilities. They function as individual care providers, as members of teams, and as participants and leaders in the health care system locally, regionally, nationally, and globally.

KEY CONCEPTS
- Administration: 4.1, 4.2
- Career development: 4.2
- Complexity of systems: 1.1
- Consideration of justice, efficiency, and effectiveness in the allocation of health care resources: 1.1, 1.2, 1.3, 1.4, 2.1, 2.2
- Effective committee participation: 3.2
- Health human resources: 2.1, 4.2
- Information technology for health care: 1.4
- Leading change: 1.1, 1.2, 1.3, 1.4, 2.2, 3.2
- Management of personnel: 4.2
- Negotiation: 3.1
- Organizing, structuring, budgeting, and financing: 2.1, 2.2, 4.1, 4.2, 4.3
- Personal leadership skills: 3.1, 4.1
- Physician remuneration: 4.2
- Physician roles and responsibilities in the health care system: 1.1, 1.2, 1.3, 1.4, 2.2, 3.2
- Physicians as active participant-architects within the health care system: 1.1, 1.2, 1.3, 1.4, 3.2
- Practice management to maintain a sustainable practice and physician health: 4.1, 4.2, 4.3
- Priority-setting: 2.1, 3.2, 4.1
- Quality improvement: 1.1, 1.2, 1.3, 1.4, 2.2, 3.2, 4.3
- Stewardship: 2.1, 2.2
- Supervising others: 4.2
- Systems thinking: 1.1, 1.2, 1.3, 1.4, 2.1, 2.2
- Time management: 4.1, 4.2
## Key competencies

### PHYSICIANS ARE ABLE TO:

1. **Contribute to the improvement of health care delivery in teams, organizations, and systems**
   - 1.1 Apply the science of quality improvement to contribute to improving systems of patient care
   - 1.2 Contribute to a culture that promotes patient safety
   - 1.3 Analyze patient safety incidents to enhance systems of care
   - 1.4 Use health informatics to improve the quality of patient care and optimize patient safety

2. **Engage in the stewardship of health care resources**
   - 2.1 Allocate health care resources for optimal patient care
   - 2.2 Apply evidence and management processes to achieve cost-appropriate care

3. **Demonstrate leadership in professional practice**
   - 3.1 Demonstrate leadership skills to enhance health care
   - 3.2 Facilitate change in health care to enhance services and outcomes

4. **Manage career planning, finances, and health human resources in a practice**
   - 4.1 Set priorities and manage time to integrate practice and personal life
   - 4.2 Manage a career and a practice
   - 4.3 Implement processes to ensure personal practice improvement
Health Advocate

DEFINITION
As Health Advocates, physicians contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.

DESCRIPTION
Physicians are accountable to society and recognize their duty to contribute to efforts to improve the health and well-being of their patients, their communities, and the broader populations they serve. Physicians possess medical knowledge and abilities that provide unique perspectives on health. Physicians also have privileged access to patients’ accounts of their experience with illness and the health care system.

Improving health is not limited to mitigating illness or trauma, but also involves disease prevention, health promotion, and health protection. Improving health also includes promoting health equity, whereby individuals and populations reach their full health potential without being disadvantaged by, for example, race, ethnicity, religion, gender, sexual orientation, age, social class, economic status, or level of education.

Physicians leverage their position to support patients in navigating the health care system and to advocate with them to access appropriate resources in a timely manner. Physicians seek to improve the quality of both their clinical practice and associated organizations by addressing the health needs of the patients, communities, or populations they serve. Physicians promote healthy communities and populations by influencing the system (or by supporting others who influence the system), both within and outside of their work environments.

Advocacy requires action. Physicians contribute their knowledge of the determinants of health to positively influence the health of the patients, communities, or populations they serve. Physicians gather information and perceptions about issues, working with patients and their families to develop an understanding of needs and potential mechanisms to address these needs. Physicians support patients, communities, or populations to call for change, and they speak on behalf of others when needed. Physicians increase awareness about important health issues at the patient, community, or population level. They support or lead the mobilization of resources (e.g. financial, material, or human resources) on small or large scales.

Physician advocacy occurs within complex systems and thus requires the development of partnerships with patients, their families and support networks, or community agencies and organizations to influence health determinants. Advocacy often requires engaging other health care professionals, community agencies, administrators, and policy-makers.

* In the CanMEDS 2015 Framework, a “community” is a group of people and/or patients connected to one's practice, and a “population” is a group of people and/or patients with a shared issue or characteristic.
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### Key competencies

**PHYSICIANS ARE ABLE TO:**

1. **Respond to an individual patient's health needs by advocating with the patient within and beyond the clinical environment**

   - **1.1** Work with patients to address determinants of health that affect them and their access to needed health services or resources
   - **1.2** Work with patients and their families to increase opportunities to adopt healthy behaviours
   - **1.3** Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients

2. **Respond to the needs of the communities or populations they serve by advocating with them for system-level change in a socially accountable manner**

   - **2.1** Work with a community or population to identify the determinants of health that affect them
   - **2.2** Improve clinical practice by applying a process of continuous quality improvement to disease prevention, health promotion, and health surveillance activities
   - **2.3** Contribute to a process to improve health in the community or population they serve

### Enabling competencies

- Health equity: 2.2
- Health promotion: 1.1, 1.2, 1.3, 2.1
- Health protection: 1.3
- Health system literacy: 1.1, 2.1
- Mobilizing resources as needed: 1.1, 1.2, 1.3
- Principles of health policy and its implications: 2.2
- Potential for competing health interests of the individuals, communities, or populations served: 2.3
- Responsible use of position and influence: 2.1, 2.3
- Social accountability of physicians: 2.1, 2.3

### Key concepts

- Adapting practice to respond to the needs of patients, communities, or populations served: 2.1, 2.2
- Advocacy in partnership with patients, communities, and populations served: 1.1, 1.2, 2.1, 2.2, 2.3
- Continuous quality improvement: 2.2, 2.3
- Determinants of health, including psychological, biological, social, cultural, environmental, educational, and economic determinants, as well as health care system factors: 1.1, 1.3, 2.2
- Disease prevention: 1.3, 2.1
- Fiduciary duty: 1.1, 2.2, 2.3
- Health equity: 2.2
- Health promotion: 1.1, 1.2, 1.3, 2.1
- Health protection: 1.3
- Health system literacy: 1.1, 2.1
- Mobilizing resources as needed: 1.1, 1.2, 1.3
- Principles of health policy and its implications: 2.2
- Potential for competing health interests of the individuals, communities, or populations served: 2.3
- Responsible use of position and influence: 2.1, 2.3
- Social accountability of physicians: 2.1, 2.3

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Scholar

DEFINITION
As Scholars, physicians demonstrate a lifelong commitment to excellence in practice through continuous learning and by teaching others, evaluating evidence, and contributing to scholarship.

DESCRIPTION
Physicians acquire scholarly abilities to enhance practice and advance health care. Physicians pursue excellence by continually evaluating the processes and outcomes of their daily work, sharing and comparing their work with that of others, and actively seeking feedback in the interest of quality and patient safety. Using multiple ways of learning, they strive to meet the needs of individual patients and their families* and of the health care system.

Physicians strive to master their domains of expertise and to share their knowledge. As lifelong learners, they implement a planned approach to learning in order to improve in each CanMEDS Role. They recognize the need to continually learn and to model the practice of lifelong learning for others. As teachers they facilitate, individually and through teams, the education of students and physicians in training, colleagues, co-workers, the public, and others.

Physicians are able to identify pertinent evidence, evaluate it using specific criteria, and apply it in their practice and scholarly activities. Through their engagement in evidence-informed and shared decision-making, they recognize uncertainty in practice and formulate questions to address knowledge gaps. Using skills in navigating information resources, they identify evidence syntheses that are relevant to these questions and arrive at clinical decisions that are informed by evidence while taking patient values and preferences into account.

Finally, physicians’ scholarly abilities allow them to contribute to the application, dissemination, translation, and creation of knowledge and practices applicable to health and health care.

KEY CONCEPTS

<table>
<thead>
<tr>
<th>Lifelong learning</th>
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<tbody>
<tr>
<td>Collaborative learning: 1.3</td>
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<td>Communities of practice: 1.3</td>
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<td>Patient safety: 1.3</td>
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<tr>
<td>Performance assessment: 1.2</td>
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<tr>
<td>Personal learning plan: 1.1</td>
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<tr>
<td>Quality improvement: 1.1, 1.2, 1.3</td>
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<tr>
<td>Reflection on practice: 1.2</td>
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<td>Seeking feedback: 1.2</td>
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<tr>
<td>Self-improvement: 1.1, 1.2, 1.3</td>
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</table>

**Teacher**
- Faculty, rotation, and program evaluation: 2.5, 2.6
- Formal and informal curricula: 2.1
- Hidden curriculum: 2.1
- Learner assessment: 2.5, 2.6
- Learning outcomes: 2.4, 2.5, 2.6
- Mentoring: 2.2, 2.5
- Needs assessment: 2.4
- Optimization of the learning environment: 2.2
- Principles of assessment: 2.6
- Providing feedback: 2.5, 2.6
- Role-modelling: 2.1, 2.5
- Supervision and graded responsibility: 2.3
- Teaching and learning: 2.2, 2.4, 2.5

**Evidence-informed decision-making**
- Effect size: 3.3, 3.4
- Evidence-based medicine: 3.1, 3.2, 3.3, 3.4
- Evidence synthesis: 3.2, 3.3
- External validity: 3.3
- Generalizability: 3.3
- Information literacy: 3.2
- Internal validity: 3.3
- Knowledge gaps: 3.1
- Knowledge translation: 3.3, 3.4
- Recognizing bias in research: 3.3
- Structured critical appraisal: 3.3
- Uncertainty in practice: 3.1

**Research**
- Conflict of interest: 4.2, 4.5
- Confidentiality: 4.1, 4.2
- Informed consent: 4.1
- Research: 4.1, 4.2, 4.3, 4.5
- Research ethics: 4.2
- Research methods: 4.4
- Scholarly inquiry: 4.1, 4.2, 4.4, 4.5
- Scholarship: 4.1, 4.2
- Scientific principles: 4.1

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## Key competencies

**PHYSICIANS ARE ABLE TO:**

<table>
<thead>
<tr>
<th>Key competencies</th>
<th>Enabling competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Engage in the continuous enhancement of their professional activities through ongoing learning</td>
<td>1.1 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice</td>
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<td>1.2 Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources</td>
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<td>1.3 Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice</td>
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<tr>
<td>2. Teach students, residents, the public, and other health care professionals</td>
<td>2.1 Recognize the influence of role-modelling and the impact of the formal, informal, and hidden curriculum on learners</td>
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<tr>
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<td>2.2 Promote a safe learning environment</td>
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<td>2.3 Ensure patient safety is maintained when learners are involved</td>
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<td>2.4 Plan and deliver a learning activity</td>
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<td>2.5 Provide feedback to enhance learning and performance</td>
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<td>2.6 Assess and evaluate learners, teachers, and programs in an educationally appropriate manner</td>
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<tr>
<td>3. Integrate best available evidence into practice</td>
<td>3.1 Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that address them</td>
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<td>3.2 Identify, select, and navigate pre-appraised resources</td>
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<td>3.3 Critically evaluate the integrity, reliability, and applicability of health-related research and literature</td>
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<td>3.4 Integrate evidence into decision-making in their practice</td>
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<td>4. Contribute to the creation and dissemination of knowledge and practices applicable to health</td>
<td>4.1 Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care</td>
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<td>4.2 Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and considering vulnerable populations</td>
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<td>4.3 Contribute to the work of a research program</td>
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<td>4.4 Pose questions amenable to scholarly inquiry and select appropriate methods to address them</td>
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<td>4.5 Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly inquiry</td>
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Professional

DEFINITION
As Professionals, physicians are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, physician-led regulation, and maintenance of personal health.

DESCRIPTION*
Physicians serve an essential societal role as professionals dedicated to the health and care of others. Their work requires mastery of the art, science, and practice of medicine. A physician's professional identity is central to this Role. The Professional Role reflects contemporary society's expectations of physicians, which include clinical competence, a commitment to ongoing professional development, promotion of the public good, adherence to ethical standards, and values such as integrity, honesty, altruism, humility, respect for diversity, and transparency with respect to potential conflicts of interest. It is also recognized that, to provide optimal patient care, physicians must take responsibility for their own health and well-being and that of their colleagues. Professionalism is the basis of the implicit contract between society and the medical profession, granting the privilege of physician-led regulation with the understanding that physicians are accountable to those served, to society, to their profession, and to themselves.

KEY CONCEPTS
Professional identity: 1.1, 4.1, 4.2
Commitment to patients
Altruism: 1.1
Bioethical principles and theories: 1.3
Commitment to excellence in clinical practice and mastery of the discipline: 1.2
Compassion and caring: 1.1
Confidentiality and its limits: 1.1, 1.5
Disclosure of physician limitations that affect care: 1.1
Insight: 1.1, 1.3, 1.4, 2.1
Integrity and honesty: 1.1
Moral and ethical behaviour: 1.1, 1.3
Professional boundaries: 1.1
Respect for diversity: 1.1
Commitment to society
Commitment to the promotion of the public good in health care: 2.1, 2.2
Social accountability: 2.1, 2.2
Social contract in health care: 2.1, 2.2
Societal expectations of physicians and the profession: 2.1, 2.2
Commitment to the profession
Accountability to professional regulatory authorities: 3.1
Codes of ethics: 3.1
Commitment to patient safety and quality improvement: 2.1, 4.1
Commitment to professional standards: 3.1
Conflicts of interest (personal, financial, administrative, etc.): 1.4
Medico-legal frameworks governing practice: 3.1, 3.3
Responsibility to the profession, including obligations of peer assessment, mentorship, collegiality, and support: 3.2, 3.3, 4.3

### Key competencies

<table>
<thead>
<tr>
<th>PHYSICIANS ARE ABLE TO:</th>
<th>Enabling competencies</th>
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<tbody>
<tr>
<td>1. Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards</td>
<td>1.1 Exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality</td>
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<td></td>
<td>1.2 Demonstrate a commitment to excellence in all aspects of practice</td>
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<td>1.3 Recognize and respond to ethical issues encountered in practice</td>
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<td>1.4 Recognize and manage conflicts of interest</td>
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<td></td>
<td>1.5 Exhibit professional behaviours in the use of technology-enabled communication</td>
</tr>
<tr>
<td>2. Demonstrate a commitment to society by recognizing and responding to societal expectations in health care</td>
<td>2.1 Demonstrate accountability to patients, society, and the profession by responding to societal expectations of physicians</td>
</tr>
<tr>
<td></td>
<td>2.2 Demonstrate a commitment to patient safety and quality improvement</td>
</tr>
<tr>
<td>3. Demonstrate a commitment to the profession by adhering to standards and participating in physician-led regulation</td>
<td>3.1 Fulfill and adhere to the professional and ethical codes, standards of practice, and laws governing practice</td>
</tr>
<tr>
<td></td>
<td>3.2 Recognize and respond to unprofessional and unethical behaviours in physicians and other colleagues in the health care professions</td>
</tr>
<tr>
<td></td>
<td>3.3 Participate in peer assessment and standard-setting</td>
</tr>
<tr>
<td>4. Demonstrate a commitment to physician health and well-being to foster optimal patient care</td>
<td>4.1 Exhibit self-awareness and manage influences on personal well-being and professional performance</td>
</tr>
<tr>
<td></td>
<td>4.2 Manage personal and professional demands for a sustainable practice throughout the physician life cycle</td>
</tr>
<tr>
<td></td>
<td>4.3 Promote a culture that recognizes, supports, and responds effectively to colleagues in need</td>
</tr>
</tbody>
</table>

#### Commitment to self
Applied capacity for self-regulation, including the assessment and monitoring of one’s thoughts, behaviours, emotions, and attention for optimal performance and well-being: 4.1

Career development and career transitions: 4.1, 4.2

Commitment to disclosure of harmful patient safety incidents, including those resulting from medical error, and their impact: 4.2, 4.3

Mindful and reflective approach to practice: 4.2

Resilience for sustainable practice: 4.2

Responsibility to self, including personal care, in order to serve others: 4.1
A taxonomy of physician competencies

Competence refers to the abilities needed to practice effectively within a defined scope and context. The following taxonomy is designed to explain the structure of the CanMEDS Physician Competency Framework and its application to a program. While each physician has a unique set of abilities, in everyday practice these competencies are integrated into a seamless whole and reflect the daily activities of the physician.

**CanMEDS Roles.** The CanMEDS Framework is organized into seven thematic groups of competencies, which are expressed as physician Roles. While the Roles are clearly synergistic and interrelated, they are also unique. In this way, a Role can be described as a meta-competency.

**Key competencies.** Within each CanMEDS Role, there are a defined number of essential abilities known as key competencies. The key competencies refer to the knowledge, skills, and attitudes of a physician and are described as global educational statements.

**Enabling competencies.** The term “enabling competencies” refers to the essential components of a key competency. Several enabling competencies in concert describe in greater detail the components of a key competency.

**CanMEDS Milestones.** CanMEDS Milestones illustrate the expected progression of competence from novice to mastery associated with each enabling competency. CanMEDS Milestones assist learners, curriculum designers, and clinical teachers to determine where a person is situated in their progress towards competence. These Milestones are organized against the Competence Continuum (see Milestones section).

**DISCIPLINE-SPECIFIC COMPETENCIES**

Each Specialty Committee of the Royal College applies a discipline-specific lens to the CanMEDS Roles, key and enabling competencies, and milestones to reflect its unique practice. The Specialty Committee expresses the competencies as educational statements that make up each discipline’s training standards.

**Royal College Entrustable Professional Activities (RCEPAs).** Royal College Entrustable Professional Activities refer to the tasks in a professional setting that may be delegated to a physician once competence in the task has been demonstrated. RCEPAs incorporate multiple CanMEDS Milestones from various CanMEDS Roles. RCEPAs allow for authentic, work-based assessment that is targeted at the daily tasks of physicians.

**PROGRAM OBJECTIVES**

Program objectives refer to discipline-specific statements describing the specific educational goals of a curriculum derived from the CanMEDS competencies, such as those used for a residency or continuing professional development program.
The following organizations have contributed to and endorse the CanMEDS 2015 Physician Competency Framework.
## 2015/2016 PGY1 Program Design for Anaesthesia Residency Program

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthesia</td>
<td>8-weeks (consecutive)</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td></td>
<td>July &amp; August Rotation</td>
<td>Hamilton General Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Anaesthesia</td>
<td>8-weeks (consecutive)</td>
<td>Hamilton General Hospital</td>
</tr>
<tr>
<td></td>
<td>May &amp; June Rotation</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Internal Medicine (CTU)</td>
<td>8-weeks (consecutive)</td>
<td>Hamilton General Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Juravinski Hospital &amp; Cancer Centre (JHCC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>4-weeks</td>
<td>Hamilton Health Sciences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Obstetrics &amp; Gynecology</td>
<td>4-weeks</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td>Pediatric General Surgery</td>
<td>4-weeks</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td>Thoracic Surgery</td>
<td>4-weeks</td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Neonatology/Level II</td>
<td>4-weeks</td>
<td>St. Joseph's Healthcare</td>
</tr>
</tbody>
</table>

**Elective**: From the following list ranking your choices for this 8-week elective block. Scheduling of core rotations will precede elective time.

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Medicine</td>
<td>4-weeks</td>
<td>Hamilton Health Sciences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Peds ER</td>
<td>4-weeks</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>4-weeks</td>
<td>Hamilton General Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Juravinski Hospital &amp; Cancer Centre (JHCC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Palliative Care</td>
<td>4-weeks</td>
<td>Site TBA</td>
</tr>
<tr>
<td>General Psychiatry</td>
<td>4-weeks</td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Intensive Care Unit</td>
<td>4-weeks</td>
<td>St. Catharines</td>
</tr>
<tr>
<td>ENT</td>
<td>4-weeks</td>
<td>Juravinski or SJH</td>
</tr>
</tbody>
</table>

**Total Weeks = 52**
<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthesia</td>
<td>at total of 9 blocks of General Anesthesia</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hamilton General Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Juravinski Hospital and Cancer Centre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Pediatric Anesthesia</td>
<td>2 blocks</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td>Obstetrical Anesthesia</td>
<td>1 block</td>
<td>St. Joseph's Healthcare</td>
</tr>
</tbody>
</table>
### 2015/2016 PGY3 Program Design - SEE NOTES

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
<th>Your Ranking Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCU</td>
<td>2 blocks</td>
<td>Hamilton General Hospital</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Respiratory</td>
<td>2 blocks</td>
<td>Juravinski Hospital &amp; Cancer Centre (JHCC)</td>
<td>Mandatory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hamilton General Hospital</td>
<td></td>
</tr>
<tr>
<td>ICU</td>
<td>2 blocks</td>
<td>Hamilton General Hospital</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Nephro</td>
<td>1 block</td>
<td>Dialysis/Transplant rotation SJH</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

#### Select combination from the below to equal 2 blocks

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
<th>Show how many blocks at each site</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICU</td>
<td>2 blocks</td>
<td>JHCC</td>
<td>St. Joseph's Healthcare</td>
</tr>
</tbody>
</table>

#### Select ONE of the rotations below to equal 1 block (indicate top two preferences, in order)

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
<th>Your Ranking Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEDS ER</td>
<td>1 block</td>
<td>MUMC</td>
<td></td>
</tr>
<tr>
<td>NICU</td>
<td>1 block</td>
<td>MUMC</td>
<td></td>
</tr>
<tr>
<td>PICU</td>
<td>1 block</td>
<td>MUMC</td>
<td></td>
</tr>
</tbody>
</table>

#### Selective combination from the below to equal 3 blocks. Must include at least 1 Medicine sub-specialty (Heme, ID, Nephro, Palliative Care) to equal 6 blocks of medicine minimum. Max of one additional ICU can be selected (but not required).

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
<th>Your Ranking Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hematology/Transfusion</td>
<td>1 block</td>
<td>HGH</td>
<td></td>
</tr>
<tr>
<td>Medicine/Hemostasis (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nephrology-AKI- 4 weeks clinical</td>
<td>1 block</td>
<td>SJH - City Wide Consult (<em>Acute Kidney Injury</em>)**see notes</td>
<td></td>
</tr>
<tr>
<td>Nephrology AKI- 2 weeks clinical</td>
<td>1 block</td>
<td>SJH - City Wide Consult - see notes</td>
<td></td>
</tr>
<tr>
<td>Nephrology - Dialysis/Transplant</td>
<td>1 block</td>
<td>SJH - Dialysis/Transplant elective (same content as mandatory rotation)</td>
<td></td>
</tr>
<tr>
<td>ICU</td>
<td>1 block max (please specify)</td>
<td>HGH</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SJH</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HGH</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>NICU</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PICU</td>
<td></td>
</tr>
</tbody>
</table>

#### Palliative Care
1 block only

#### Research
1 block only

#### Infectious Diseases
1 block only

#### Peds ER
1 block only

---

**Total 13 blocks**
Scheduling notes in template

Royal College 2006 Specialty Training Requirements for "Medicine year"

At least six months of approved resident training in adult Internal Medicine. Rotations eligible for credit include:

- general internal medicine and/or any combination of experience in at least two of the following subspecialties: Cardiology, coronary care, Respirology, Neurology, Hematology, Nephrology, Endocrinology, and Infectious Diseases

At least three months of approved resident training in adult intensive care. In addition, it is strongly recommended that the acute care experience include broader elements, such as neonatal/pediatric ICU, coronary care and emergency medicine. A maximum of six months ICU experience is allowed under this section

Nephrology Notes

** Nephrology elective rotation "City-Wide Consult (AKI)" includes the option of doing 2 weeks of city-wide consult service and using the other 2 weeks for self-study. Having 2 weeks of self-study time during a rotation is a rare privilege and comes with a few specifications. The elective is approved at the discretion of the Program Director.

The Nephrology service will determine which 2 weeks would be for on-service in order to optimize the teaching faculty. They will notify Anesthesia 2 months ahead.

(Vacation cannot occur during the 2 weeks on service, but Nephrology will accommodate previously-booked vacation time when planning the specific dates for the service weeks.)

Once the weeks for AKI service are known, fly-in call should then be arranged to avoid any post-call days occurring during the 2 weeks on service. The reason for this is that the clinical time is already cut in half and must not be further reduced. The resident doing the elective should take the responsibility of ensuring that their admin resident is aware of their limitations. This does not mean that the resident cannot do any call during the AKI weeks, but rather that they do not create post-call days. Therefore, they are still available for Friday pm/Sunday day call OR Saturday pm call.

During all 4 weeks of the elective, the resident would have 2 one-on-one teaching sessions with faculty per week. Self-study segment must accommodate those private sessions (which have some flexibility for timing). During the self-study weeks, the resident must stay in town, attend Anesthesia academic half days, be available for any simulation sessions that might be booked or any other academic activities that might be arranged (e.g. in training exams).

The resident also has the option of doing all 4 weeks on the consult service (ie no self-study time). In the latter case, the resident still gets the same one-on-one teaching sessions with faculty. In the case of 4 weeks on AKI consult service, then fly-in call can occur at any time during the four week block.
<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thoracic Anesthesia</td>
<td>2 blocks</td>
<td>St. Joseph's Healthcare</td>
</tr>
<tr>
<td>Cardiac Anes</td>
<td>8-weeks (consecutive)</td>
<td>Hamilton General Hospital</td>
</tr>
<tr>
<td>Neuro Anes</td>
<td>8-weeks (consecutive)</td>
<td>Hamilton General Hospital</td>
</tr>
<tr>
<td>High Risk Peds Anes</td>
<td>4-weeks</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td>High Risk OB Anes</td>
<td>4-weeks</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td>Community</td>
<td>2 blocks</td>
<td>site must be pre-approved by program</td>
</tr>
<tr>
<td>Chronic Pain</td>
<td>4-weeks</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td>Regional Anes</td>
<td>4-weeks</td>
<td>St. Joseph's Healthcare</td>
</tr>
</tbody>
</table>

During block 5 -7 it will become a longer rotation if required
### 2015/2016 PGY5 Program Design

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Rotation Length</th>
<th>Rotation Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthesia</td>
<td>at total of 13 blocks of General Anesthesia</td>
<td>McMaster University Medical Centre (MUMC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hamilton General Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Juravinski Hospital and Cancer Centre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St. Joseph's Healthcare</td>
</tr>
</tbody>
</table>

Any PGY4 rotations that were not accounted for will be scheduled within the first 6 blocks.
# Common Rotation Schedule 2016-2017

<table>
<thead>
<tr>
<th>BLOCK</th>
<th>STARTS ON</th>
<th>ENDS ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Friday, July 1, 2016</td>
<td>Monday, July 25, 2016</td>
</tr>
<tr>
<td>2</td>
<td>Tuesday, July 26, 2016</td>
<td>Monday, August 22, 2016</td>
</tr>
<tr>
<td>3</td>
<td>Tuesday, August 23, 2016</td>
<td>Monday, September 19, 2016</td>
</tr>
<tr>
<td>4</td>
<td>Tuesday, September 20, 2016</td>
<td>Monday, October 17, 2016</td>
</tr>
<tr>
<td>5</td>
<td>Tuesday, October 18, 2016</td>
<td>Monday, November 14, 2016</td>
</tr>
<tr>
<td>6</td>
<td>Tuesday, November 15, 2016</td>
<td>Monday, December 12, 2016</td>
</tr>
<tr>
<td>7</td>
<td>Tuesday, December 13, 2016</td>
<td>Monday, January 9, 2017</td>
</tr>
<tr>
<td>8</td>
<td>Tuesday, January 10, 2017</td>
<td>Monday, February 6, 2017</td>
</tr>
<tr>
<td>9</td>
<td>Tuesday, February 7, 2017</td>
<td>Monday, March 6, 2017</td>
</tr>
<tr>
<td>10</td>
<td>Tuesday, March 7, 2017</td>
<td>Monday, April 3, 2017</td>
</tr>
<tr>
<td>11</td>
<td>Tuesday, April 4, 2017</td>
<td>Monday, May 1, 2017</td>
</tr>
<tr>
<td>12</td>
<td>Tuesday, May 2, 2017</td>
<td>Monday, May 29, 2017</td>
</tr>
<tr>
<td>13</td>
<td>Tuesday, May 30, 2017</td>
<td>Friday, June 30, 2017</td>
</tr>
</tbody>
</table>
Residents in the Anesthesia Residency Program have complete two blocks of Community Anesthesia. Although two blocks are allocated for Community Anesthesia, there is some latitude for the goals of the second rotation. In all cases, the supervisors must be FRCP(C). The community electives usually occur in the PGY4 year; occasionally one of them may occur in the PGY5 year.

Each elective experience must be approved by the Program Director.

Please note that the electives must take place in Ontario unless the case can be made that the experience is not available in Ontario. The reason for this is that residents are paid for their work by the Ontario government.

The information below relates to the procedure for arranging electives in a variety of jurisdictions. Candice Stroud will be able to assist residents in understand which process applies them.

From: Stroud, Candice
Sent: Friday, May 16, 2014 12:03 PM
To: Stroud, Candice
Subject: Community Electives

Good morning all

I am sending this to all years whether you are completing your community experience rotation this year or in the future. After speaking with Dr. Raymer please note the following PRIOR to setting up your community experience rotation(s) for the upcoming years.

Starting in July 2014 all community electives MUST be approved by the program prior to confirming. You can send these requests directly to me for approval. If there are any issues, it will then go to Dr. Raymer.

In your request it must state:
Supervisors Name
Hospital
Contact name, email, address and phone number or supervisor and/or admin that you were dealing with
Specialty (if applicable)

You supervisor MUST be a Royal College graduate. This can be from any residency program that receives a Royal College certificate (ie – commonwealth countries) or the USA.

If you are going through MacCare, ROMPS, SWOMEN, NOSM etc… please let me know if you would like me to complete these forms on your behalf. I really don’t mind doing it and this way we can keep track of all the boxes being ticked off and you aren’t trying to get
paperwork completed at the last moment. I did this in Ortho and the residents seems to like that they didn’t have to do the admin paperwork with it.

All LOGS for these rotations should now come from the program and NOT the PGME office.

Any questions, please let me know!

McMaster Residents doing:

a) Mac-CARE – Core rotations and Electives

All McMaster Residents doing core or elective rotations in a Mac-CARE region (http://maccare.mcmaster.ca/) shall follow the following process:

• Candice will fillout the form on your behalf to confirm your elective along with the LOGS
  mac.care@mcmaster.ca.
• The Mac-CARE office will coordinate the placement request within the Mac-CARE region. The resident, preceptor and PGME office will be notified of the booked rotation (as available).
• It is the Resident’s professional responsibility to ensure that all immunizations and mask fit testing information is current with the PGME Office. The Confirmation of Registration letter may include a report of the Immunization status and mask fit testing (if requested) as recorded with the PGME Office (McPost).

The Confirmation of Registration will include:

• Resident information: Name, Program, Level of training
• Rotation information: Name of the hospital, dates, service
• Verification of current CPSO registration
• Verification of current CMPA
• Resident’s immunization record and/or mask fit results as recorded in McPost will be sent by request.

b) Electives
• within Ontario – ROMP / ERMEP / SWOMEN / NEP
• Outside of the Province / Outside of Canada

• Contact information for Canadian medical schools, as well as individual school requirements are available on medportal, under Policies and Procedures – Electives

WITHIN ONTARIO:
Mac-CARE Region – Electives within the Mac-CARE region (see mac-care.ca) follow process above.

ROMP Region – ROMP supports Electives only (versus Core) rotations. The Resident should contact ROMP directly.
Website: http://www.romponline.com/
Email: romp@romponline.com
Fax: 705-445-8911
Write: 459 Hume Street, Collingwood, ON L9Y 1W9
Other Distributed Medical Education (DME) providers in Ontario:
Southwestern Ontario Medical Education Network (SWOMEN):
http://www.schulich.uwo.ca/swomen/
Eastern Regional Medical Education Program (ermep): http://www.ermep.com/
Northern Ontario Electives Program (NEP):
http://www.nosm.ca/education/general.aspx?id=526

OUT-OF-PROVINCE / OUT-OF-COUNTRY: Prior to elective, Residents must seek approval from their program director, who would provide a letter of support addressed to the Assistant Dean, Postgraduate Medical Education. The elective should be unique, in that it is not available within the Province of Ontario. Out-of-country electives must complete a “Field Trip and Electives Planning and Approval Policy form”. The form can be found on medportal, under Policies and Procedures:

Foreign sponsored trainees: because foreign trainees are here on a work permit and the regulations vary from province to province, you may be required to submit additional documents at the school where you are going to do the elective. Please check with the Postgraduate Medical Education Office of that school.

U.S. ELECTIVES: are not encouraged because of the high liability issues. Trainees wishing to take an elective in the U.S. should ensure they have the correct traveling documents by contacting Health Canada at http://www.hesc.gc.ca/hppb/healthcare/health_resources.htm.
CMPA coverage does not cover medical electives in the U.S. The University does have limited coverage, but again, do not encourage U.S. electives. See next section on Liability.

General Information on Electives:

• The Royal College of Physicians and Surgeons of Canada defines eligibility for Electives in their “Policies and Procedures for Certification and Fellowship” document, e.g., maximum of 6 months in an unaccredited setting, defined objectives and evaluation.
• The trainee must follow the registration instructions of the visiting medical school/institution as well as the regulations of the licensing authority and membership rules of the malpractice insurance carrier.

LIABILITY
Canadian Medical Protective Association:
CMPA will cover electives within Canada but do not provide coverage in the United States or other foreign jurisdictions.

Out-of-Province / Within Canada
Trainees taking an out-of-province elective must pay the Province of Work (POW) of their training program. If the elective is part of their training program, it is not considered “moonlighting”.

The Resident should contact CMPA with:
• the exact dates of the elective and
• the educational licence number from the province in which the elective is taking place and its effective date.

Outside of Canada
The CMPA does not provide coverage for outside of Canada. There may be some exceptions for missionary/charity work, and the Resident should contact CMPA directly. The Resident is advised as follows:
• that they require licensure and malpractice insurance coverage before undertaking an elective outside of the country.
• Contact the hospital where they are doing the elective to see if they offer malpractice insurance or alternatively,
• Contact an insurance broker or provider. Link to a list of Physician Insurers Association of America (PIAA):
  2275 Research Blvd., Suite 250
  9e74043b6bd5456489ae35e&Section=Member_Directory1
Related articles from CMPA: (available on medportal)
• Providing care outside of Canada
• Potential gap in liability protection when teaching or learning outside Canada
• Clarifying CMPA assistance when providing care as a good Samaritan
CMPA contact:
1-800-267-6522

Canadian Universities Reciprocal Insurance Exchange (CURIE)
Out-of-Province/Within Canada/ Outside of Canada
All residents from CURIE covered schools maintain coverage under CURIE when on electives in Canada, in the United States and outside of North America. The coverage is normally sufficient depending on what the institution requires (CURIE currently has $5,000,000 liability, including malpractice insurance – this may change from time to time). If the institution requires verification of this information, CURIE can issue a “Certificate of Insurance”.

CURIE will require documentation of an agreement to undertake the elective from the program
Field Trip and Electives Planning and Approval Program

All Anesthesia Residents

The Department of Anesthesia at St. Joseph’s Hospital offers a bursary for the overseas elective in anesthesia and tropical medicine in Uganda.

The bursary will fund up to $3000 for one resident per year from the residency program to participate in this elective. This goes most of the way in covering travel expenses and incidentals such as medical license and cost of living expenses. Reimbursement is made by Dr. Janet Farrell, on behalf of SJHH Department of Anesthesia, at the end of the elective once receipts are submitted (in Canadian dollars and not the local Ugandan currency). The duration of the elective is 4 weeks.

The elective supervisor will be Dr. Steven Ttendo who is a member of the McMaster teaching faculty. In this way a proper rotation evaluation can be provided, so that it will be a part of the residency program, and not vacation time.

The applicant should be comfortable in diverse clinical and life situations. Trainees at different levels will certainly be considered for this exciting opportunity, but PGY3 or 4 is the most typical time for this opportunity. The rotation will most likely count as part of your core anesthesia rotations. Depending on where it is placed in your schedule, it may cause a rotation from one year to be moved to the subsequent year.

Interested applicants should submit a one-page letter to Dr. Raymer by August (Date to be confirmed by program in July) The announcement of the recipient will be made by the end of September and the bursary will apply to travel in the subsequent calendar year, either within the same or the next academic year, depending on scheduling and the desired time of travel. Candidates should suggest a proposed timeframe in their letter. Criteria such as clinical evaluations, CanMeds competencies, academic performance and the interest expressed in the letter will be considered.

I think that this is an exciting opportunity within the Residency Program, which will enrich the experience of an individual enormously. We are very fortunate within the residency program to receive the support for this endeavor from St. Joseph’s Hospital as well as having the strong connection with Dr. Ttendo that has been forged by Dr. Dauphin and others, which makes this opportunity possible.

I encourage each resident to seriously consider this elective opportunity. We feel that this will enrich your exposure to international medicine, which is already a unique component of the McMaster Residency Program, and we hope you share the enthusiasm for this venture.

Sincerely
Karen Raymer
UGANDA EXPERIENCE - SURVIVAL HANDBOOK (2014)

The Uganda elective experience is an amazing opportunity and was one of the best experiences of my life. My only regret is that I couldn't stay longer. You will learn more about medicine and develop skills in anesthesia you never thought possible. Below I will try to outline some of the things I discovered and what the experience is all about. The biggest thing is to be able to go with the flow, and be adaptable. In Uganda - things happen when they happen (surgeries), resources are limited to scarce, and values very different. Dr. Stephen Ttendo is an amazing person and will ensure that you are well taken care of and safe throughout the elective.

How to Apply

The international elective is organized through St. Joseph’s Hospital department of Anesthesia. Dr. Dauphin is the primary contact person. The selection process typically occurs end of November to early December (Note from PD: This year we will ask for application letter by end of August to allow for earlier planning). Traditionally it has been awarded to a senior anesthesia resident (PGY4) – however junior residents if interested should apply annually as some years are more competitive than others and ongoing interest can be helpful. To apply an application should be submitted to Candice around the aforementioned date (the program will email a reminder out). The essay should focus on why you want to do the elective focusing on in particular international health. The decision to send the resident is typically made prior to Christmas.

Who is selected?

Usually one resident is selected but in previous years more than one resident has gone (the cost of the trip was split between the two). As mentioned above a senior anesthesia resident, typically a PGY4. However in previous years a PGY3 has gone.

What is covered/How much will the trip cost?

The cost of the trip (accommodations/airfare) within reason is covered by the Anesthesia department at SJH. After returning from your trip submit all receipts to Dr. Farrell or her program assistant who will reimburse you (up to $3000). Other costs such as food, travel, tips etc…will be have to be covered by the resident. It’s easy to get by in Uganda on shoestring. (<$10USD/day)
How long do I need to go for?

Resident’s have gone for as short as 2 weeks to as long as 4 weeks. My recommendation would be to go as long as possible. Considering how long it takes to get there, the time difference, and that you will be in two different cities - the longer you can stay the better the experience. There is a lot of medicine to see.

Preparations for your trip

General Information: Prior to leaving make sure you read up on Uganda, government, policies, and in particular how their healthcare system is set up. This will be very helpful for when you get there. Picking up a lonely planet or at the very least getting a map of Kampala will also be helpful.

A cell phone is a must. Cell phone coverage throughout the country is quite good. There is an unlocked cell phone that has been passed on throughout the program. Also Unlocking a cellphone and bringing it down may be better as you can get 3G data pretty much anywhere in the country. WiFi is usually unavailable except in certain locations – some restaurants, the anesthesia office. If you need internet you may want to pick up a 4G modem that plugs into your computer or just buy data for your phone.

What to expect: As far as African countries go Uganda is very safe. It is easy to get around, and the people are friendly. That being said it can still be a difficult place, especially on your own. If you have never travelled before to a developing country you need to prepare yourself. That being said, you will meet a ton of people as there is a lot of foreign aid (mainly Americans) that will be around and you will be able to spend time with. UBC usually sends a couple of residents some from anesthesia that may overlap with your time there. The Ugandan residents are extremely hospitable. They will take you out, and make sure you are okay.

Contact and Hospital Information: Keeping all the cities and hospitals straight can be difficult. During your elective you will spend most of your time in two cities (generally two weeks each). Kampala is the capital city – which has the national referral hospital called Mulago. It is affiliated with Makerere University. Here you will see pretty much everything from Neuro to Trauma. You will also spend some of your time in Mmbarra which has the Mmbarra regional referral hospital. This is where Dr. Ttendo works. This is generally better organized then when in Kampala. A lot of the residents also use whatsapp so if you have an iphone this can be really helpful to know what’s going on.

Contact Information
Mbarara Hospital
Dr. Stephen Ttendo - ssttendo@dr.com
Mobile #256 (0) 712 333 658,

Kampala Hospital
Dr. Andrew Kintu - andrewug2012@gmail.com
Mobile # +256 779 229 920
Prior to leaving make sure you touch base with both doctors. Both have spent time at McMaster Andrew more recently. Dr. Ttendo will take care of all your accommodation, transport and questions you may have.

Predeparture training – The university offers predeparture training for medical students/residents. These are offered 2-3x throughout the year by the MD program. Check Medportal International electives site within Undergraduate page, or speak with Doreen Reeve, CPLO administrator at 905-525-9140 x22670, dreeve@mcmaster.ca

**Personal Travel Health:** Please visit the CDC website to see what vaccines you need. Recommended immunizations (often $200-400 total) include: Yellow Fever (mandatory for travel within Africa), Typhoid, Hepatitis A & B (TwinRix), and consideration of Menaetra (Meningococcal A, C, Y, W135) and Dukoral (cholera + travellers diarrhea)

You will also require antimalarials for the duration of your stay in Uganda (and depending on medication chosen, for at least a few days prior, and up to 1 month after your return). This is all covered by the resident health plan. For HIV post exposure prophylaxis all you need is a 7-10 days of atripla (triple therapy in one pill).

**Packing:** Try and pack as light as possible. If you have a backpack (~70L) that should be more than enough space. You will likely be moving around a lot. The people in Uganda are very formal. All healthcare professionals show up to work wearing slacks, and a tie and you should be prepared to pack something appropriate to wear to work. While there are scrubs available my suggestion would be to pack at least 3 pairs of your own. Also, a lab coat is a must. You cannot walk around the hospital in scrubs. If you need to leave the OR you either need to get changed or put a lab coat on over your scrubs. Also, they have OR shoes for you to wear but again my recommendation would be to bring your own. You cannot wear your OR shoes outside of the operating room. This is extremely important.

**Accomodations:** This will be taken care of by Dr. Ttendo.

**Kampala**
- **Mulago Hospital Guest House** (located a 2 minute walk from the side gate of Mulago Hospital): Manager Rosette: +256 773 267 123, mulagohgh@yahoo.co.uk $25-30/night with a variety of room configurations and a common room with public kitchen (breakfast provided). Private washrooms with showers (+/- hot water).
- **Makerere University Guest House** (located a 20-30 minute walk from Mulago hospital): +256 414 534 169, guesthouse@projects.mak.

**Mbarara**

Most residents/students stay within student halls of residence on the hospital/university campus or in a few private guesthouses located within a compound directly across the main road from the hospital/university campus. Further details can be obtained from Dr. Stephen Ttendo. The other option is one of the hotels. The hotels have wifi, and restaurants in them so are somewhat easier to manage.
Anesthesia in Uganda: Health care in Uganda is obviously very different than in North America. Resources are limited and there are very few doctors (There are 40 million people for ~20 anesthesiologists most of whom are located in the big cities.). The anesthesia residency program has recently been developed so there has been an influx of anesthesia trainees. Although there will be opportunities to work alongside residents, you will typically be put in a room to run on your own. Daily rooms consist of everything you would find at home (trauma, neuro, general surgery, urology) however the room starts when the surgeon shows up (if he/she decides to show up), and finishes when he/she are tired. Surgeries/cases are sometimes listed the night before but this is not the norm. If they are up – it is unlikely they will go in any specific order. Patients are not optimized, they have not been seen in preop clinic, and many of them have travelled long distances to be there so are very rarely cancelled. There may or may not be a staff anesthesiologist assigned to the room you are in, and if there is it is unlikely they will be present for the case. Residents typically run the rooms (operate/anesthesia).

You anesthetic will be very different than what you are used to. Most of the time it will consist of whatever drugs are in your anesthetic cart. The most common drugs/anesthetic agents were: halothane, isoflurane, atracurium, succinyl choline, thiopental. Airway adjuncts do not exist here. Be prepared to reuse ETT tubes, laryngoscope blades may or may not be appropriately sized. At the end of cases – patients are brought to PACU. There is no real monitoring and no supplemental oxygen given. It is up to you to wipe down your own equipment including your laryngoscope blade.

What should I bring (anesthesia)?: If possible bring your own laryngoscope with different blades (esp pediatric blades).

Most of their laryngoscopes do not have working lights. Other things you should bring: gloves (a couple boxes), tourniquets, tape (and lots of it – both pink and clear), alcohol swabs, hand sanitizer, and pediatric stylets. Otherwise most of the other equipment can be found somewhere in the operating rooms.

Final Thoughts: Remember these are just tips from my experience. There are a lot of small details that I have left out. Before you go I would be more than happy to sit down with you to discuss what to expect, and how to properly prepare.

Dave Sussman, Class of 2016
Guidelines Pertaining to Resident Room Assignments:

1) Regarding room assignments, the priority is to optimize level-specific clinical exposure and not to grant specific resident requests.

2) Residents on a sub-specialty rotation get priority for rooms in that sub-specialty. Days when that sub-specialty resident is post-call or on vacation should be used strategically to allow PGY5’s or other PGY4’s to gain access to that surgical service.

3) Extremely rare or highly challenging cases should be identified by the admin resident and every effort should be made to ensure an appropriate level resident is able to take advantage of the learning opportunity; Ensuring that there is a resident assigned to such a room takes precedence over resident requests.

4) If a resident would like to make a request for an "early room" due to a doctors appointment, research meeting etc - this should be communicated in email in advance to the admin resident and CTU director. Requests for early lists are understandably necessary from time to time, but would be expected to be limited to approximately once or twice per block.

5) Requests for a specific room made to the admin resident by another resident should not be a daily norm. This practice undermines the managerial role of the admin resident and places additional constraints on a process that already involves many considerations (allocation of clerks etc). Occasionally a resident may request a room because of the staff assigned, a patient they saw in clinic, or because of the desire to correct specific educational deficits. These requests should be kept to a minimum and may be denied in order to fulfill points 1 - 4 above.

The PGY5 residents represent a special case, because with a finite opportunity to fill remaining case-exposure deficits, they may legitimately feel the need to have input into their list. This nature of how this “input” manifests will vary according to the two individuals involved (the admin resident and the PGY5 resident on rotation) for any given block. For example, the PGY5 may provide the admin resident with a list of desired procedures at the beginning of the rotation. In other cases, the PGY5 resident might wish to have more of an ongoing, open dialogue with the admin resident in order to provide input on his or her educational needs. The two residents (PGY5 and admin resident) should openly discuss how this communication is going to take place and each resident should take into account the needs, expectations and perspectives of the other. This discussion taps into Canmeds “Collaborator” and “Manager” Roles. Some of the guiding principles around this should include:

- Any specific direction that the PGY5 wishes to provide should be based solely on educational needs, recognizing that lists of any duration can be beneficial and can fill an educational void
- If a PGY5 needs an early day, the expectation is that he or she would follow the guideline described above for all residents, rather than making a specific list request to the admin resident “framed” as an educational request
• Any specific list request made by the PGY5 should occur within a timeframe that doesn’t cause a delay in the list-assigning or leave the admin resident in a state of uncertainty as to whether a request may be coming later.

• The PGY5 resident must accept that any requests may not be able to be granted. The PGY5 must at all times respect the difficult role that the admin resident fulfills.

• Some PGY5’s will be more vocal than others in the dialogue around their educational needs; the admin residents’ task is to ensure that assignments are as optimal for the PGY5 that has a “hands-off” approach as for the PGY5 who is more directive. This responsibility lies equally within a group of PGY5’s at a given site, who should ensure amongst themselves that list equality is available to everyone, not just those who wish to be very directive.

• The CTU director is responsible for monitoring the mix of cases and lists in which all residents, but particularly the PGY5’s, participate. PGY5’s who wish to be directive around their lists selection accept accountability for that selection. The CTU directors recognize that many short lists have high educational benefit but expect a mix of early and later lists on non-call days.
McMaster University
Residency Training Program in Anesthesiology

General Goals and Objectives

The Residency Program in Anesthesiology is a five year program, during which the resident must develop the knowledge base, skills, judgment and behavioural qualities needed to competently and successfully practice anesthesiology at a consultant level. Rotation specific goals and objectives have been provided for each rotation and should be studied carefully at the beginning of each rotation.

Goals and objectives of training, as defined by the Royal College of Physicians and Surgeons of Canada, recognize the importance of both the expert role of the physician, (knowledge base, technical skills, judgment) and the non-expert competencies which impact upon the application and effectiveness of the physician in the delivery of health care. The CanMEDS competencies define the expectations of the Royal College for the training and evaluation of residents in Canadian medical colleges.

The McMaster Residency Program in Anesthesiology adheres to the Objectives of Training and Specialty Training Requirements in Anesthesiology as defined by the Royal College. These are appended, and should be studied carefully, as they form the basis for training and evaluation of residents during the residency program.

It should be noted that the non-expert competencies, (communicator, collaborator, leader (manager), health advocate, scholar and professional) carry equal weight in the evaluation of performance, to that of medical expert/clinical decision-maker. Successful completion of the Program requires the demonstration of competency in all seven domains of practice. Please review the Objectives of Training carefully and frequently during your period of residency training.

June 2014
Rotation Specific Objectives of Training

Anesthesia PGY-1 Rotation

At the completion of Anesthesia training at the PGY-1 level (Blocks 1, 2 and 12, 13), each resident is expected to achieve the following in each domain.

CANMEDS Medical Expert Role

Clinical Ability

- Basic pre-operative assessment including airway, respiratory and cardiovascular examination.
- Basic machine and equipment check, including preparation of emergency and induction medications.
- Produce a basic anesthetic plan appropriate for the ASA 1-2 patient.
- Have an understanding of fluid/blood product requirements for routine surgical procedures.
- Be able to identify normal parameters for routine intra-operative monitors, give an indication of abnormal values and when to intervene.
- Identify basic intra-operative problems (hypotension, hypertension, hypoxemia, bradycardia, tachycardia, raised inflation pressure, laryngospasm) and produce a basic differential diagnosis and treatment plan.

Knowledge Base

- Indicate a basic knowledge of the actions of and contraindications to routine anesthesia medications including induction agents, narcotics, muscle relaxants, inhalational agents, local anesthetics, and vasoactive agents.
- Understand the interactions of the above medications with other therapeutic agents and routine medical problems.
- Demonstrate a basic knowledge of current ACLS guidelines and medications.
- Understand the function and application of CAS routine monitors.

Technical Skills

- Demonstrate the ability to effectively bag/mask ventilate, and intubate patients possessing normal airways, and place a laryngeal mask airway with success, in the majority of elective cases.
- Demonstrate facility at obtaining intravenous access in adult patients.
- Begin to obtain experience with neuroaxial blockade with faculty assistance.

CANMEDS Professional Role

- Arrive on time to prepare OR for day's cases and have first patient assessed.
- Attend all rounds, seminars and journal clubs.
- Demonstrate evidence of ethical behaviour and practice.
- Attend academic days.

CANMEDS Communicator Role
• Presents basic anesthetic concerns and pre-operative assessment in an organized fashion.
• Obtain basic understanding of anesthesia charting and consultation.
• Exhibit the ability to develop rapport with patients to create an effective therapeutic relationship.

**CANMEDS Collaborator Role**

• Demonstrate an ability to work together with all members of the health care team.
• Exhibit professional interpersonal behaviour with patients, family, staff and colleagues.
• Demonstrate the ability to appropriately request or provide consultation as needed.

**CANMEDS Manager Role**

• Begin to understand the rationale for allocation of healthcare resources.
• Begin to obtain an understanding of OR, PACU and Obstetrical anesthesia resource management.
• Begin to develop skill at identifying, prioritizing and managing urgent and emergent situations.
• Begin to develop strategies for effective personal and professional time management.

**CANMEDS Health Advocate Role**

• Identify health issues in patient management which will improve peri-operative care.
• Gain an initial understanding of the standards of anesthesia care with respect to the Canadian Anesthesiologists' Society guidelines.
• Respond appropriately to individual patients healthcare needs, including those related to issues of gender, age and ethnic or religious background.

**CANMEDS Scholar Role**

• Begin to appreciate the requirement for continuing personal education.
• Understand the basics of critical appraisal as it pertains to anesthesia practice.
• Take part in the education of junior learners, with regard to anesthesia knowledge and skills.
• Demonstrate evidence of personal academic/professional growth.

Revised March 2015
Rotation Specific Objectives of Training

Anesthesia PGY-2 Initial 0 to 6 month Rotation

At the completion of the first 6 months of Anesthesia training at the PGY-2 level, each resident is expected to achieve the following in each domain.

CANMEDS Medical Expert Role

Clinical Ability

- Be able to perform a pre-operative assessment including airway, respiratory and cardiovascular examination, and understand the implications of major pre-operative medical problems on perioperative care.
- Routine machine and equipment check.
- Preparation of emergency and induction medications.
- Produce a basic anesthetic plan appropriate to the patients medical condition and surgery anticipated.
- Accurately estimate fluid/blood product requirements
- Be able to identify normal parameters for routine intra-operative monitors, give an indication of abnormal values and when to intervene.
- Identify basic intra-operative problems (hypotension, hypertension, hypoxemia, bradycardia, tachycardia, raised inflation pressure, laryngospasm) and produce a differential diagnosis and treatment plan.

Knowledge Base

- Indicate knowledge of action and contraindications to routine anesthesia medications including induction agents, narcotics, muscle relaxants, inhalational agents, local anesthetics, and vasoactive agents.
- Understand the interactions of the above medications with other therapeutic agents and routine medical problems.
- Demonstrate knowledge of current ACLS guidelines and medications.
- Understand the function and application of CAS routine monitors, and indications for invasive monitoring.

Technical Skills

- Demonstrate the ability to effectively bag/mask ventilate, and intubate patients possessing normal airways, and place a laryngeal mask airway with success in the majority of elective cases.
- Demonstrate facility at obtaining intravenous access in adult patients.
- Be able to perform spinal and epidural anesthesia with minimal assistance.
- Understand the anatomy, indications and contraindications of arterial line and CVP placement

CANMEDS Professional Role

- Arrive on time to prepare OR for day's cases and have first patient assessed.
- Attend all rounds and seminars scheduled.
- Honour on-call responsibilities and respond to calls in a timely fashion.
- Demonstrate evidence of ethical behaviour and practice.

**CANMEDS Communicator Role**

- Present anesthetic concerns and pre-operative assessment in an organized fashion.
- Understand anesthesia charting and consultation.
- Demonstrate the ability to develop rapport with patients and to form a trusting therapeutic relationship.

**CANMEDS Collaborator Role**

- Demonstrate an ability to work together with all members of the health care team
- Exhibit professional interpersonal behavior with patients, family, staff and colleagues.
- Request and provide consultation appropriately and in a timely fashion.

**CANMEDS Manager Role**

- Demonstrate an understanding of OR and Obstetric anesthesia resource management.
- Exhibit skill at identifying, prioritizing and managing urgent and emergent situations.
- Demonstrate evidence of effective personal and professional time management.

**CANMEDS Health Advocate Role**

- Identify health issues in patient management that will improve their perioperative care.
- Understand the standards for anesthesia management with respect to the CAS guidelines and local standards of practice.
- Respond appropriately to patients' healthcare needs, including those related to issues of gender, age, and ethnic or religious background.

**CANMEDS Scholar Role**

- Exhibit evidence of a plan for continuing personal education.
- Understand the basics of critical appraisal as they pertain to anesthesia practice.
- Take part in the education of junior learners with regard to anesthesia knowledge and skills.
- Demonstrate evidence of personal academic and professional growth.
- Attend all rounds, seminars and journal club.s
- Attend academic days.

Reviewed March 2015
Rotation Specific Objectives of Training

Anesthesia PGY-2 6 to 12 month Rotation

At the completion of 12 months of Anesthesia training at the PGY-2 level, each resident is expected to achieve the following in each domain.

CANMEDS Medical Expert Role

Clinical Ability

- Thorough pre-operative assessment which is coupled with an understanding of patient medical and surgical considerations to produce a rational anesthetic plan.
- Able to consider alternative anesthesia plans as required in elective and emergent situations.
- Manage ASA 1-2 patients for routine elective surgery without immediate supervision.
- Identify, provide a complete differential diagnosis and timely, rational treatment plan for intra-operative emergencies. (Hypotension, hypertension, bradycardia, tachycardia, hypoxemia, hypocapnia, raised inflation pressure, laryngospasm)
- Manage obstetrical analgesia and caesarean section independently, with the ability to solve basic anesthesia problems in this area.
- Identify and manage difficult and emergency airway problems, demonstrating a comprehensive plan with multiple options.
- Exhibit a detailed knowledge of pharmacology relevant to anesthesia practice.

Knowledge Base

- Sound knowledge of anesthetic, resuscitation and hemodynamic medication pharmacology.
- More complete understanding of interactions between major medical problems, anesthetic techniques and surgical procedures.
- Basic knowledge of ATLS.
- Complete knowledge of ACLS.
- Understand indications for regional vs. general anesthesia with the ability to provide plausible backup plan.
- Have a knowledge of complications and critical incidents which may occur with regional and general anesthesia (ie. laryngospasm, inadvertent medication administration, awareness, aspiration, bronchospasm, delayed emergence, anaphylaxis, massive transfusion.)
- Basic knowledge of plexus blockade.
- Basic knowledge of modes and options for acute pain management.

Technical Skills

- Demonstrate facility with all forms of routine airway management and demonstrate knowledge of laryngeal mask airway, glide scope, and fiberoptic bronchoscope.
- Begin to attain skills at trauma airway management.
- Show skill at obtaining arterial line and CVP access with minimal assistance.
- Demonstrate ability to perform spinal and epidural anesthesia independently.
- Be able to manage ASA 1-2 patients for routine surgeries independently following an appropriate pre-operative assessment.
CANMEDS Professional Role

- Arrive on time to prepare OR for day's cases and have first patient assessed.
- Attend all rounds and seminars scheduled
- Honor on-call responsibilities and respond to calls in a timely fashion.
- Considers the ethical management of patient issues, and demonstrates evidence of ethical behaviour and practice.

CANMEDS Communicator Role

- Presents anesthetic concerns and pre-operative assessment in an organized fashion.
- Produces complete, legible and concise anesthesia charting and consultation reports.
- Communicates anesthesia concerns and issues to patients clearly and in understandable terms.

CANMEDS Collaborator Role

- Demonstrate the ability to work together with all members of the health care team
- Exhibit professional interpersonal behavior with patients, family, staff, and colleagues.
- Request and provide consultation appropriately and in a timely fashion, and integrates well into the perioperative team.

CANMEDS Manager Role

- Understand OR and Obstetric anesthesia resource management.
- Exhibit skill in identifying, prioritizing and managing urgent and emergent situations.
- Consider quality assurance issues in day to day anesthesia practice.
- Demonstrate effective personal and professional time management practices.

CANMEDS Health Advocate Role

- Identify health issues in patient management which will improve their perioperative care.
- Know and understand the standards for anesthesia management with respect to the CAS guidelines and local standards of practice.

CANMEDS Scholar Role

- Exhibit evidence of a plan for continuing personal education.
- Understand the basics of critical appraisal as they pertain to anesthesia practice.
- Take part in the education of junior learners with regard to anesthesia knowledge and skills.
- Demonstrate academic growth.
- Prepare an academic project suitable for presentation at Residents Day.
- Attend all rounds, seminars and journal clubs.
- Attend academic days.

Revised March 2015
Rotation Specific Objectives of Training

Anesthesia PGY-5 Rotation

At the completion of Anesthesia rotation at the PGY-5 level, each resident is expected to achieve the following in each domain.

CANMEDS Medical Expert Role

Clinical Ability

- Complete a thorough pre-operative assessment which is coupled with an understanding of patient, medical and surgical considerations to produce a rational anesthetic plan.
- Be able to provide multiple alternative anesthesia plans as required in elective and emergent situations.
- Be able to manage ASA 1-4 patients for routine elective surgery without immediate supervision.
- Identify, provide a complete differential diagnosis and timely, rational treatment plan for intra-operative emergencies. (Hypotension, hypertension, bradycardia, tachycardia, hypoxemia, hypocapnia, raised inflation pressure, laryngospasm).
- Identify and manage difficult and emergency airway problems, demonstrating a comprehensive plan with multiple options.

Knowledge Base

- Sound knowledge of anesthetic, resuscitation and hemodynamic medication pharmacology.
- Complete level of understanding of interactions between major medical problems, anesthetic techniques and surgical procedures.
- Complete knowledge of ACLS and ATLS guidelines.
- Understand indications for regional vs. general anesthesia with the ability to provide plausible backup plan.
- Have a comprehensive knowledge of complications and critical incidents which may occur with regional and general anesthesia including laryngospasm, inadvertent medication administration, awareness, aspiration, bronchospasm, delayed emergence, anaphylaxis, massive transfusion.
- Complete knowledge of plexus blockade.
- Complete knowledge of modes and options for acute pain management.

Technical Skills

- Demonstrate facility with all forms of routine and difficult airway management including endotracheal intubation, laryngeal mask airway, bougie, glide scope, and fiberoptic bronchoscope.
- Obtain arterial line and CVP access independently, and be able to safely insert a pulmonary artery catheter.
- Demonstrate consultant level ability to perform spinal and epidural anesthesia independently.
- Be able to manage patients of all ASA categories for routine and emergency surgeries independently following an appropriate pre-operative assessment.

CANMEDS Professional Role
Arrive on time daily to prepare OR for day's cases and have first patient assessed.
Attend all rounds and seminars scheduled.
Honour on-call responsibilities and respond to calls in a timely fashion.
Attend all academic day activities.
Consider the ethical management of patient issues.
Demonstrate awareness of own limitations, seeking advice when necessary.
Develop effective professional relationship with patients and health care team.

**CAN MEDS Communicator Role**

- Present anesthetic concerns and pre-operative assessment in an organized fashion.
- Produce complete, legible and concise anesthesia charting and consultation reports.
- Communicate anesthesia concerns and issues to patients clearly and in understandable terms.
- Present anesthesia concerns and issues to other members of the healthcare team in a collegial and appropriate fashion.

**CAN MEDS Collaborator Role**

- Demonstrate an ability to work together with all members of the health care team.
- Exhibit professional interpersonal behavior with patients and staff.
- Provide consultations independently.
- Communicate need for consultation in an appropriate manner.

**CAN MEDS Manager Role**

- Have a comprehensive understanding of OR and obstetrical anesthesia resource management.
- Display consultant level skill at identifying, prioritizing and managing urgent and emergent situations.
- Consider quality assurance issues in day to day anesthesia practice.
- Display effective practice management strategies to allow adequate personal time.

**CAN MEDS Health Advocate Role**

- Identify health issues in patient management which will improve the patient’s perioperative care.
- Know and understand the standards for anesthesia management with respect to the CAS guidelines and local standards of practice.
- Recognize and respond appropriately in advocacy situations particularly with regard to patient safety.
- Begin to develop an understanding of community healthcare needs, as they relate to perioperative care.
CAN MEDS Scholar Role

- Demonstrate a commitment to the requirement for continuing personal education.
- Understand critical appraisal issues as they pertain to anesthesia practice.
- Take part in the education of junior learners with regard to anesthesia knowledge and skills.
- Demonstrate academic qualities consistent with the standard required for independent practice.
- Attend all rounds, seminars and journal clubs.
- Attend academic days.

Reviewed March 2015
Anesthesia PGY-4 Cardiovascular Anesthesia Rotation-Specific Objectives
McMaster University, 2015

At the completion of Cardiac Anesthesia Rotation PGY-4 level, each resident is expected to demonstrate the following within each domain.

1. CANMEDS Medical Expert Role

A) Clinical Ability

• Thorough pre-operative assessment of the patient with coronary, valvular, aortic or peripheral vascular disease in the context of patient-specific physiologic and surgical considerations.

• Rational risk stratification with appropriate use of pre-operative assessment investigations.

• Generation of and appropriate anesthesia plan for the patient with cardiac disease undergoing elective and emergent cardiac and non-cardiac surgeries.

• Management (without immediate supervision) of the stable patient with valvular or coronary disease undergoing routine elective cardiac surgery.

• Management (without immediate supervision) of the stable patient with vascular disease undergoing routine elective vascular surgery.

• Safe and independent insertion of the pulmonary artery catheter including appropriate patient selection and the technical skills required to avoid complications (both early and late).

• Management of separation from cardio-pulmonary bypass with minimal assistance.

• Identification, differential diagnosis and timely treatment of intraoperative emergencies specific to the patient with cardiac disease: Arrhythmias, hemodynamic instability, difficult separation from bypass, coagulopathy, massive transfusion.

B) Knowledge Base

• Sound knowledge of anesthesia and hemodynamic medication pharmacology as it applies to the patient with various forms of cardiac disease.
• Complete understanding of optimum hemodynamic parameters for coronary disease, all forms of valvular heart disease, cardiomyopathies and common congenital heart diseases.

• Solid understanding of the interaction between cardiac disease (coronary, major valvular, congenital or cardiomyopathies), anesthetic technique, and the specific surgical procedure in the cardiac patient.

• Complete knowledge of Advanced Cardiac Life Support guidelines.

• A complete understanding of the indications and contraindications to the insertion of the pulmonary artery catheter as well as an understanding of the hemodynamic information that it provides and the limitations of that information.

• Basic knowledge of cardio-pulmonary bypass, intra-aortic balloon pumps and left ventricular assist devices including their indications and complications.

• Sound differential diagnosis of and management plan for anticipated and unanticipated difficult separation from cardio-pulmonary bypass.

• A basic understanding of the key Trans-esophageal Echocardiographic images and their use in cardiac and non-cardiac surgery.

2. CANMEDS Professional Role

• Punctual arrival each morning to allow for patient assessment and thorough operating room preparation.

• Preoperative assessment of all patients, including an in-patient assessment the day before surgery where applicable.

• Recognition of the circumstances when faculty assistance is required and the ability to seek that assistance.

• Honouring of on-call responsibilities and timely response to calls.

• Application of ethical principles to patient care.

3. CANMEDS Communicator Role

• Presentation of anesthetic concerns and pre-operative assessment in an organized fashion.
• Production of complete, legible and concise anesthetic records and consultation reports.

• Communication of anesthetic concerns and issues to patients and families in a clear, understandable fashion, avoiding the use of medical jargon.

• Effective communication with surgeons, nurses and perfusionists in the perioperative setting.

- Effective Communication during handover of post-operative cardiac surgery patient in critical care setting

4. CANMEDS Collaborator Role

• The ability to work together with all members of the cardiac surgical team.

• Professional interpersonal behaviour with patients and staff.

• Communication of issues to colleagues in a clear and concise fashion.

• Familiarity with ongoing clinical trials involving cardiac patients at the Hamilton Health Sciences and the ability to fulfill the anesthesiologist’s role in study protocols.

5. CANMEDS Manager Role

• Recognition of the impact of resource management on routine and emergent cardiac care in the surgical and critical care settings.

• Ability to prioritize urgent and emergent cardiac surgeries including those resulting from angiographic emergencies.

• Consideration of quality assurance issues in routine and emergent cardiac anesthesia practice.

6. CANMEDS Health Advocate Role

• Identification of health issues specific to the cardiac patient that will allow optimal anesthesia care.

• Advocacy for the standards of anesthesia management through the application of the CAS guidelines.
7. CANMEDS Scholar Role

• Recognition of the requirement of continuing personal education.

• Familiarity with evidence-based practice of cardiac (and vascular) anesthesia, cardiac surgical techniques and cardiopulmonary bypass

• Participation in the education of junior learners with regard to knowledge of the various cardiac diseases and pre-operative risk assessment skills.

September 4, 2013
ROTATION SPECIFIC OBJECTIVES OF TRAINING

Anesthesia PGY-4 Neuro Anesthesia Rotation

At the completion of Neuro Anesthesia Rotation PGY-4 level, each resident is expected to achieve the following within each domain.

Anesthesia Objectives for Competency in CANMEDS Roles

1. Medical Expert

A) Clinical Ability

- Organized and comprehensive pre-operative assessment of the patient with cerebrovascular disease, intracranial mass lesions, head injury, systemic neurologic illness, or spinal cord disease, with attention to the patient-specific medical and surgical considerations.

- Generation of an appropriate anesthetic plan for patients undergoing cranial, spinal, and cerebrovascular surgery in both elective and non-elective settings, including special consideration to procedures and those in which neuro-monitoring will be in use.

- Rational patient risk stratification with appropriate use of pre-operative assessment tools and investigations including, but not limited to CT, MRI, and angiography.

- Management of patients with cerebrovascular, intracranial, systemic neurologic illness or spinal cord disease for elective neurologic surgery without immediate supervision.

- Identification, differential diagnosis and timely, rational treatment plan development for intra-operative emergencies specific to the patient with neurologic disease or undergoing neurosurgery. Examples include cardiac arrhythmias, raised intracranial pressure, hemodynamic instability, hypocapnia, and seizure.

B) Knowledge Base

- Sound knowledge of anesthesia, resuscitation, and hemodynamic medication pharmacology as it applies to the patient with various forms of neurological disease.

- Knowledge of basic neuroanatomy, with special attention to vasculature and the neuromuscular junction.

- Understanding of neurophysiology including such concepts as action potential, autoregulation, cerebral perfusion pressure, and determinants of cerebral oxygen consumption.

- Complete understanding of interactions between anesthetic techniques and neurological pathologies such as increased intracranial pressure, traumatic brain or spinal cord injury, neurodegenerative disease, and neurovascular pathology.
- Knowledge of common neuro-endocrine disorders such as pituitary dysfunction, diabetes insipidus, and cerebral salt wasting, and their management.
- Knowledge of common neurosurgical procedures and their specific considerations.
- Basic knowledge of the various modes of intracranial pressure measurement and neuromonitoring, including necessary modifications to anesthesia.
- Complete understanding of optimum hemodynamic parameters for all forms of neurological and cerebrovascular disease, as well as acute and chronic spinal cord injuries.
- Sound knowledge of differential diagnoses and management plans for neuroanesthesia emergencies such as seizure, aneurysm rupture, delayed emergence, venous air embolism, and autonomic hyperreflexia.
- Complete knowledge of current Advanced Cardiac Life Support guidelines.

2. Communicator
- Present comprehensive pre-operative assessments and anesthetic considerations in an organized fashion.
- Produce complete, concise, and legible anesthesia charting and consultation reports.
- Communicate anesthesia concerns and issues to patients and families compassionately, clearly, and in understandable terms.
- Communicate effectively with surgeons and nurses in the neurosurgical OR and radiology suite.
- Provide concise, complete, and organized handover of complex neurosurgical patients to nursing and medical staff in PACU and ICU.

3. Collaborator
- Demonstrate the ability to work effectively with all members of the neurosurgical OR team.
- Exhibit professional interpersonal behaviour with all staff, patients, and their families.
- Communicate perioperative issues and concerns to colleagues in a clear and concise fashion.

4. Manager
- Demonstrate understanding of routine and emergent neurosurgical OR and ICU resource management.
- Display ability to identify urgent and emergent neurosurgical cases, appropriately prioritize these cases as they arise, and manage resources appropriately to facilitate their completion.
- Exhibit consideration of quality assurance issues in elective and emergent neurosurgical anesthesia practice.
5. Health Advocate

- Identify health issues specific to patients with neurological pathology to allow optimal anesthesia care.

- Know and understand the standards for anesthesia management with respect to the current CAS guidelines.

6. Scholar

- Appreciate the requirement for continuing personal education.

- Understand the components of critical appraisal as they pertain to current neurosurgical assessment and anesthesia practice.

- Participate in the education of junior learners with regard to knowledge of the various neurological pathologies and their interaction with anesthetic techniques.

7. Professional

- Ensure that all patients have undergone appropriate preoperative assessment by seeing inpatients on the resident’s assigned list on the day prior to surgery and discussing with staff, and reviewing in advance the charts of patients who have undergone outpatient anesthesia consultation.

- Arrive in time daily to meet with patients and appropriately prepare the operating room for the day's cases.

- Recognize situations requiring assistance from faculty, and obtain appropriate assistance as required.

- Honour on-call responsibilities and respond to calls in a timely fashion.

- Apply ethical principles to patient care.
McMaster University Department of Anesthesia
Objectives for Residents in the Chronic Pain Management Rotation

Listed below are the chronic pain management rotation specific objectives for anesthesia residents.

Anesthesia Objectives for Competency in CanMEDS Roles

Medical Expert
- The resident will demonstrate the ability to integrate medical knowledge, clinical skills and professional attitudes in the provision of care to the chronic pain patient.

Communicator
- The resident will demonstrate the ability to establish a therapeutic relationship with the patient and family. This includes the ability to obtain and share pertinent information with the patient and the health care team.

Collaborator
- The resident will demonstrate the ability to work effectively in a team environment, by contributing to interdisciplinary patient care activities and by consulting effectively with other physicians.

Manager
- The resident will utilize health care resources effectively to balance patient care, learning needs and outside activities.
- The resident will be able to utilize information technology to optimize patient care and life-long learning.

Health Advocate
- The resident will identify the important determinants of health affecting patients.
- The resident will recognize and respond to those patient care issues where patient advocacy is appropriate.

Scholar
- The resident will develop, implement and monitor a personal continuing education strategy that will include the ability to critically appraise the literature.

Professional
- The resident will practice medicine ethically with integrity, honesty and compassion, always demonstrating respect for others.
- The resident's duties will be discharged reliably.

Specific Goals and Objectives for the Chronic Pain Management Rotation

Medical Expert:
The resident will display the ability to manage the following chronic pain conditions and perform the skills listed:

- Consultation of new pain patients and follow up visits to evaluate effectiveness of interventions and other management strategies.
- Evaluation of complex pain patients, with functional, psychological and behavioural issues.
- Management of behavioural issues relating to pain.
- Understands the pharmacology of opioids, NSAIDS, antineuropathic pain medications, and other pain management medication, including opioid tolerance, opioid induced hyperalgesia and issues surrounding their abuse.
- Demonstrate ability to make a pain diagnosis (location and mechanism), and suggest current optimal treatment.
- Be aware of and apply current best practice guidelines for treatment where they exist- Canadian Opioid Guideline, Canadian Pain Society Consensus Statement on management of neuropathic pain, Canadian Pain society fibromyalgia guideline, etc.

The resident will have knowledge of the following procedures:

- Epidural blocks: lumbar, thoracic, cervical and caudal.; both interlaminar and transforaminal
- Trigger point infiltration.
- Peripheral nerve blocks: e.g. Occipital, suprascapular nerves, intercostal nerve blocks, ilioinguinal nerve blocks
- Sympathetic blocks i.e. Stellate ganglion block, lumbar sympathetic blocks, celiac plexus blocks
- Diagnostic medial branch nerve blocks for facet joint pain.
- Radio-frequency medial branch nerve/facet denervation.
- Intra-articular injections: sacro-iliac joint, facet joint,

**Communicator:**

The resident will display effective doctor-patient communication skills.

- Listens to and effectively communicates with patients and their families in emotionally charged situations.
- Encourages full participation of the patient/family in decision-making and management.
- Can obtain an informed consent.
- Able to communicate clearly with patient to provide diagnostic information and treatment plan options.
- Provides clear instructions in an empathetic manner and checks whether the patient/family understands.
- Communicates a succinct, system-orientated presentation of a chronic pain patient, identifying relevant pathophysiologic problems, ongoing management and plans for further investigation.
- Clear, concise and legible medical records both written and dictated.
Collaborator:

The resident will display good collaborative team skills.

- Able to request and provide consultations with clear understanding of the question being asked.
- Understands the importance of multidisciplinary team approach to chronic pain management.
- Interacts effectively with the nursing, physiotherapy, and consulting services.
- Has a straightforward and respectful approach with all health care professionals and peers.
- Takes on appropriate share of team assignments and assists others as required.
- Assumes responsibility in coordinating patient care amongst multiple health care providers.
- Assumes responsibility in dealing with issues associated with work related injury i.e. back-to-work planning, dealing with Workman’s Compensation Board etc.

Manager:

The resident is an effective manager.

- Displays organizational skills with effective time management.
- Effectively uses information technology to optimize patient care and continued self-learning.
- Manages office-based practice and understands system of booking, record keeping and laboratory result follow-up mechanisms.

Health Advocate:

The resident is a health advocate.

- Recognizes quality of life issues amongst chronic pain patients and promotes discussion with the health care team and family within the context of the care plan.
- Demonstrates effective utilization of social work and community resources to facilitate the care of the chronic pain patient.
- Identifies situations where patient advocacy is required and acts as a patient advocate.
- Understands the demographics of injury and risk factors for the subsequent development of chronic pain.
- Recognition of substance abuse issues and appropriate initiation of care.

Scholar:

The resident will develop a plan for self-improvement.

- Attends and contributes to rounds and learning events.
- Accepts and acts on constructive feedback.
• Searches, retrieves and critically appraises relevant literature and applies this information and evidence based medicine appropriately to chronic pain management.
• Understands the challenges and limitations of obtaining high quality evidence for chronic pain management

Professional:

The resident will carry out his/her duties in a professional manner.

• Recognizes limitations and seeks advice and consultation when needed.
• Exercises initiative within limits of knowledge and training.
• Discharges duties and assignments dependably and in a timely and ethical manner.
• Reports facts accurately, including own errors.
• Maintains appropriate boundaries in work and learning situations.
• Respects diversity of race, age, gender, disability, intelligence and socio-economic status.
• Demonstrates compassion and sensitivity in dealing with patients with chronic pain.

Reviewed, October 2009
Reviewed, May, 2011
Reviewed, March 2015
Rotation Specific Objectives of Training

Anesthesia PGY4 Pediatric Anesthesia Rotation

At the completion of the Pediatric Anesthesia Rotation PGY-4 level, residents are expected to achieve nearly practice-ready competence in each CANMEDS domain for pediatric anesthesia. This is the last pediatric-specific rotation of residency at McMaster; only small further improvements will be possible in the PGY5 year. It is expected that residents will require minimal guidance from faculty by the end of their training at the PGY4 level.

CANMEDS Medical Expert Role – Displays the following, with minimal assistance from faculty:

Knowledge Base (adapted from ACUDA 2010 National Curriculum p 79-81)

1. As pertinent for the provision of anesthesia, understanding of:
   (a) the anatomy and physiology of the pediatric patient, with respect to: airway, respiratory, cardiovascular, neurological, gastrointestinal, genitourinary systems, thermoregulation
   (b) the changes that occur with growth through phases of neonate/infant/child/adolescent.
2. Pharmacology of anesthetic agents and agents used in resuscitation, with emphasis on the changes in pharmacokinetics and pharmacodynamics with age.
4. Indications for and safe use of premedication in the child.
5. Knowledge of protocols for the evaluation and resuscitation of the newborn and pediatric patient: routine and emergent surgical cases, and PALS, Pediatric Trauma Life Support, and Neonatal Resuscitation/Life Support guidelines.
6. Basic knowledge of options for acute pain management in the pediatric patient, including various systemic- and local-anesthetic-based techniques.
7. Understanding of pediatric disease processes/conditions that are common or of special pediatric significance, along with their anesthetic implications. This would include:
   - Ex-prematurity
   - Congenital heart disease
   - Respiratory diseases that are common (e.g. URTI, asthma) or have special significance in the pediatric population (e.g. Cystic fibrosis)
   - Common congenital syndromes (e.g. Downs)
   - Diabetes, mucopolysaccharidoses
   - Pediatric infectious diseases (e.g. epiglottitis)
   - Muscular and myotonic dystrophies, cerebral palsy, spina bifida
   - Pyloric stenosis
   - Sickle cell disease
   - Pediatric oncologic presentations – e.g. leukemia, mediastinal mass
8. Perioperative psychological implications at different stages of development, with respect to the child and family. Impact of developmental delay and impact of need for multiple surgeries.
9. Issues relating to informed consent for pediatric patients.
10. Management of fluid and electrolyte issues during and after surgery.
11. Indications for and administration of blood products.
12. Understand the cause and management of common complications associated with regional and general anesthesia, to include:
   - Laryngospasm
   - Emergence delirium
   - Post-extubation stridor
   - Hypotension
   - Intravascular injection of local anesthesia

Capable of Care for Children Undergoing: (adapted from ACUDA 2010 National Curriculum p81-82)

a) Neonatal/infant surgery: pyloromyotomy, inguinal hernia repair, laparotomy
b) General surgery: trauma surgery, laparoscopic surgery, antireflux surgery, cholecystectomy, splenectomy
c) Otolaryngology: tonsillectomy and adenoidectomy, including bleeding tonsil, myringotomy, mastoidectomy, thyroidectomy, tympanoplasty, airway or esophageal foreign body, epiglottitis.
d) Orthopedics: fracture reduction, hip reconstruction, soft tissue surgery, spine surgery.
e) Plastic surgery: cleft lip/palate repair, burn debridement/skin grafting, correction of congenital limb deformities
f) Neurosurgery: raised ICP management, VP shunt insertion/revision, tumour resection, drainage of extra/subdural hematoma, myelomeningocele repair
g) Urology: circumcision, hypospadias, ureteric reimplantation, cystoscopy, nephrectomy, peritoneal dialysis catheter insertion
h) Ophthalmology: strabismus repair, cataract surgery, glaucoma, eyelid surgery, laser for retinopathy of prematurity
i) Cardiac surgery: pacemaker insertion (must be extrapolated from adult cases)
j) Dental surgery: dental extractions/restorations, orthognathic surgery
k) remote locations: MRI, CT, interventional radiology, bone marrow aspiration/biopsy, LP, GI endoscopies, joint injections

Technical Skills – Displays the following, with minimal assistance from faculty:

1. Facility with pediatric airway management (with understanding differences from adult airway management) including bag-mask ventilation, oral and nasal intubation, laryngeal mask airway and other alternatives as they apply to the various pediatric age groups.
2. Skill at pediatric IV access.
3. Ability in conducting IV and inhalational induction of pediatric patients and safe emergence from anesthesia – generally able to manage ASA 1-3 patients independently for routine surgeries.
4. Skill at obtaining arterial line and CVP access (though may not attain mastery in toddlers and infants.)
5. Ability to perform epidural and caudal anesthesia independently. Has a basic understanding of the limited role of spinal anesthesia in the pediatric population.
6. Set up and safe use of pediatric IV fluid administration systems, monitors, temperature regulation devices, patient positioning.

**CANMEDS Professional Role – Displays the following, with minimal assistance from faculty:**

1. Arrives punctually each morning to allow for patient assessment and thorough operating room preparation.
2. Obtains appropriate assistance from faculty as required and ensures that faculty are aware of clinical activities.
3. Sees all in-patient pre-operative assessment patients the day before surgery.
4. Honours on-call responsibilities and respond to calls in a timely fashion.
5. Considers the ethical management of patient issues and maintains patient privacy and confidentiality.
6. Knows and follows best practices with respect to patient safety, personal safety, and safety of other hospital workers.

**CAN MEDS Communicator Role – Displays the following, with minimal assistance from faculty:**

1. Communicates anesthesia concerns and issues to patients and families clearly and in understandable terms, avoids medical jargon.
2. Exhibits compassion and understanding of families and patients during their perioperative experience.
3. Presents anesthetic concerns and plan in an organized fashion.
4. Produces complete, legible and concise anesthesia charting, consent, and consultation reports, in keeping with national, provincial, and hospital expectations.
5. Communicates effectively with other members of the perioperative team.
6. Conveys appropriate handover details to colleagues, the recovery room or intensive care teams.

**CAN MEDS Collaborator Role – Displays the following, with minimal assistance from faculty:**

1. Demonstrates the ability to work together with all members of the perioperative team.
2. Exhibits professional interpersonal behavior with patients and staff.
3. Communicates consultation issues to colleagues in a clear and concise fashion.

**CAN MEDS Manager Role – Displays the following with minimal assistance from faculty:**

1. Presents anesthetic concerns and pre-operative assessment in an organized fashion.
2. Produces complete, legible and concise anesthesia charting, consent, and consultation reports, in keeping with national, provincial, and hospital expectations.
3. Understands routine and emergent pediatric anesthesia and trauma resource management.
4. Displays skill in identifying, prioritizing and managing urgent and emergent situations.
5. Considers quality assurance issues in day to day and emergent pediatric anesthesia practice.

**CAN MEDS Health Advocate Role – Displays the following with minimal assistance from faculty:**

1. Identifies health and psychosocial issues specific to pediatric patients undergoing surgery and responds appropriately to their needs.
2. Knows, understands, and advocates for the standards for anesthesia management with respect to the CAS guidelines.

**CAN MEDS Scholar Role – Displays the following with minimal assistance from faculty:**

1. Appreciates the requirement for continuing personal education and exhibits evidence of its practice.
2. Understand the components of critical appraisal and evidence-based practice as they pertain to pediatric assessment and anesthesia practice.
3. Take part in the education of junior learners with regard to pediatric anesthesia knowledge and skills.

May 2011
Revised March, 2015
Rotation Specific Objectives of Training

Anesthesia PGY-2 Obstetrical Anesthesia Rotation

Preamble

The PGY2 rotation in obstetrical anesthesia is intended to provide the resident with basic skills and knowledge of obstetrical anesthesia. This knowledge base and skill set will develop further during periods of on call coverage and later during the High Risk Obstetrics rotation in the PGY4 year.

Anesthesia Objectives for Competency in CanMEDS Roles

CANMEDS Medical Expert Role

Knowledge Base

- Knowledge of the physiologic changes of pregnancy, particularly as this pertains to the delivery of regional analgesia, regional anesthesia and general anesthesia to the parturient.
- Knowledge of the normal stages of labour.
- Indications, contraindications and complications of regional analgesia and anesthesia, including but not limited to post-dural puncture headache, total spinal, hypotension, epidural abscess, and epidural hematoma.
- Anatomy and physiology relevant to the provision of regional analgesia/anesthesia.
- Knowledge of the standard protocol for delivery of general anesthesia for Cesarean section, contraindications for general anesthesia and complications including but not limited to hypotension, hypoxemia, failed intubation, and aspiration.
- Understand the normal fetal heart tracing and its use as a monitor of fetal well being.
- Knowledge of the interaction of common medical illnesses and their effects on pregnancy, delivery and the provision of anesthesia and analgesia. This would include but are not limited to diabetes, neurological disease and morbid obesity.
- Understand the issues related to the provision of analgesia and anesthesia for patients with twins and abnormal presentations.
- Understand the causes of antepartum and post-partum hemorrhage and the anesthetic management of the bleeding parturient.
- Awareness of the physiologic changes of pregnancy that affect airway management. Have an understanding of the approach to the difficult airway and management of the failed airway in pregnancy.
- Understand the preoperative assessment of the pregnant patient for elective and emergent Cesarean section and for epidural analgesia.
- Understand the physiology of fetal blood flow and the physiologic changes which occur in the baby immediately after delivery.
- Understand the physiologic effects of regional and general anesthesia and their impact on the fetus.
- Knowledge of the American Heart Association guidelines for Cardiopulmonary Resuscitation in Pregnancy.
- Knowledge of the American Heart Association guidelines for Neonatal Resuscitation.
**Technical Skills**

- Demonstrate the ability to provide spinal anesthesia for operative delivery.
- Demonstrate the ability to provide epidural or CSE analgesia for labour and epidural anesthesia for Cesarean section.
- Demonstrate the ability to assess the pregnant patient preoperatively, including a comprehensive assessment of the airway.

**CANMEDS Professional Role**

- Punctual arrival each morning to allow for patient assessment and thorough operating room preparation.
- Preoperative assessment of all patients, including an in-patient assessment the day before surgery where applicable.
- Recognition of circumstances when faculty assistance is required and the ability to seek that assistance.
- Attend calls to labour & delivery in a timely fashion.
- Attend to 4F clinic requests for outpatient pre-operative consultations in a timely fashion.
- Honour on-call responsibilities and respond to calls in a timely fashion.
- Application of ethical principles to patient care.

**CAN MEDS Communicator Role**

- Presentation of obstetrical and anesthetic concerns and pre-operative assessment in an organized fashion.
- Produce complete, legible and concise anesthesia charting and consultation reports.
- Communication of anesthetic concerns and labour analgesia concerns and issues to patients and families clearly and in understandable terms.
- Effective communication with the attending obstetrician, obstetrical residents, L&D RN’s, RT’s, neonatal team, and critical care or post-partum RN’s.
- Effective communication during handover to faculty and resident colleagues.

**CAN MEDS Collaborator Role**

- Demonstrate the ability to work effectively with all members of the obstetrical team.
- Exhibit professional interpersonal behaviour with patients, families, and staff.
- Communicate of issues to colleagues in a timely, clear and concise fashion.

**CAN MEDS Manager Role**

- Understand routine and emergent obstetric anesthesia resource management.
- Further develop the skills of identifying, prioritizing and managing urgent and emergent situations.
• Consider quality assurance issues in day to day and emergent obstetrical anesthesia practice

**CAN MEDS Health Advocate Role**

• Identify potential health issues specific to the obstetrical patient that will allow for optimal anesthesia care.
• Advocacy for the standards of anesthesia management through the application of the CAS guidelines.

**CAN MEDS Scholar Role**

• Appreciate the requirement for continuing personal education.
• Understand the components of critical appraisal as they pertain to obstetrical anesthesia practice.
• Participation in the education of junior learners with regard to obstetrical anesthesia knowledge and skills.

October, 2008
Updated March, 2010
Updated March, 2015
Rotation Specific Objectives of Training

Anesthesia PGY-4 Obstetrical Anesthesia Rotation

At the completion of the PGY-4 Obstetrical Anesthesia Rotation each resident is expected to demonstrate the following in each domain.

CANMEDS Medical Expert Role

Clinical Ability

- Comprehensive assessment and management plan for the parturient with full consideration of the physiological changes of pregnancy, maternal and fetal wellbeing, co-morbidities, individualized analgesic requirements, and potential surgical considerations.

- Appropriate patient selection, safe and independent execution, monitoring, and trouble shooting of neuraxial anesthesia in the parturient.

- Identification, differential diagnosis, and rapid rational management of obstetrical emergencies which include but are not limited to: eclampsia, antepartum and post-partum hemorrhage, local anesthetic toxicity, hypotension, high spinal, complete spinal, unanticipated difficult airway, and umbilical cord prolapse.

- Thorough pre-operative assessment, rational risk stratification, appropriate investigations & consultations, optimization, and generation of an appropriate management plan for the parturient undergoing obstetrical or non-obstetrical surgery.

- Management (without immediate supervision) of the stable parturient undergoing routine operative delivery, cerclage, or assisted-delivery using regional or general anesthesia.

Knowledge Base

- Complete knowledge of the physiological changes of pregnancy and the implications for regional and general anesthesia.

- Complete understanding of the concept of uteroplacental perfusion and the pathologies, interventions, and medications that impair or improve perfusion.

- Complete knowledge of the effects of regional and general anesthesia medications on the parturient and the fetus at various periods of gestation.

- Complete knowledge of the indications, contraindications, potential complications and appropriate management of regional anesthesia in the parturient. Sound knowledge of other analgesic options in labour including but not limited to: patient controlled analgesia with associated fetal and maternal risks, pudendal nerve block, TENS and other non-invasive analgesic strategies.
• Thorough knowledge of the presentation, differential diagnosis, and evidence based management of a post-dural puncture headache in the parturient. This includes a sound knowledge of the more sinister processes that are included in the differential diagnosis and a rational approach to their identification.

• Sound knowledge of the more common pathological states associated with pregnancy. This includes a complete understanding of the pathophysiology, anesthetic considerations, and an evidence-based management plan. Common pathologies include but are not limited to: gestational diabetes mellitus, pregnancy induced hypertension and its variants, antepartum hemorrhage and coagulopathies of varying etiology.

• Sound knowledge of the concerns for the parturient and fetus undergoing non-obstetrical surgery at various stages of gestation. This includes considerations for laparoscopic surgery.

• Knowledge of the risk factors, fetal and maternal implications, and the management of antepartum and postpartum hemorrhage. This includes a complete knowledge of the indications, contraindications, side effect profiles, and recommended dosages of common pharmacological agents used in management of post-partum hemorrhage.

• Show a basic understanding of cardiotocography with a knowledge of the various deceleration patterns and the appropriate responses to each pattern.

• Complete knowledge of the American Heart Association guidelines for Cardiopulmonary Resuscitation in Pregnancy.

• Sound knowledge of the American Heart Association guidelines for Neonatal Resuscitation.

**Technical Skills**

• Demonstrate an ability to safely and effectively perform epidural and spinal anesthesia in the parturient.

• Demonstrate an ability to assess the parturient’s airway with special consideration for a potential unanticipated difficult intubation in the pregnant patient.

• Be able to manage routine caesarean section utilizing regional or general anesthesia with minimal supervision.

**CANMEDS Professional Role**

• Punctual arrival each morning to allow for patient assessment and thorough operating room preparation.

• Preoperative assessment of all patients, including an in-patient assessment the day before surgery where applicable.

• Recognition of circumstances when faculty assistance is required and the ability to seek that
• Attend calls to labour & delivery in a timely fashion.
• Attend to 4Fclinic requests for outpatient pre-operative consultations in a timely fashion.
• Honour on-call responsibilities and respond to calls in a timely fashion.
• Application of ethical principles to patient care.

**CAN MEDS Communicator Role**

• Presentation of obstetrical and anesthetic concerns and pre-operative assessment in an organized fashion.
• Produce complete, legible and concise anesthesia charting and consultation reports.
• Communication of anesthetic concerns and labour analgesia concerns and issues to patients and families clearly and in understandable terms.
• Effective communication with the attending obstetrician, obstetrical residents, L&D RN’s, RT’s, neonatal team, and critical care or post-partum RN’s.
• Effective communication during handover to faculty and resident colleagues.

**CAN MEDS Collaborator Role**

• Demonstrate the ability to work effectively with all members of the obstetrical team.
• Exhibit professional interpersonal behaviour with patients, families, and staff.
• Communicate of issues to colleagues in a timely, clear and concise fashion.

**CAN MEDS Manager Role**

• Understand routine and emergent obstetric anesthesia resource management.
• Further develop the skills of identifying, prioritizing and managing urgent and emergent situations.
• Consider quality assurance issues in day to day and emergent obstetrical anesthesia practice

**CAN MEDS Health Advocate Role**

• Identify potential health issues specific to the obstetrical patient that will allow for optimal anesthesia care.
• Advocacy for the standards of anesthesia management through the application of the CAS guidelines.

**CAN MEDS Scholar Role**

• Appreciate the requirement for continuing personal education.
• Understand the components of critical appraisal as they pertain to obstetrical anesthesia practice.
• Participation in the education of junior learners with regard to obstetrical anesthesia knowledge and skills.

March 2015
Rotation Specific Objectives of Training

Anesthesia PGY-4 Thoracic/Head and Neck Anesthesia Rotation

At the completion of Thoracic/Head and Neck Anesthesia Rotation PGY-4 level, each resident is expected to achieve the following in each domain.

**CANMEDS Medical Expert Role**

**Clinical Ability**

- Thorough pre-operative assessment of the patient with lung pathology (including lung neoplasia, chronic obstructive lung disease, bullous lung disease, restrictive lung disease, pulmonary hypertension, pneumothorax and anterior mediastinal mass) and head and neck pathology (including obstructing airway tumours, obstructive sleep apnea, salivary gland pathology, thyroid and parathyroid pathology) coupled with an understanding of patient-specific medical and surgical considerations to produce a rational anesthetic plan.
- Be able to produce a rational risk stratification with appropriate use of pre-operative assessment tools and investigations for the patient undergoing thoracic surgery or major head and neck surgery.
- Demonstrate alternative anesthesia plans for the various respiratory pathologies encountered in elective and emergent thoracic and non-thoracic surgeries.
- Manage patients for thoracic surgery (including lung biopsy, lobectomy, pneumonectomy, bullectomy, pleurodesis, spontaneous pneumothorax, anterior mediastinal mass, broncho-pleural fistula and obstructing airway tumours) and head and neck surgery (including known difficult airway, obstructing upper airway tumours, parotidectomy and neck dissection without paralysis, uvulopalatopharyngoplasty and prolonged anesthesia for major head and neck reconstructions) for elective cases.
- Manage one-lung anesthesia with various techniques including trouble shooting inadequate lung isolation, equipment malposition and hypoxia during OLV.
- Identify and provide a complete differential diagnosis for intra- and post-operative emergencies specific to thoracic or head and neck surgery including raised inflation pressure, dysrhythmias, hypotension, hypertension, hypoxemia and stridor as well as an appropriate treatment plan for the aforementioned emergencies.

**Knowledge Base**

- Have a sound knowledge of the pharmacology of drugs for anesthesia and resuscitation as it applies to the patient with various forms of lung or head and neck pathology.
- Have a complete understanding of the interactions between major lung or head and neck pathologies, anesthetic techniques and surgical procedures specific to those cases.
- Have a thorough knowledge of Advanced Cardiac Life Support guidelines.
- Understand the role for both regional and general anesthesia in Thoracic and Head and Neck surgeries.
- Know the options available for post-operative pain management, including risk and benefits for thoracic epidural, continuous thoracic paravertebral nerve block catheters and PCA in cases mentioned above.
- Have a sound knowledge of the various indications and techniques for lung isolation.
- Know how to check tube position during one-lung ventilation, both by auscultation and by bronchoscopy.
- Understand the principles of management of airway hemorrhage, massive intrathoracic hemorrhage, bronchopleural fistula and empyema.

**Technical Skills**

- Show skill at obtaining arterial line and central venous access independently.
- Generally be able to manage stable patients with lung pathology for thoracotomy independently following an appropriate pre-operative assessment.
- Display facility at the various forms of lung isolation.
- Display skill at insertion of thoracic epidural catheters +/- thoracic paravertebral nerve block.
- Display proficiency with different techniques for securing an airway in cases of difficult intubation including fiberoptic intubation.
- Display skilled use of a bronchoscope.

**CANMEDS Professional Role**

- Arrive on time daily to prepare OR for day's cases.
- Obtain appropriate assistance from faculty as required.
- See all in-patient pre-operative assessment patients the day before surgery.
- Honour on-call responsibilities and respond to calls in a timely fashion.
- Consider the ethical management of patient issues.

**CANMEDS Communicator Role**

- Present anesthetic concerns and pre-operative assessment in an organized fashion.
- Produce complete, legible and concise anesthesia charting and consultation reports.
- Communicate anesthesia concerns and issues to patients and families clearly and in understandable terms.
- Communicate clearly with surgeons and nurses in the OR and Intensive Care Unit.

**CANMEDS Collaborator Role**

- Demonstrate the ability to work together with all members of the OR and ICU team.
- Exhibit professional interpersonal behaviour with patients and staff.
- Communicate consultation issues to colleagues in a clear and concise fashion.

**CANMEDS Manager Role**

- Understand routine and emergent OR and ICU resource management.
- Display knowledge of the identification, prioritizing and managing of urgent and emergent thoracic and airway emergencies.
- Consider quality assurance issues in day to day and emergent anesthesia practice

Updated March 2015
CANMEDS Health Advocate Role

- Identify health issues which will improve the anesthesia care of patients with pulmonary and head & neck pathology.
- Know and understand the standards for anesthesia management with respect to the CAS guidelines.

CANMEDS Scholar Role

- Appreciate the requirement to continuing personal education.
- Understand the components of critical appraisal as they pertain to current thoracic and head and neck pre-operative assessment and anesthesia practice.
- Take part in the education of junior learners with regard to knowledge of the various respiratory pathologies and pre-operative risk assessment skills.

Revised March 2015
Rotation Specific Objectives of Training

Anesthesia PGY-4 Regional Anesthesia Rotation

Preamble

A one to two month in PGY4 or PGY5 year at St. Joseph’s Healthcare.

Designated Resident will:

1) Be booked preferentially on lists involving regional techniques. This would include:
   a) Total joint arthroplasty.
   b) Major shoulder repair.
   c) Major abdominal and thoracic cases, requiring thoracic epidural insertion.
   d) Vascular access surgery
   e) Plastic surgery limb cases

2) The resident on the Thoracics Rotation will have priority over the Regional Anesthesia resident, for thoracic cases.

3) While on the rotation, the Regional Anesthesia resident may move between rooms, to improve their experience in regional techniques by optimizing the number of regional cases managed. The resident must complete each case started. This option must not interfere with the experience of any resident already booked to do the case, and prior discussion with the attending anesthesiologist should take place.

4) The Regional Anesthesia resident should attempt to discuss their schedule for the following day with the staff anesthesiologists who will be involved. It is recognized that, on occasion, staff anesthesiologists will want to do their own blocks.

At the completion of the Regional Anesthesia Rotation PGY-4 level, each resident is expected to achieve the following skills and knowledge base in each domain.

CANMEDS Medical Expert Role

Clinical Ability

- Demonstrate an understanding of the spectrum of regional anesthetic techniques and the ability to perform these.
- Demonstrate knowledge of basic surface anatomy & palpable landmarks and the dermatomal & peripheral nerve distribution as applicable to each specific block.
- Describe site-specific equipment; indications; contraindications & drug selection for each block.
- Demonstrate good sterile technique when performing regional anesthesia
- Perform various regional anesthetic blocks safely, demonstrating good in plane visualization of the block needle when doing U/S guided blocks
- Demonstrate safe technique with the utilization of nerve stimulation, appreciating acceptable
endpoints and ways to minimize risk of inadvertent intraneural injection of local anesthesia

- Choose appropriate ultrasound probe and settings to properly identify the desired nerves
- Identify the ultrasonographic anatomy relevant to nerve localization
- Use ultrasound to safely and effectively perform regional blocks
- Demonstrate proficiency with In-plane vs. Out-of-plane techniques
- Provide appropriate neurolept/sedation during block installation and intra-operatively

Knowledge Base

- Have a sound knowledge of the pharmacology of local anesthetics including mechanism of action, factors that both facilitate and hinder their effect.
- Have a complete knowledge of local anesthetic toxicity and its management including:
  - Know the different forms of LA toxicity – cardiac toxicity, direct neurotoxicity; methaemoglobinemia; allergy
  - Identify and provide appropriate management of local anesthetic toxicity
  - Describe the mechanisms of LA neurologic and cardiac toxicity
  - Know factors influencing the development CNS & CVS toxicity (eg. speed of injection; site of injection; maximal doses; LA potency; hypercarbia; use of vasoconstrictors; cardiac/liver disease)
- Understand the physiology of nerve conduction
  - Describe the structural classification of nerve types and the relevance to local anesthetic action
  - Explain the generation of nerve action potential, refractory period and recovery
  - Describe the structure of nerves
- Knowledge of the limitations of regional anesthesia including contraindications and complications
  - Contraindications to Regional Anesthesia
    - Identify and, where appropriate, manage relative and absolute contraindications to regional anesthetics
  - Anticoagulation and Regional Anesthesia
    - Have an approach to regional anesthesia in the patient with abnormal coagulation parameters
    - Plan regional anesthesia with reference to the current published guidelines from anesthetic associations and regulatory bodies pertaining to the conduct of regional anesthesia in the context of anticoagulation
    - Assess the appropriate timing of regional anesthetic procedures relative to anticoagulation therapy
    - Appropriately modify the anticoagulation, anesthetic plan or both in order to minimize overall risk and improve outcome
- Describe the complications of regional anesthesia and the risk factor, presentation, diagnosis and treatment of:
  - Failed block
  - Intravascular injection of local anesthetic
  - Overdose
  - Post-operative neuropathy
- Have a thorough knowledge of clinical anatomy as it relates to specific blocks and surgical procedures.
- Describe the relative advantages, disadvantages and limitations of ultrasound as a method of locating nerves
- Describe the basic physics principles of ultrasound and their clinical relevance in identifying different anatomic structures

**Technical Skills**

- **Neuraxial Blocks**
  - Spinal – single shot midline and paramedian
  - Epidural – midline and paramedian approach
    - Thoracic
    - Lumbar
- **Upper Extremity Blocks**
  - Interscalene
  - Supraclavicular
  - Infraclavicular
  - Axillary
  - Intercostal Brachial Nerve Block
  - At the wrist and hand
    - Ulnar nerve
    - Median nerve
    - Radial Nerve
- **Lower Extremity Blocks**
  - Femoral nerve block/3 – in – 1 block
  - Fascia Iliaca Compartment Block
  - Sciatic block
    - Parabiceps femoris approach, Labatt approach
    - Popliteal fossa block
  - Saphenous nerve block mid-thigh
- **Ankle block**
- **IVRA (Bier block)**
- **Trunk Blocks**
  - Parvertebral block
  - TAP Block

**CAN MEDS Communicator Role**

- Obtain informed consent from patients for regional anesthesia by:
  - Discussing the relative advantage, disadvantage and physiologic implications of regional vs. general anesthesia, including specific risks and outcome.
- Create an appropriate anesthetic plan that meets the patient’s level of comfort by discussing regional PLUS GA vs. GA vs. regional.
- Demonstrate an ability to put patients at ease during the regional anesthesia placement.
- Present anesthetic concerns and pre-operative assessment in an organized fashion.
- Produce complete, legible and concise anesthesia charting and consultation reports including
thorough documentation of the block and appropriate end points.

- Communicate anesthesia concerns and issues to patients and families clearly and in understandable terms.

**CANMEDS Collaborator Role**

- Demonstrate the ability to work together with all members of the OR team including surgeons, nurses and Anesthesia Assistants.
- Communicate clearly with nursing staff to ensure patients have undergone surgical site safety checks/confirmation prior to initiating sedation for a block.
- Provide clear, concise communication with Anesthesia Assistants during the performance of a block to obtain optimal U/S image, nerve stimulation, hydro-dissection and injection of local anesthetic.
- Exhibit professional interpersonal behaviour with patients and staff.
- Communicate consultation issues to colleagues in a clear and concise fashion.

**CANMEDS Manager Role**

- Demonstrate the ability to organize and optimize the flow of patients from DSU to Block Room to OR to ensure the room stays on time and is not delayed due to regional anesthesia.
- Display knowledge of the identification, and prioritization of various regional procedures to allow for optimal utilization of the block room and its limited resources. Giving appropriate priority to cases requiring adequate soak time.
- Consider quality assurance issues in day to day and emergent anesthesia practice.
- Gain an appreciation how utilizing regional anesthesia when on call can provide an additional level of safety during situations of limited human resources.

**CANMEDS Health Advocate Role**

- Identify health issues which will improve the anesthesia care of patients by selecting and presenting the appropriate regional anesthetic technique to the patient.
- Know and understand the standards for anesthesia management with respect to the CAS guidelines.

**CANMEDS Scholar Role**

- Appreciate the requirement to continuing personal education.
- Understand the components of critical appraisal as they pertain to current regional anesthesia practice.
- Take part in the education of junior learners with regard to knowledge of the anatomy, pain physiology and local anesthesia pharmacology.

**CANMEDS Professional Role**

- Arrive on time daily to prepare OR for day's cases.
- Demonstrate the ability to organize/prioritize blocks to maximize exposure to various regional procedures throughout the day in multiple operating rooms.
- Obtain appropriate assistance from faculty as required.
- See all in-patient pre-operative assessment patients the day before surgery.
- Honour on-call responsibilities and respond to calls in a timely fashion.
- Consider the ethical management of patient issues.

April, 2014
Reviewed March 2015 – P. Moisiuk
Rotation Specific Objectives of Training

Anesthesia Community Rotation

At the completion of the community Anesthesia rotation at the PGY4-5 level, each resident is expected to achieve the following in each domain.

CANMEDS Medical Expert Role

Clinical Ability

- Thorough pre-operative assessment which is coupled with an understanding of patient, medical and surgical considerations to produce a rational anesthetic plan.
- Consider multiple alternative anesthesia plans as required in elective and emergent situations.
- Manage ASA 1-4 patients for routine elective surgery.
- Identify and provide a complete differential diagnosis and timely, rational treatment plan for intra-operative emergencies, including hypotension, hypertension, bradycardia, tachycardia, hypoxemia, hypocapnia, raised inflation pressure, laryngospasm.
- Identify and manage difficult and emergency airway problems, demonstrating a comprehensive plan with multiple options.
- Adapt practice to community hospital environment and adjust accordingly.

Knowledge Base

- Sound knowledge of anesthetic, resuscitation and hemodynamic medication pharmacology.
- Complete level of understanding of interactions between major medical problems, anesthetic techniques and surgical procedures.
- Complete knowledge of ACLS and ATLS guidelines.
- Understand indications for regional vs. general anesthesia with the ability to provide plausible backup plan.
- Have a comprehensive knowledge of complications and critical incidents which may occur with regional and general anesthesia including laryngospasm, inadvertent medication administration, awareness, aspiration, bronchospasm, delayed emergence, anaphylaxis, massive transfusion, seizures, bupivacaine toxicity, nerve injury etc.
- Develop awareness of available equipment and specialty backup in the community for dealing with perioperative emergencies.
- Complete knowledge of plexus blockade.
- Complete knowledge of modes and options for acute pain management.

Technical Skills

- Demonstrate facility with all forms of routine and difficult airway management including direct laryngoscopy, laryngeal mask airway, video laryngoscopy, and fiberoptic bronchoscope.
- Obtain arterial line and CVP access independently.
- Demonstrate the ability to perform spinal and epidural anesthesia independently.
- Be able to manage patients of all ASA categories for routine and emergency surgeries independently, following an appropriate pre-operative assessment.
- Be able to adapt practice to use the equipment available in the community.
CANMEDS Professional Role

- Arrive on time daily to prepare OR for day's cases and have first patient assessed.
- Attend all rounds and seminars scheduled.
- Honour on-call responsibilities and respond to calls in a timely fashion.
- Attend all academic day activities.
- Consider the ethical management of patient issues.
- Demonstrate awareness of own limitations, seeking advice when necessary.
- Develop effective professional relationship with patients.
- Develop effective professional relationship with the health care team in the community and adapt practice to utilize available expertise appropriately.

CAN MEDS Communicator Role

- Present anesthetic concerns and pre-operative assessment in an organized fashion.
- Produce complete, legible and concise anesthesia charting and consultation reports.
- Communicate anesthesia concerns and issues to patients clearly and in understandable terms.

CAN MEDS Collaborator Role

- Present anesthesia concerns and issues to other members of the healthcare team in a collegial and appropriate fashion.
- Communicate effectively with other consultants and health care workers who have had little experience in dealing with residents.
- Demonstrate an ability to work together with all members of the health care team.
- Exhibit professional interpersonal behaviour with patients and staff.
- Provide consultations independently.
- Communicate need for consultation in an appropriate manner.
- Recognize consultation patterns of practice in the community and utilize these effectively.

CAN MEDS Manager Role

- Develop a comprehensive understanding of OR and obstetrical anesthesia resource management in the community hospital.
- Display appropriate level skill at identifying, prioritizing and managing urgent and emergent situations.
- Consider quality assurance issues in day to day anesthesia practice.
- Display effective practice management strategies to allow adequate personal time.
- Display an understanding of any limitation imposed by resource availability in the community and manage patient care appropriately, within the context of these limitations.
- Be aware of transport policies for patients who require expertise not available within the community.

CAN MEDS Health Advocate Role

- Identify health issues in patient management, which will improve their perioperative care.
- Know and understand the standards for anesthesia management with respect to the CAS guidelines and local standards of practice.
Recognize and respond appropriately in advocacy situations particularly with regard to patient safety.

Begin to develop an understanding of community healthcare needs, as they relate to perioperative care.

Develop awareness of any specific health care issues pertinent to the community setting with specific attention to issues of ethnic and economic demographics, local industry and environment.

Respond appropriately to issues related to resource availability in the community and arrange for appropriate consultations or management outside the community setting, when appropriate.

**CAN MEDS Scholar Role**

- Demonstrate a commitment to the requirement for continuing personal education.
- Understand critical appraisal issues as they pertain to anesthesia practice.
- Take part in the education of junior learners with regard to anesthesia knowledge and skills, if present in the community.
- Attend academic days, location permitting.
- Demonstrate academic qualities consistent with the standard required for independent practice.
- Attend all rounds, seminars and journal clubs.
- Attend academic days.
- Demonstrate the development of a knowledge base relevant to the community practice setting, with regard to procedures managed, and social and economic issues within the specific community.

October 24, 2012
Revised March 2015
The purpose of a PGY1 radiology elective for the Anesthesia resident is to introduce concepts and interpretations of General Radiology, as it applies to the pre-operative patient, intraoperative, ICU and acute care setting. The experience should provide the resident with basic skills of radiologic interpretation, with an emphasis on chest pathology.

**Specific Objectives:**

1. To demonstrate an understanding of basic radiographic ANATOMY of:
   - 2 view CXR
   - Portable AP chest
   - Acute abdominal series
   - CT head
   - CT chest and abdomen

2. To demonstrate an ability to recognize common chest and abdominal film interpretation for the following pathologies:
   - Pulmonary edema – cardiogenic versus non-cardiogenic
   - Pneumonia and collapse
   - Pleural effusion
   - Pneumothorax and pneumomediastinum
   - Bowel obstruction
   - Pneumoperitoneum

3. To demonstrate an understanding of appropriate tube and support device placement and evaluation on imaging (eg. ETT, feeding tubes, vascular access lines, chest tubes).

4. To demonstrate an understanding of the indications for advanced radiologic imaging (eg. Ultrasound, CT, MRI) including advantages and disadvantages of these modalities for differing clinical questions.

5. To demonstrate an understanding of the role and indications for radiologic interventional procedures, including thoracentesis and pleural drain placement, abscess drainage, IVC filter placements, vascular intervention, etc.

6. All residents MUST present a PowerPoint presentation before the end of their rotation. This presentation should be approximately 15 minutes in duration. Residents may select a topic of interest. It is recommended that the topic be discussed with the supervisor. Please provide your supervisor with a copy of this presentation.

7. Further individual goals and objectives to be discussed with rotation supervisor.

May, 2011
June 2015 – reviewed.
Emergency Medicine PGY1 Rotation

Anesthesiology Specific Goals and Objectives

In addition to the goals and objectives defined by the Department of Emergency Medicine for BCT rotating residents, the following goals and objectives should be acquired by residents in Anesthesiology.

Medical Expert

The anesthesiology resident should emphasize the following expert competencies during the BCT Emergency Medicine rotation:

- Principles of airway management outside of the OR.
- Sedation and pain management: indications, contraindications and pharmacology.
- Diagnosis, differential diagnosis and management of shock, to include: cardiogenic, hypovolemic, septic and anaphylactic shock.
- Current guidelines for ACLS management.
- Current management of acute coronary syndrome.
- Management of acute respiratory failure.
- Management of serious infectious disease emergencies, to include pneumonia, meningitis, soft tissue infection, and intra abdominal sepsis.

Communicator

- Be able to obtain informed consent with a clear explanation of the procedure and its possible complications.
- Be able to provide clear instructions to the patient/family and ensure that the instructions have been understood.

Collaborator

- Deal with all members of the health care team in a respectful and professional manner.
- Be able to request consultation with a clear concise presentation of the case and understanding and statement of the question being asked.
- Take an appropriate share of team assignments and assist others as required.

Manager

- Display organizational skills with effective prioritization of patient care activities and time management skills.
- Use information technology to obtain patient data and learning material to optimize patient care.
- Be able to manage discharge to community services, as appropriate.

Health Advocate
• Understand the impact of social, behavioural and hereditary factors on the disease processes which bring patients to the emergency department.
• Obtain appropriate consultation and follow up care for patients in the Emergency Department.

Scholar

• Show evidence of knowledge base and skill development during the rotation.
• Accept and act on constructive feedback.
• Teach and supervise junior learners, when appropriate.

Professional

• Recognize personal limitations and seek advice and consultation when appropriate.
• Report facts accurately.
• Maintain appropriate boundaries in work and learning situations.
• Respect diversity of age, race, gender, ability and socioeconomic status.

May, 2011
June 2015 - reviewed
Rounding

- The chief resident will email a weekly schedule to the team working at Hamilton Health Science (HHS) on Sunday evening. Please check your email. Notify the chief resident of any approved absences the week prior to the schedule being sent out.

- Rounding of patients will be done everyday before the start of the operative room (OR) and the clinic. Depending on which hospital residents are assigned for that day, they will be responsible for rounding on those inpatients and relay any concerns and questions to the most senior resident and/or staff. Rounding times and location will be decided the night before by the senior resident depending on the number of inpatients.
  
  o Wednesday morning rounds can be done after Grand Rounds but should be started before the start of Surgical Foundations teaching session PGY1/2s are available.

- You are also required to round with the team and with the staff at the end of the day on all patients.
  
  o If the staff is not planning to round, please check and clarify any issues or plans for their patients for the following day. Resolve any ward issues before going home at the end of the day so that the on call resident doesn’t have to deal with them.

- Ensure that discharge summaries are completed as soon as the patient is discharged. It is the responsibility of the individual writing the discharge order to ensure that the front admission sheet is complete and that the dictated discharge summary number is printed on it.

- The junior resident is responsible for printing the list of patients for the team. It is also required that junior residents arrive 5 to 10 minutes prior to rounding to obtain and document pertinent blood work.

- Do not sign off on any inpatient or transfer most responsible physician unless the chief resident or staff has accepted it.
Handover

- At the end of the day, junior residents at each site will be responsible for sending out the handover to all HHS residents. Relay any new admits, consults, possible OR’s overnight and plans for tomorrow. This can be done on Google docs. If you do not have access, please contact the chief resident.

- Often residents from St. Joseph’s Healthcare will cover evening calls at HHS. As a result, junior residents should email a handover to the resident on call by 5 pm. Format should include clinical/surgical history and outline a plan for outstanding issues:
  - For e.g. Patient A, HGH 6S, Ward, Room 2. Has history of papillary carcinoma, and underwent total thyroidectomy, uncomplicated. Patient on 1850 mg oral calcium TID and 0.5 mcg Vitamin D (specify doses specific to the case in the handover), please review 18:00 blood work for Calcium level.

Call

- During the day, the junior resident will cover day call unless they are assigned in the OR and so the resident who is not assigned to work in the OR should be covering the call. When all residents are scheduled to be in the OR, the junior resident should cover the day call. If you are paged while in the OR, please respond to the page in a timely manner.

- Junior residents should attempt to manage common Otolaryngology emergencies during the day to the best of their abilities. The senior residents are readily available for backup.

- When the junior residents are attending the Surgical Foundations lectures on Wednesday morning, the senior residents will cover day call until 1 pm when the junior residents return. It is the senior resident’s responsibility to let paging know of these change in the morning and the junior resident to call in the appropriate change when they return.

- All consultations require a complete head and neck examination. This includes flexible nasopharyngolaryngoscopy when applicable.
  - After hours, the scopes can be obtained from the 3V1 clinic at McMaster University Medical Centre (MUMC). Your identification (ID) badge will give you access to the 3V1 clinic.
  - At the General Hospital, scopes are available in the 3 Upper North clinic (3UN) and you must call security to gain access after hours.
  - At the Juravinski site, there is 1 scope in the Emergency Department (ED) and bronchoscopes/light source can be obtained from the OR or ICU on the 1st floor in the airway cart.
o **All scopes must be returned to the proper clinic after each usage.** Please remember to keep a label with the patient’s name to be placed in the binder for each scope used. Clean the scopes gently with an alcohol swab and rinse with water before leaving them overnight in the clinic on the blue pad next to the sink. On the weekends, you may have to disinfect the scopes yourself if you have multiple consultations (ask the outpatient clinic healthcare aid to show you how to disinfect the scopes properly). Please do not leave the scope in the disinfectant for more than 20 minutes, this will damage the scopes.

• Do not accept consultations coming from outside HHS sites. Any outside consultations need to be triaged by the staff first. If there are any questions or concerns, please review the case with a senior resident. Do not admit any patients at any of the sites without the approval coming from a staff. Admissions of patients to the Juravinski site will only happen under exceptional circumstances.

• For all consultations that seem unsure or inappropriate, please review them with the senior resident or the staff before accepting such a consultation.

• All residents even after being on night/weekend call must round with the team to provide appropriate handover and attend to outstanding/emergent issues.

• The charge nurse from the ED is now tracking arrival times of the physician for consultations to the ED – please ensure to notify the charge nurse of your arrival time to see the patient.

• If you converted your home call as per PARO guidelines, you must still round with the team to provide appropriate handover and attend to outstanding/emergency issues prior to taking a post-call day.

**Outpatient Clinic and OR**

• **OR starts at 7:50 am.**

• Please ensure that you know which cases will be doing that day in the OR as to review around the relevant anatomy, clinical presentation, and operative management.

• Clinic routinely starts at 8:30 AM.
  
  o MUMC ENT Clinic is located at 3V1 (yellow elevators)
  o General ENT Clinic is located at 3UN

• Attempt to dress in clinic attire, but scrubs are allowed. Have your ID badge visible at all times.
Other

- Please remember to complete the cover sheets at the time of OR. Also please dictate all OR cases if you were the primary surgeon and all discharge summaries in a timely fashion.

- For patients admitted after the OR, please complete the cover sheet, appropriate discharge prescriptions and orders. Ensure that the patient has been added to the handover list.

- All consultations and discharged patients seen during the day or when on call must be reviewed with the chief resident and staff.

- For all outpatient consultations requested from ED physicians during your call, please have the ED physician fax the consultation request to 3V1 or 3UN clinics. Please ensure that the consulting physician has labelled the timeline on the consultation request (e.g. *Please see this patient within 1 week *). The following day, check with the clinic staff to make sure that the consultation requested did indeed get faxed through. Remember to get the name of the referring ED physician for the staff.
  
  - 3V1 fax number is 905-521-8552
  - 3UN fax number is 905-527-6860

- Generally, tracheostomy tubes should not be changed for at least 7 days after the procedure. This allows maturation of the stoma for ease of change. There are exceptions to this rule, so when doubt, please consult a senior resident. Please observe a senior resident performing a trach change prior to your first change. It is always a good idea to have an unopened trach tray in the room prior to performing a trach change. As well, ensure a second tracheostomy tube one size smaller is in the room/available. Also ensure adequate lighting, patient positioning and suction.

- Overall, this rotation is a very educational and enjoyable experience. Should you have any concerns or questions, please do not hesitate to discuss this with the chief resident or Drs Sommer or Reid.

- Please help us to improve this rotation by letting know any suggestions that would make this a better experience.

- Please review these instructional videos on physical examination and flexible nasopharyngolaryngoscopy prior to the start of your rotation.
  
  - http://www.youtube.com/watch?v=e-6teNSMZYG&feature=related (flexible nasopharyngolaryngoscopy)
  - www.sinusvideos.com

November 21, 2013
St. Joseph’s Healthcare Otolaryngology-Head and Neck Off-Service Resident Orientation Handout

Rounding

- Weekly schedules will be emailed out by the Chief on Sunday evening. Please check your email. If you are to be away during the week, please let the Chief know.

- Unless otherwise stated, rounding starts at 7 AM on the Head and Neck Unit, 4th floor of the Juravinski tower.
  - We round at 6:30 AM on Wednesday morning PRIOR to Grand Rounds.

- It is also required to round with your staff at the end of the day.
  - If your staff is not planning to round, please check nursing issues on the ward before going home at the end of the day.

- Ensure discharge summaries are completed as soon as the patient is discharged. Charts of discharged patients can be found above the nursing handover station.

- The junior resident will be responsible for printing patient lists for the team. It is also expected that this resident arrives 5-10 minutes prior to rounding to obtain and document pertinent blood work.

- Friday rounds begin at 7 AM and are Staff Walk Around Rounds where patients’ cases are reviewed. The most senior resident will be responsible for reviewing the case however should you have a particular interest in a case, you may request to present it to the staff.
  - If you are scrubbed into any surgical case, you should be prepared to know the patient’s clinical and surgical history in detail.
  - Rounding starts 7 AM sharp, and PLEASE do not be late.

Handover

- Often residents from HHS will cover evening call at St. Joes. As a result, junior residents should email a handover to the resident on call by 5 pm. Format should include clinical/surgical history and outline a plan for outstanding issues:
  - Eg. If Mr. X’s 8pm calcium level drops from 2.10 at 3pm, please increase the oral calcium supplementation to 1875 mg calcium carbonate QID. If patient is
not symptomatic and the calcium level has not precipitously dropped to <1.75, attempt to avoid IV calcium gluconate.

Call
- During the day, call should be taken by the resident not covering OR. If all residents are scheduled to be in the OR, day call should be covered by junior residents. If you are paged in the OR, please respond to pages in a timely fashion.

- Junior residents should attempt to manage common Otolaryngology emergencies during the day to the best of their abilities knowing senior residents are readily available for backup.

- All consults require a complete head and neck examination. This includes flexible nasopharyngolaryngoscopy (NPL).

- After hours, the scope can be signed out from the endoscopy suite on the 3rd floor of the Mary Grace Wing. You may have to call security to obtain access. Please remember to sign the blue scope sign-out binder and return the scope once the examination is complete.

- Don't accept consults from outside St. Joe's unless it’s from HHS ENT. If there are questions or concerns, please review the case with a senior resident.

- If you converted your home call as per PARO guidelines, you must still round with the team to provide appropriate handover and attend to outstanding/emergent issues prior to taking a post-call day.

Clinic
- Clinic routinely commences at 8:15 AM on the 8th floor of the Mary Grace Wing.

- Dr. Young's clinic on Wednesday afternoon 1 PM must be covered. If you are assigned and cannot make the clinic please let the senior resident know as soon as possible to make alternate arrangements.
  - Attempt to dress in clinic attire, or at the least, with a white coat.

- Multidisciplinary Cancer Clinic occurs every Friday at the Juravinski Cancer Centre 1st floor. If you are assigned to cancer clinic, please tend to Ward issues and make it to the Juravinski for 9:30 AM.

Other
- Please remember to complete cover sheets at the time of OR. Also please dictate all discharge summaries in a timely fashion.

- Generally speaking, tracheostomy tubes should not be changed for at least 7 days post tracheostomy. This allows maturation of the stoma for ease of change. There are
exceptions to this rule, so if in doubt please consult a senior resident. Please observe a senior resident performing a trach change prior to your first change. It is always a good idea to have an unopened trach tray in the room prior to performing a trach change.

- Overall, this rotation is a very educational and enjoyable experience. Should you have any concerns or questions, please do not hesitate to discuss this with the Chief resident or Dr. Jackson CTU.
- Please help us to improve this rotation by letting know any suggestions that would make this a better experience.

- Please review these instructional videos on physical examination and flexible nasopharyngolaryngoscopy prior to the start of your rotation.


  [http://www.youtube.com/watch?v=e-6teNSMZYg&feature=related](http://www.youtube.com/watch?v=e-6teNSMZYg&feature=related) (flexible nasopharyngolaryngoscopy)

  [www.sinusvideos.com](http://www.sinusvideos.com)

November 21, 2013
ENT/Head & Neck Surgery PGY1 Rotation

Anesthesiology Specific Goals and Objectives

In addition to the goals and objectives defined by the Department of Surgery for rotating residents, the following goals and objectives should be acquired by residents in Anesthesiology, during the ENT/Head & Neck Surgery rotation.

Medical Expert

The anesthesiology resident should understand the following clinical topics during the ENT/Head & Neck Surgery rotation:

- The spectrum of disease processes involved in otolaryngology from pediatric issues to those of the elderly.
- Structural anatomy and function of upper and lower airways:
  - Nose, mouth, teeth, tongue
  - Nasopharynx, oropharynx, pharynx
  - Epiglottis, larynx, glottis, vocal cords, valleculae
  - Cartilages
  - Sensory and motor innervation
  - Conducting and respiratory airways: trachea, bronchi, bronchioles, alveoli
- Gain an appreciation of the following disease processes and the implications they have on airway anatomy and respiratory physiology
  - Tumours and mass effects
  - Post surgical or irradiation scarring
  - Congenital deformities
  - Foreign bodies
  - Trauma
  - Infections, abscesses
  - Vocal cord lesions
- Develop a differential diagnosis, investigation and treatment plan for the following common presenting complaints:
  - Hoarseness, stridor, hemoptysis
  - Foreign body aspiration
  - Airway trauma
  - Papillomatosis
  - Tumours
  - Epistaxis
  - Subglotic Stenosis
  - Adenoid/Tonsillar Hypertrophy and obstructive sleep apnea in the pediatric and adult patient
  - Acute Epiglottitis
  - Hearing Loss
  - Vertigo
- Understand in the pathologic processes and indications for both emergent and elective tracheotomy
  - Emergent tracheotomy for airway obstruction
    - Epiglottitis
    - Upper airway tumours
ii. Elective tracheostomy
- For pulmonary toilet
- Prolonged orotracheal intubation
- During major head and neck cancer surgery
- Chronic ventilatory failure

- Learn how to manage a patient with an existing tracheal stoma
- Understand major patient comorbidities associated with patients requiring major Head and Neck Surgery.
  - Smoking, COPD, alcohol
  - Elderly, malnutrition
  - Cardiovascular disease
  - Prior irradiation, chemotherapy
- The management of common postoperative complications, including acute airway obstruction, post tonsillectomy hemorrhage including ensuing hypovolemia and hemorrhagic shock.
- Indications for utilizing heliox.
- The diagnosis and management of supraglottic respiratory failure.
- Indications for and complications of nasopharyngoscopy.
- Innervation of the oropharynx, larynx and trachea, as it applies to anesthesia for bronchoscopy.
- Use of the bronchoscope/nasopharyngoscope, including topical anesthesia, the skill of bronchoscopy/nasopharyngoscopy to assess vocal cord function and laryngeal pathology.

Communicator

- Exhibits compassion and support for patients and their families during the perioperative period.
- Establishes a trusting professional relationship with patients and their families.
- Produces effective oral and written problem oriented presentations of patient condition and management.
- Encourages patient and family input into critical decision making.

Collaborator

- Collaborates and effectively communicates with other members of the health care team to ensure optimal patient management.
- Treats all members of the health care team in a respectful manner.
- Accepts appropriate share of work assignments.
- Obtains consultation appropriately, with a clear understanding of the role and expectations of the consultant.
Manager

- Understands the logistics of operating room booking and the flow of patients from the decision to carry out surgery to their discharge.
- Effectively coordinates preparation of patients for the OR and their disposition postoperatively.

Health Advocate

- Ensures effective preoperative optimization.
- Ensures appropriate postoperative management, including transfer of high risk patients to monitored care, discharge planning and the provision of appropriate follow up after surgery.

Scholar

- Attends all educational events, including the anesthesia half-day.
- Shows evidence of preparation for elective cases.
- Demonstrate effective use of information technology.

Professional

- Respects diversity of age, culture, religion, gender and socioeconomic status.
- Understands the legal requirements regarding informed consent, disclosure of harm and patient confidentiality.

April, 2014
Internal Medicine PGY1 Rotation

Anesthesiology Specific Goals and Objectives

In addition to the goals and objectives defined by the Department of Internal Medicine for PGY1 rotating residents, the following goals and objectives should be acquired by residents in Anesthesiology.

Medical Expert

The anesthesiology resident should emphasize the following during the BCT Internal Medicine rotation:

- The impact of cardiopulmonary disease on perioperative outcome.
- Basic physiology and differential diagnosis of shock and its management.
- ACLS guidelines for resuscitation of the adult victim of cardiac arrest.
- The pathophysiology of acute coronary syndromes, including indications and contraindications for thrombolysis, immediate revascularization and pharmacologic management.
- Basic arrhythmia management.
- The physiology and management of acute asthma and chronic obstructive pulmonary disease.
- The management of diabetes and diabetic ketoacidosis
- The pathophysiology and management of hypertension, including the pharmacology of common antihypertensive agents.

Non-expert CanMEDS Competencies.

In addition to the goals and objectives defined by the Department of Internal Medicine for BCT rotating residents the following additional goals and objectives should be emphasized by the anesthesiology resident:

Communicator

- Exhibits compassion and support for patients and their families during critical events and interventions.

Collaborator

- Interacts effectively with surgical and anesthesia colleagues, and OR staff, to fully optimize patients in need of surgical intervention.

Manager

- Effectively co-ordinates preparation of patients who are in need of surgical intervention, ensuring that co-ordination of transfer to and from the OR occurs efficiently.
Health Advocate

- Understands behavioural, hereditary and social determinants of health, as they impact or predict the presence of medical conditions which affect the delivery of perioperative care.

Scholar

- Attends and participates in anesthesia half-day and other learning activities.
- Understand the principles of medical information retrieval and evidence-based medical practice and their application to bedside patient care.

Professional

Understands the principles of ethical and legal medical practice and exhibits their application in day-to-day practice.

May, 2011
PREAMBLE

Team 4 Pediatrics at St. Joseph’s Healthcare includes Level 2 Nursery and outpatient neonatal follow-up clinic. This rotation should give pediatric residents the opportunity to manage a wide variety of conditions in neonates, both in the acute environment of delivery rooms and L2N, as well as in the neonatal follow-up clinic.

The junior pediatric resident should be acquiring the knowledge and skills listed below and be able to manage these patients with supervision. The senior pediatric resident should demonstrate thorough knowledge of the range of medical conditions in neonates and is expected to function as a junior attending by the end of their rotation.

MEDICAL EXPERT

The pediatric resident should demonstrate accurate, relevant and nuanced history taking and physical exam skills that will enable them to develop relevant differential diagnoses and management plans for a variety of neonatal presentations. Specifically, pediatric resident should be able to:

1. Diagnose and manage a variety of medical conditions in well-baby nursery and Level 2 nursery, including but not limited to:
   a. Hypoglycemia
   b. Nutritional requirements of the newborn and premature infant
   c. Jaundice
   d. Sepsis
   e. Respiratory distress in preterm and term baby
   f. Neonatal abstinence syndrome
   g. IUGR or dysmorphic neonate
   h. Neonatal heart murmurs
   i. Antenatal consults
   j. Breastfeeding assessment

2. Demonstrate knowledge of universal screening programs (NBS, hearing, hyperbilirubinemia), as well as additional screening in premature neonates (ROP, HUS, AOP, Car seat trends)

3. Demonstrate good knowledge of NRP guidelines through real and mock resuscitations.

4. Understand the need for developmental surveillance of premature babies, babies born with minimal antenatal care, and babies exposed to multiple substances in utero.
COMMUNICATOR

1. The resident will demonstrate appropriate verbal and non-verbal communication skills enabling him/her to establish a therapeutic relationship with the family.
2. The resident will successfully mitigate most physical, cultural, psychological and social barriers to communication.
3. The resident will be able to clearly convey pertinent information with the health care team, both verbally and in the written form.

COLLABORATOR

1. The resident will work together with fellow residents, medical students and all the members of the multidisciplinary team to ensure sharing of responsibility and workload in a pleasant and collegial working environment.
2. The resident will work towards preventing, negotiating and resolving inter-professional conflict.

MANAGER

1. The resident will demonstrate ability to prioritize their assigned tasks (e.g. seeing discharges first).
2. Senior pediatric resident will function as a junior attending, ensuring the efficient flow of the rounds and division of daily duties. (expected by the end of the rotation)

HEALTH ADVOCATE

The resident should be able to:
   a. Give accurate information with respect to immunizations.
   b. Promote safety in the home and car seat.
   c. Promote developmental anticipatory guidance in NAS clinic patients

PROFESSIONAL

1. The resident will practice medicine ethically with integrity, honesty, commitment and compassion, always demonstrating respect for others, regardless of gender, culture and ethnicity.
2. The resident will be on time for handover and teaching, and will complete assigned tasks in a timely manner.

Modified March 2015, BB
CTU 4 Orientation Manual

For Residents and Clinical Clerks 2015-2016

Editor: Dr. Bojana Babic
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Dear Learners Rotating on Pediatrics at St. Joseph’s Hospital,

Welcome to your pediatrics CTU team 4 rotation. I hope that you have a good learning experience with us. Don’t hesitate to contact the pediatric Chief Residents at macpedschiefs@gmail.com if you have any questions or concerns. The CTU Director for team 4 is Dr. Babic at babicb@mcmaster.ca. The CTU administrative support is Rosy Evered at revered@stjosham.on.ca.

During your time here, you will have an Attending Pediatrician who will be guiding your learning. Your attending will meet you for orientation on your first day to discuss objectives, expectations and sign your learning contract. You should have received the “Green Book” (the pediatric survival guide) from your department. If you have not received one please contact your department coordinator. If you have lost it or need to buy one, please contact Rosy Evered, who can sell you one for $10.00. The Green Book can also be found at: http://www.macpeds.com/resources_for_residents.html Objectives, expectations and resources for the rotation can be found at: http://www.macpeds.com/generalPediatricsCTUSt.Josephs.html

The green book and resources provided above should be reviewed prior to the start of the rotation as they contain information about the day-to-day running of the wards. You will be provided with a monthly schedule of teaching sessions and relevant rounds. Please ensure you are prompt for each of these sessions. The teaching schedule can be found at: http://www.macpeds.com/stjhh_ctu_teaching_schedule.html

With respect to your first day at St. Joseph’s please show up for handover at 8 am in 3OBS conference room. Weekend handover is at 8:00 am in the NICU. Lockers are available for you in the change room in labor and delivery. Please refrain from putting your things in the NICU lounge as space is limited. The fridge in the NICU lounge can be used for lunches etc. Information about St. Joseph’s Healthcare, getting your passcodes, resident lounge, showers, call rooms etc. can be found at: http://mystjoes/departments/RLMA/Shared%20Documents/ResidentOrientationHandbook%202013Final.pdf

I would encourage you to spend 1 afternoon with the Breastfeeding & Newborn Assessment Clinic (BANA), Room D361, 3rd Flr, Dowling Wing, ext. 34998. Pediatric residents are expected to spend at least 2 half days during their rotation in Bana clinic. Please contact BANA clinic nurse on your first day to arrange for time for you to attend the clinic.

We hope you enjoy your stay with us. If there are any concerns or questions, please direct them to your attending or myself.

Sincerely,

Bojana Babic
CTU 4 Education Lead
Division of General Pediatrics
Introduction to the Division of General Pediatrics

The Division of General Pediatrics is the largest division within the Department of Pediatrics. The division consists of 21 pediatricians. The pediatricians provide consulting services at McMaster Children’s Hospital and St. Joseph’s Healthcare Hamilton. All pediatricians are affiliated with McMaster University.

General pediatricians work in four teams - teams 1, 2 and 3 at McMaster and team 4 at St. Joseph’s hospital. Teams 1 and 2 have up to forty general pediatric ward patients. Team 3 covers twelve Level II neonatal patients and up to six chronic complex pediatric patients. As well, pediatricians on team 1, 2 and 3 provide consults to the Emergency Department, surgical teams, as well as consult requests from the regional hospitals and regional community physicians.

At St. Joseph’s Healthcare, we are responsible for up to 18 Level II patients. In addition we attend deliveries, see consult requests from newborn nursery, BANA clinic, and rarely from Emergency Department. In addition, we run an afternoon clinic on Tuesday and Thursday afternoons where we will see antenatal consults, as well as follow up late premature neonates, neonates with poor prenatal care and neonates discharged from our NICU with neonatal abstinence syndrome.

The Division of General Pediatrics provides 24/7 on-call coverage at both hospitals. In addition to on-service and on-call work in these hospitals, our group has a commitment to the medical needs of the community. All the General Pediatricians provide follow up and consulting services to children within Hamilton and the surrounding regions. Care provided is based on the best available evidence in a family-centred environment.

CTU 4 is covered by the core group of pediatricians who rotate on CTU every 2 weeks, starting on Mondays. In addition, some CTU blocks and call are covered by other members of our division.

The core group:

Dr. Bojana Babic joined the Division of General Pediatrics in 2009. Dr. Babic completed her pediatric training at McMaster University and her fellowship in Pediatric Endocrinology and Metabolism at the Hospital for Sick Children in Toronto. Dr. Babic is interested in medical
education of health professionals. She has been the program director for the general pediatric fellowship since October 2011.

Dr. Samara Chitayat is an active member of the Division of General Pediatrics with a focus on neonatal care at St. Joseph’s Healthcare. She also maintains a consultant general pediatric practice in downtown Hamilton. Dr. Chitayat is skilled in development follow-up, with experience in assessments for children with autism and global developmental delay, as well as follow-up of premature infants.

Dr. Kelly Fitzpatrick joined the Division in 1999 after completing her pediatric training at the Hospital for Sick Children in Toronto. Dr. Fitzpatrick has an interest in developmental and behavioural issues, in addition to providing care for children with complex medical needs.

Dr. Lucia Giglia joined the Division in 2003 after completing her Pediatric Residency training at McMaster University. Today, she plays an active role in the Department’s research and education initiatives. Her investigative work focuses on several key areas including pediatric head injuries, neonatal outcomes, population health and clinical care. Dr. Giglia provides valuable direction and advice in her role as a Research Lead at McMaster Children’s Hospital.
**Dr. Andrew Latchman** completed his pediatric residency training at McMaster University. He is currently serving as the medical director of the Neonatal Resuscitation Program, Pediatric Advanced Life Support training (PALS), the RSV clinic and the newborn screening program. Dr. Latchman is interested in medical education.

**Dr. Sandi Seigel** joined our Division in 1990. Since 2006, she has served as the Deputy Chief of General Pediatrics. Dr. Seigel's interests are in pediatric HIV and she currently works as the pediatrician in the SIS clinic seeing HIV positive children and infants of HIV positive mothers. Dr. Seigel is interested in immigrant and refugee health. She also has an interest in child welfare issues and has served as a member of the regional child welfare committee since 1999 and a member of the Child Advocacy and Assessment team.

**Susan Alliston RN (EC), BScN, MSN, Nurse Practitioner- Pediatrics**
Susan is a Neonatal Nurse Practitioner in the Level II Nursery. Prior to joining the St. Joseph’s team in 2012 she worked for 23 years in the L3N NICU at McMaster Children’s Hospital in Hamilton. Susan is an Assistant Clinical Professor in the McMaster School of Nursing. Her responsibilities include providing clinical service within her scope of practice in the Women & Infants Program, leadership, education and involvement in research projects within the Department of Pediatrics.

Other pediatricians covering CTU 4 and call:

Dr. Wendy Cheung
Dr. Giuliana Federici
Dr. Kathy Gambarotto
Dr. Andrea Hunter
Dr. Moyez B. Ladhani
Dr. Audrey Lim
Dr. Ramsay MacNay
Dr. Frank O’Toole
Dr. Madan Roy
Dr. Iman Shbash
Dr. Gita Wahi
**Division of General Pediatrics**

**CTU 4 Weekly Schedule**

**St. Joseph’s Healthcare**

Handover at 8 am: combined staff, NP and resident/fellow: occurs at 7:45 am on rounds days

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
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<tbody>
<tr>
<td>8-9 am</td>
<td>DGP rounds</td>
<td>See pts/discharges</td>
<td>See pts/discharges</td>
<td>Mcmaster Peds grand rounds</td>
<td>?Mcmaster NICU rounds</td>
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<td>Staff touches base with BANA/3OBS/L&amp;D re consults</td>
<td>Staff touches base with BANA/3OBS/L&amp;D re consults</td>
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<td></td>
<td>NP/SPR to meet at 9 to divide up supervisory responsibility</td>
<td>NP/SPR to meet after handover to divide up supervisory responsibility</td>
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<tr>
<td>9-10 am</td>
<td>See pts/discharges</td>
<td>See pts/discharges</td>
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<td>Staff touches base with BANA/3OBS/L&amp;D re consults</td>
<td>Staff touches base with BANA/3OBS/L&amp;D re consults</td>
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<td>NP/SPR to meet after handover to divide up supervisory responsibility</td>
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<tr>
<td>10-12</td>
<td>NICU rounds No non-urgent interruptions</td>
<td>NICU rounds No non-urgent interruptions</td>
<td>NICU rounds No non-urgent interruptions</td>
<td>NICU rounds No non-urgent interruptions</td>
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<tr>
<td>12-1 pm</td>
<td>Lunch</td>
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<tr>
<td>1-2 pm</td>
<td>finish notes/see consults</td>
<td>finish notes/see consults</td>
<td>Academic ½ day</td>
<td>finish notes/see consults</td>
<td>finish notes/see consults</td>
</tr>
<tr>
<td>2-4 pm</td>
<td>Teaching (CBL/journal articles)/ quality assurance/ family Meetings)</td>
<td>Clinic: 1 learner attends with staff</td>
<td>Academic ½ day; may have family meetings</td>
<td>Clinic: 1 learner attends with staff</td>
<td>Teaching (CBL/journal articles)/ quality assurance/ family Meetings)</td>
</tr>
<tr>
<td>4-5 pm</td>
<td>Finish work, update list</td>
<td>Finish work, update list</td>
<td>Academic ½ day</td>
<td>Finish work, update list</td>
<td>Finish work, update list</td>
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</table>

- DGP rounds – Division of General Pediatrics’ Rounds – Videoconferenced LIVE to SJH Rm T2308 (library) except 1st Monday
- Grand rounds – Department of Pediatrics Grand Rounds – Videoconferenced LIVE to SJH Rm T2308 (library)
- MDR – Multidisciplinary Rounds
Division of General Pediatrics CTU 4 Expectations

Handover:

Handover is to take place at 8:00 hrs together with staff/NP and residents. On the mornings when there are rounds (Monday and Thursday) handover should start at 7:45. Weekend handover is at 8:00 hrs.

Discharge Rounds:

Discharge planning should always be occurring and the team should discuss patients that could potentially go home the night before. Discharges for these patients should occur promptly after the handover if patients are ready. This is particularly important for the well babies on 3Obs and any anticipated discharges from the nursery.

See Patients:

During this time the team will see their assigned patients. The chart and nursing notes should be reviewed to identify any issues that have arisen over night. The patient should be seen and examined. All lab work and radiological procedures that are pending should be reviewed. The house staff should then come up with a plan for the day and be ready to present that patient during ward rounds. It is not necessary that full notes be written at this time, as there will be time allotted for that later in the day.

Ward Rounds:

During ward rounds the team will round on patients. These are work rounds. Some spontaneous teaching during rounds and at the bedside can occur during this time, however there is allotted time for that later in the day.

Patient Care:

During this time residents will follow through with decisions made during ward rounds. They will finish charting on patients. This is also the time for them to get dictations done and to complete face sheets.

Teaching Sessions:

There are various teaching sessions throughout most days on the CTU. Please refer to the CTU teaching schedule for locations – this will be posted online and more teaching will happen with your Staff attending as well.

Evaluations:
Time is left in the schedule for evaluations. This would be the time to give residents mid-way evaluations, as well as end of rotation evaluations.

*Handover 1700 hrs:*

Handover will occur to the on-call team with residents, NP and staff together.

*Orientation:*

At the beginning of each month the attending should meet with their team members to review the objectives, expectation and schedule of the rotation. The senior resident may have valuable input during this time.
**Roles of the Pediatric Medical Team at St. Joseph’s Healthcare: May 2013**

**Most responsible physician/staff attending:**
Supervises all learners and nurse practitioner during ward rounds and clinical duties; gives feedback to NP/SPR/fellow for 5 minutes at end of rounds re how the rounds were run
Carries the NRT pager during rounds (this may be delegated to the SPR/fellow if present)
Supervises teaching of medical learners in the NICU
Has responsibility in quality assurance in the NICU
Ensures that patient flow and completion of daily clinical activities occurs in an efficient manner
Liaises with all members of the NICU team (nursing, pharmacy, child life and social work) as required
Ensures consultations and follow up of babies followed in BANA 3 OBS occurs in a timely and thorough manner
Runs the pediatric afternoon clinic

**Nurse practitioner:**
Takes leadership role in the NICU in running the daily NICU ward round; if a SPR/fellow is present this responsibility is shared with the SPR/fellow
Takes first call for patients in the NICU after rounds and carries staff NRT pager (if SPR/fellow not present): communicates and consults with attending as required: updates attending on any patient changes before handover: If SPR/fellow present this responsibility is shared: SPR /fellow carries the NRT pager if present
80% of time is clinical time covering NICU 20% academic/administrative time
Can be delegated to do 3OBS consultations though primary clinical responsibility is to NICU/L&D
Participates in family meetings with nursing and social work

**Senior Pediatric resident/Fellow**
Reviews learning objectives and goals at start of rotation
Acts as junior attending: runs rounds: may be shared with NP ( ie SPR conducts rounds in 1 room and NP conducts rounds in 2nd room)
Supervises teaching of junior learners
Encouraged to look at quality assurance and possible future quality assurance initiatives: can be a potential focus of resident/fellow quality assurance project
Carries staff NRT pager and is first responder at deliveries; 1rst chance at intubation, etc during resuscitation with staff backup as required
Note: if both fellow/SPR present: they sit down with NP and attending at start of rotation to divide supervisory responsibilities

**BCT/JPR**
Rounds on his/her assigned patients: reviews with bedside nurse and examines patients before NICU rounds
Involved with communication with families of his/her patients
Reviews learning package and objectives at start of rotation
Dictates discharge summaries
Writes daily notes; updates their patients on list
Sees babies in consultation on OBS/BANA as directed by SPR/fellow/attending
Attends deliveries when carrying NRT pager
Participates in teaching sessions and looks up topics and discusses with team as instructed by attending/SPR/fellow

Clinical clerks:
Reviews learning objectives at onset of rotation
Participates on ward rounds and is assigned patients by NP/SPR/fellow
Sees consultations as per direction of SPR/attending/fellow
Attend teaching sessions
PATIENT CARE/CHARTING

Admissions
- Write full admission orders (include MRP on-call, transfer care to staff on service in a.m.)
- Ensure history & physical is documented on chart – fill out NICU admission forms

Charting
- Progress notes should be written daily on every patient
- All complex patients admitted to the hospital and residing in the hospital for over a week should have a summary of interval progress documented every Thursday by the resident or assigned learner. This should consist of a brief update of events of the week, significant physical findings, investigation results, and care provided during the preceding week. This will facilitate the provision of care over the weekend as well as help keep the numerous issues updated. Further this weekly summary will be a great help in dictating the final discharge summary.
- Off-service notes (at the end of a month/rotation) are also helpful and expected.
- All patient care meetings such as those conducted with parents or multispecialty meetings should be documented in the chart by the learner assigned to the case, with a summary of the discussion.

Discharging patients
- Dictate a discharge summary for every pediatric patient. Please refer to L2N discharge summary templates in the Green Book.
- Complete face sheet prior to patient leaving hospital – this will be faxed to family physician’s office at the time of discharge. Face sheet completion prior to discharge is the responsibility of the learner. The face-sheet will be completed in detail, at the time of discharge. Information on this will include salient course in hospital, diagnosis at discharge, and follow up plan.
- Complete any prescriptions, CCAC requests, radiology requisitions and other forms prior to discharge.
- For neonates who will be followed in the community by a pediatrician, please fill out a referral form to be faxed to their office.
CTU 4 FACULTY EXPECTATIONS

Staff Handover Weekdays and Weekends: Staff handover for Team 4 will occur at 0800 hrs. in person.

Service Handover: Will occur on Monday morning in person or via phone after Division of General Pediatric Rounds.

Orientation:
- All learners will receive a welcome email from the General Pediatric Administrative staff one week prior to their rotation starting.
- Learners will be expected to arrive for handover at 0800 hrs. at the start of their rotation.
- The attending will meet the senior resident at 0900 hrs. to review objectives and sign the learning contract.
- The attending will meet the junior resident and other learners at 0930 hrs. to review objectives and sign the learning contract.
- Orientation will be a shared responsibility of the faculty and SPR. Use the orientation checklist as a guide.

This would also be an opportune time to discuss the residents’ vacations, half day, make arrangements for mini MAS for pediatric residents, and set time to discuss the mid-rotation and end-rotation evaluations.

Evaluations:
- CTU staff are expected to do mid-rotation feedback with each learner informally after each week of service. If there are concerns with any of the residents’ performance, the evaluation must be in writing. An evaluation is available on WebEval.
- After each 2-week block, the staff is to give formal feedback in writing to all learners and face-to-face feedback.
- It is resident’s responsibility to use Mini-MAS once per week.
- Each attending will do one handover mini-CEX during a 2-week block. The handover mini CEX is an observation of the evening handover by the Senior and Junior Residents. There is a provider and recipient form.

Teaching:
- There are CBL cases developed for the CTU 4 rotation. These can be found on line at [http://www.macpeds.com/generalPediatricsCTUST.Josephs.html](http://www.macpeds.com/generalPediatricsCTUST.Josephs.html)
- Please use these for the afternoon teachings as outlined in the weekly schedule. The staff pediatrician or SPR can use these as learning tools.
- A minimum of 4 cases need to be worked through by all learners in a 2-week period.
St. Joseph's Healthcare
PEDIATRIC ROTATION - Orientation Check List:

- Review objectives and evaluation process with learners.

- Ensure orientation packages have been reviewed by the learners. (Available from Rosy x36039). Remind learners that the green book is online at http://www.macpeds.com/resources_for_residents.html. They should have received a hard copy from their departments.

- Referring learners to the website: www.macpeds.com where objectives and evaluations are listed. Also informing them of the interesting articles posted under the education section. Advise them of the teaching schedule also on line.

- Going over daily routine with learners: handover at 0800 hours, see patients by 10:00 hours, rounds 10:00-12:00 hours. Social worker will join rounds on Wednesdays.

- Letting learners know that in the afternoon they are to follow up on patients, write their notes, see new referrals from 3 Obstetrics and attend deliveries. In addition, one learner should attend the Tuesday and Thursday afternoon clinic. Also, remind learners to touch base with BANA clinic on first day of their rotation to schedule time in there (Pediatric residents are expected to spend at least 2 half-days per rotation in BANA clinic).

- Ensuring that when Residents leave for the day they sign over to the person carrying the pager.

- Showing the Residents the dictation room with the dictation book and the dictation format for NICU. Showing the learners the NICU library in addition to the NICU drug book and the guidelines book. Introducing the learners to the team that is involved: Charge Nurses, Social Workers, Child Life, and Pharmacy. Ensuring that the learners hook up with the NICU Charge Nurse to make sure that they do get NRP update at the beginning of the rotation.

- Letting the Residents know that a discharge summary is mandatory on all admitted patients and that the front cover sheet also needs to be filled out. It is essential that Residents have their dictations done prior to the patients leaving so that they can be faxed to the family doctor.

- Take them on a physical tour of L2N, delivery room, the resuscitation room and ER. Show them the delivery records to be filled after attendance at delivery and how to review antenatals.
Show the existing order-sets and ensure that they are familiar with the computer system for the St. Joseph’s Healthcare.
ROTATION OBJECTIVES:

PREAMBLE

Team 4 Pediatrics at St. Joseph’s Healthcare includes Level 2 Nursery and outpatient neonatal follow-up clinic. This rotation should give pediatric residents the opportunity to manage a wide variety of conditions in neonates, both in the acute environment of delivery rooms and L2N, as well as in the neonatal follow-up clinic.

The junior pediatric resident should be acquiring the knowledge and skills listed below and be able to manage these patients with supervision. The senior pediatric resident should demonstrate thorough knowledge of the range of medical conditions in neonates and is expected to function as a junior attending by the end of their rotation.

MEDICAL EXPERT

The pediatric resident should demonstrate accurate, relevant and nuanced history taking and physical exam skills that will enable them to develop relevant differential diagnoses and management plans for a variety of neonatal presentations. Specifically, pediatric resident should be able to:

1. Diagnose and manage a variety of medical conditions in well-baby nursery and Level 2 nursery, including but not limited to:
   a. Hypoglycemia
   b. Nutritional requirements of the newborn and premature infant
   c. Jaundice
   d. Sepsis
   e. Respiratory distress in preterm and term baby
   f. Neonatal abstinence syndrome
   g. IUGR or dysmorphic neonate
   h. Neonatal heart murmurs
   i. Antenatal consults
   j. Breastfeeding assessment

2. Demonstrate knowledge of universal screening programs (NBS, hearing, hyperbilirubinemia), as well as additional screening in premature neonates (ROP, HUS, AOP, Car seat trends)

3. Demonstrate good knowledge of NRP guidelines through real and mock resuscitations.

4. Understand the need for developmental surveillance of premature babies, babies born with minimal antenatal care, and babies exposed to multiple substances in utero.

COMMUNICATOR

1. The resident will demonstrate appropriate verbal and non-verbal communication skills enabling him/her to establish a therapeutic relationship with the family.

2. The resident will successfully mitigate most physical, cultural, psychological and social barriers to communication.
3. The resident will be able to clearly convey pertinent information with the health care team, both verbally and in the written form.

COLLABORATOR

1. The resident will work together with fellow residents, medical students and all the members of the multidisciplinary team to ensure sharing of responsibility and workload in a pleasant and collegial working environment.
2. The resident will work towards preventing, negotiating and resolving inter-professional conflict.

MANAGER

1. The resident will demonstrate ability to prioritize their assigned tasks (e.g. seeing discharges first).
2. Senior pediatric resident will function as a junior attending, ensuring the efficient flow of the rounds and division of daily duties. (expected by the end of the rotation)

HEALTH ADVOCATE

The resident should be able to:
   a. Give accurate information with respect to immunizations.
   b. Promote safety in the home and car seat.
   c. Promote developmental anticipatory guidance in NAS clinic patients

PROFESSIONAL

1. The resident will practice medicine ethically with integrity, honesty, commitment and compassion, always demonstrating respect for others, regardless of gender, culture and ethnicity.
2. The resident will be on time for handover and teaching, and will complete assigned tasks in a timely manner.

Modified May 2015, BB
Obstetrics and Gynecology PGY1 Rotation

Anesthesiology Specific Goals and Objectives

In addition to the goals and objectives defined by the Department of Internal Medicine for PGY1 rotating residents, the following goals and objectives should be acquired by residents in Anesthesiology.

Medical Expert

The anesthesiology resident should develop an understanding of the following during the PGY1 Obstetrics and Gynecology rotation:

- Physiologic changes of pregnancy.
- Physiology of the uteroplacental unit.
- Fetal physiology.
- The course and management of normal labour and delivery.
- Interpretation of fetal heart rate monitoring.
- The effects of common analgesic techniques on the labouring patient and fetus, to include epidural analgesia, combined spinal epidural analgesia, opioids.
- Indications for Cesarean section.
- Pathophysiology and management of common complications of pregnancy including abnormal presentation, multiple gestation.
- Pathophysiology and management of hypertensive disorders of pregnancy.
- Differential diagnosis, pathophysiology and management of antepartum and postpartum hemorrhage and the use of blood products in pregnancy.
- Resuscitation of the pregnant patient, including ACLS guidelines, management of massive transfusion and management of embolic catastrophes, (pulmonary embolism, amniotic fluid embolism, air embolism).

Communicator

The anesthesiology resident should be able to exhibit the following skills and behaviours during the OB/GYN rotation.

- Establish a trusting and professional relationship with the obstetrical patient and their partner.
- Deals with patients in a compassionate and reassuring manner.
- Provides clear communication with the patient.
- Encourages full participation of the patient in decision making.
- Obtains informed consent with a clear explanation of the procedure and its possible complications.

Collaborator

- Works effectively with all branches of the interdisciplinary team.
- Able to provide clear, concise and complete presentation of patient data, both verbally and in written form.
- Deals with all members of the health care team in a respectful manner.
- Takes an appropriate share of assignments and assists others as needed.
Manager

- Displays good organizational skills and efficient time management habits.
- Accesses patient data and educational material through the efficient use of information technology.
- Able to effectively prioritize clinical activities to optimize efficiency.
- Understand the common care paths of patients from the diagnosis of pregnancy to their discharge.

Health Advocate

- Understands social, dietary and behavioural factors affecting pregnancy.
- Understands the role of social services and community support systems available to families after delivery.
- Obtains appropriate consultation with allied services to optimize patient care.

Scholar

- Attends and contributes to rounds and other learning events.
- Receptive to constructive feedback and acts on it appropriately.
- Demonstrates critical appraisal skills and evidence-based approach to clinical practice.
- Demonstrates evidence of ongoing learning by improving their knowledge base during the rotation.
- Teaches and supervises junior learners when appropriate.

Professional

- Knows limits and seeks consultations when appropriate.
- Demonstrates punctuality, availability and reliability in the discharge of duties.
- Respects confidentiality and privacy of the patient.
- Maintains appropriate boundaries in work and learning situations.

May, 2011
Reviewed June 2015
PGY1 Goals and Objectives

PROGRAM: Anesthesia ROTATION: Pediatric Surgery

Medical Expert/Clinical Decision Maker
Knowledge: Basic Science and Anatomy

The resident should have an understanding of the applied anatomy and physiology with respect to the surgical problems and conditions managed by the pediatric surgical service.

Knowledge: General Clinical

By the end of the rotation, the resident should be able to:

a. Demonstrate the unique communication skills necessary to obtain thorough, focused neonatal and pediatric histories from children, parents, or other caregivers;

b. Elicit key physical signs in children with emphasis on the physical signs associated with surgical conditions.

Knowledge: General Clinical Problems

By the end of the rotation, the resident should be able to:

a. Recognize the unique natural history of neonatal and pediatric diseases and use that information in reaching a diagnosis;

b. Recognize the heat regulation problems in infants and children and the need for careful environmental control during evaluation and management and in the operating room;

c. Recognize the limited host resistance and high risk of nosocomial infections in newborns, and the need for aseptic protocols to minimize environmental hazards;

d. Recognize the need to individualize drug dosage and fluid administration on the basis of weight, and be able to calculate expediently nutritional and fluid and electrolyte requirements using standard formulas;

e. Recognize and accommodate for the altered physiological states (such as immature hepatic and renal function) that affect drug administration;

f. Recognize the normal range and wide variation with respect to diagnostic tests involving infants and children of different ages.

Knowledge: Specific Clinical Problems

Be able to diagnose and define management principles of a variety of surgical conditions, including:

1) The principles of wound healing
2) The principles of resuscitation, stabilization, and disposition
3) The natural history and progress of surgically related disease in the pediatric population
4) The indications and limitations of investigative modalities
5) The indications and limitations, mechanisms of action, interactions, and complications of pharmacologic agents
6) The indications, techniques, and complications of procedural skills, including central venous catheter insertions, lumbar puncture, bladder catheterization and surgical assisting.

The PGY1 should be able to:

1) Recognize and initiate treatment in the acutely ill patient.
2) Recognize the need for and obtain appropriate help in treating patients with complex disease or immediately life-threatening conditions.
3) Complete a clinical assessment of a patient with respect to the history and physical examination.
   • Special attention to physical examination of the abdomen, groin, and perianal regions.
4) Understand the assessment of and initial management of the following conditions:
   • Hypovolemic shock.
   • Fluid and electrolyte requirements.
   • Abdominal pain.
   • Acute and chronic abdominal pain.
   • Vomiting/diarrhea/constipation.
   • Change in bowel habits.
   • G.I. hemorrhage.
   • Upper and lower.
   • Abdominal distension.
   • Bowel obstruction.
   • Abdominal mass.
   • Disorders of the hollow viscus: Perforation, volvulus, herniation, ulceration, intussusception, strangulation, neoplasia.
   • Scrotal masses and hernias.
   • Neck mass.
   • Wound infections.
   • Anorectal disorders.
   • Recognize and initiate management for postop complications.
   • Recognize child neglect and maltreatment, including skeletal injuries, skin injury, sexual abuse and shaken baby syndrome.
   • Perform the following skills.
   • Wound closure and repair.
   • Surgically assist for common, uncomplicated procedures – open and laparoscopic assistance.

Knowledge: Technical

Demonstrate aseptic technique in performing medical and surgical procedures.
Communicator

Convey pertinent information on the neonatal and pediatric inpatients in different circumstances (over the phone, during ward rounds and case conferences).

Provide accurate and concise written information to other health professionals by means of dictated discharge summaries and consultation notes.

Appreciate the importance of communicating not only with the child but also the child’s parents and other family members.

Learn to share and convey favorable and unfavorable information to patients and families and provide updated and accurate medical information if requested.

Understand the crucial role that the patient’s primary care physician plays, not only during the hospitalization but also after discharge.

Be able to:

- Explain general surgical disease processes.
- Obtain informed consent related to common surgical procedures.
- Counsel patients and families about postop conditions and followup.
- Plan, initiate and communicate regarding patient discharge.

Collaborator

Participate in interdisciplinary teams, considering and respecting the opinions of other team members and contributing expertise commensurate with training.

Identify and understand the roles, expertise and limitations of all members of an interdisciplinary team working to achieve a goal related to patient care, an educational program, a research project or an administrative activity.

Work with the other members of the interdisciplinary team to develop a plan for the care of pediatric surgery patients; this may include preoperative and postoperative investigations, treatments and continuing care both in hospital and in ambulatory settings.

Work together with fellow residents and medical students to ensure sharing of responsibility and workload in a pleasant and collegial working environment.

Recognize the key role the ward nursing staff play in ensuring optimal care for infants and children in hospital.

Be respectful of all allied healthcare providers including nurses, pharmacists, respiratory therapists and physiotherapists.

Manager

To achieve these competencies during the pediatric surgery rotation the resident will:
Recognize appropriate resource allocation.

Ensure that chart notes document important points in the patient’s course, treatment options, expectations and plans for care.

Understand the principle of Quality Assurance in clinical practice.

Be able to manage timely admission and discharge of patients on busy active inpatient units.

Ensure the smooth and efficient transfer of patients from other hospitals to the ward, and recognize when transfer from the ward to the step down unit or intensive care unit is warranted.

Appreciate the issues surrounding informed consent and refusal of treatment in children and adolescents and the right of adolescents to confidentiality.

Understand the costs and cost effectiveness of treatments and interventions for infants and children in a hospital setting.

**Health Advocate**

Understand and be able to communicate to patients the risk factors associated with surgery and the issues related to deciding upon a surgical course of treatment.

The resident should be an injury prevention health advocate.

**Scholar**

Understand the value of ongoing systems of peer review, maintenance of competence, and evaluation of outcomes in the management of sick infants and children.

Recognize the importance of self-assessment, self-directed learning and personal continuing education combined with integrated patient care.

Be able to critically appraise medical literature and apply these skills in practicing evidence-based medicine.

Teach the principles of neonatal and pediatric illnesses to medical students, fellow residents and other health professionals.

Demonstrate Continuing Medical Education by preparing for rounds, clinic exposure, and the operating room.

Review texts, recommended reading and review articles in preparation for OR cases and related to pediatric surgical patients.

**Professional**
Appreciate the emotional and ethical issues surrounding the care of a sick infant or child and the need to involve parents, children's advocates and other caregivers in providing support in difficult situations and circumstances.

Be aware of the life-long significance of serious or chronic illnesses in children and their impact on quality of life.

Understand and appraise the ethics of research concerning children.

Demonstrate appropriate attitudes with respect to gender, culture and ethnicity.

Interact with patients, families, nurses and other health care personnel in a professional manner with appropriate attitudes.

Work to maintain and advance professional competence.

Respect all opinions of health care workers as well as the patients and their family.

Provide care in an ethical manner and demonstrate an appropriate work ethic.

Examine and resolve interpersonal difficulties in professional relationships.

Strive to balance personal and professional roles and responsibilities, and to demonstrate ways to resolve conflicts in these areas.

Constantly evaluate personal knowledge, skills and abilities, and recognize the limits of her/his professional competence.

May, 2011
May 2014
Thoracic Surgery PGY1 Rotation

Anesthesiology Specific Goals and Objectives

In addition to the goals and objectives defined by the Department of Surgery for PGY1 rotating residents, the following goals and objectives should be acquired by residents in Anesthesiology, during the Thoracic Surgery rotation.

Medical Expert

The anesthesiology resident should understand the following clinical topics during the Thoracic Surgery rotation:

- The physiological changes associated with the perioperative period, including fluid shifts, inflammation and changes in the coagulation system.
- The physiology of pain and the management of postoperative pain, with emphasis on the effects and complications of thoracic epidural analgesia.
- The management of common postoperative complications, including perioperative acute coronary syndromes, hypovolemia and hemorrhagic shock, deep vein thrombosis and pulmonary embolism and atelectasis and pneumonia.
- Indications for blood product utilization.
- Preoperative assessment of the patient for thoracic surgery, including the utility of pulmonary function studies and prediction of postoperative pulmonary complications.
- The insertion of chest tubes and their management, and complications.
- The diagnosis and management of postoperative respiratory failure.
- Bronchial anatomy.
- Indications for and complications of bronchoscopy.
- Innervation of the oropharynx, larynx and trachea, as it applies to anesthesia for bronchoscopy.
- Use of the bronchoscope, including topical anesthesia, the skill of bronchoscopy and the care of the bronchoscope.

Communicator

- Exhibits compassion and support for patients and their families during the perioperative period.
- Exhibits compassion and support for patients and their families as it relates to advanced malignancies, palliative care, end of life care and end of life planning.
- Establishes a trusting professional relationship with patients and their families.
- Produces effective oral and written problem oriented presentations of patient condition and management.
- Encourages patient and family input into critical decision making.
- Exhibits competency and understanding of the tenants in obtaining informed patient consent for components of care including blood product transfusion, bronchoscopy and chest tube insertion.

Collaborator
• Collaborates and effectively communicates with other members of the health care team to ensure optimal patient management.
• Gains increased understanding of the unique and important collaborative interplay between anesthesia and thoracic surgery during operative care of the thoracic surgery patient as it relates to induction, airway management, fluid administration, pain control, ventilation and arrhythmias.
• Treats all members of the health care team in a respectful manner.
• Accepts appropriate share of work assignments.
• Obtains consultation appropriately, with a clear understanding of the role and expectations of the consultant.

Manager

• Understands the logistics of operating room booking and the flow of patients from the decision to carry out surgery to their discharge.
• Effectively coordinates preparation of patients for the OR and their disposition postoperatively.
• Works with the thoracic surgery team to supervise care of patients with many care providers and complicated discharge planning.

Health Advocate

• Ensures effective preoperative optimization.
• Ensures appropriate postoperative management, including transfer of high risk patients to monitored care, discharge planning and the provision of appropriate follow up after surgery.

Scholar

• Attends all educational events, including the anesthesia half-day.
• Shows evidence of preparation for elective cases.
• Demonstrate effective use of information technology.
• Attends all thoracic surgery educational activities including seminar teaching sessions, teaching case rounds, journal clubs.

Professional

• Respects diversity of age, culture, religion, gender and socioeconomic status.
• Understands the legal requirements regarding informed consent, disclosure of harm and patient confidentiality.
• Demonstrates compassionate care in a challenging population of patients, often with issues related to socioeconomics, substance abuse and sensitive issues related to cancer care.

May 2011
July 2015 - Revised
NEPHROLOGY OBJECTIVES FOR COMPETENCY IN CANMEDS ROLES

How to Grade

- **1-2:** The resident has not met these competencies and additional time is necessary. Feedback for such an evaluation in any domain **MUST** be provided to the Program Director
- **3-4:** Resident has achieved the competency/objective and is performing at an appropriate level or often above the level of training.
- **5:** Outstanding: It is expected that only **10 to 20%** of the residents would complete the competency/objective at this level.

In the comment section, **AVOID** using generalizations; instead please **USE** specific descriptions or examples.

Provide trainees recommendations in order to attain a higher level of performance in a supportive manner. Comments **MUST** justify the ratings provided

B. OBJECTIVES FOR CLINICAL SKILLS IN SJH NEPHROLOGY (Medical Expert)

*Listed below are the Nephrology specific objectives for Internal Medicine residents. It should be noted that not all objectives will be met while residents are on the clinical rotation. Further learning takes place during outpatient clinics, nephrology education seminars and independent learning.*

Develop an approach in diagnosing and managing common problems experienced by a patient presenting with renal disease: (1) Acute kidney injury (2) Approach to glomerulonephritis (3) Management of electrolyte disturbances including Na/K/Ca/Phos disorders (4) Management of patients on hemodialysis and associated specific complications (5) Assessment of urinalysis (6) Understand the role of the immune system and AKI (7) Recognize the various syndromes such as Hepato-renal and cardio-renal (8) Recognize the implications of polypharmacy (ie adverse effects/drug interactions/pharmacokinetics in patients with renal disease) (9) Review role of dialysis in management of toxins.

**Competently perform the following procedures:** temporary dialysis catheter insertion (IJ, femoral)
RESIDENT: __________________________   DATES OF SUPERVISION: __________________________

OBJECTIVE: THE RESIDENT WILL DISPLAY EFFECTIVE CANMEDS COMPETENCIES - AKI PGY4

1        2          3         4       5
N/A Unsatisfactory Needs to Improve Satisfactory Very Good Outstanding
Many major Several Important at an Often exceeds Consistently exceeds
Deficiencies Deficiencies appropriate level level of training level of training

MEDICAL EXPERT:
The resident addressed the following medical expert areas:

1) Renal physiology and blood pressure control
2) ABG perturbations in AKI and CKD
3) Sodium and Potassium disorders
4) Contrast Induced Nephrotoxicity
5) Rhabdomyolysis and AKI
6) Pathophysiology and natural history of ATN
7) Pharmacokinetics in renal failure

The resident was able to diagnose and manage the patient upon case review
○ 1    2      3       4   5

The resident had a good understanding of the underlying renal associated medical expert areas identified above during case review
○ 1    2      3       4   5
NEPHROLOGY OBJECTIVES FOR COMPETENCY IN CANMEDS ROLES

How to Grade

- **1-2**: The resident has not met these competencies and additional time is necessary. Feedback for such an evaluation in any domain **MUST** be provided to the Program Director.
- **3-4**: Resident has achieved the competency/objective and is performing at an appropriate level or often above the level of training.
- **5**: Outstanding: It is expected that only **10 to 20%** of the residents would complete the competency/objective at this level.

In the comment section, **AVOID** using generalizations; instead please **USE** specific descriptions or examples.

Provide trainees recommendations in order to attain a higher level of performance in a supportive manner. Comments **MUST** justify the ratings provided.

B. OBJECTIVES FOR CLINICAL SKILLS IN SJH NEPHROLOGY (Medical Expert)

*Listed below are the Nephrology specific objectives for Internal Medicine residents. It should be noted that not all objectives will be met while residents are on the clinical rotation. Further learning takes place during outpatient clinics, nephrology education seminars and independent learning.*

Develop an approach in diagnosing and managing common problems experienced by a patient presenting with renal disease:

1. Acute kidney injury
2. Approach to glomerulonephritis
3. Management of electrolyte disturbances including Na/K/Ca/Phos disorders
4. Management of patients on hemodialysis and associated specific complications
5. Assessment of urinalysis
6. Understand the role of the immune system and AKI
7. Recognize the various syndromes such as Hepato-renal and cardio-renal
8. Recognize the implications of polypharmacy (ie adverse effects/drug interactions/pharmacokinetics in patients with renal disease)

**Competently perform the following procedures:** temporary dialysis catheter insertion (IJ, femoral)
RESIDENT: ___________________________________ DATES OF SUPERVISION: ______________________

OBJECTIVE: THE RESIDENT WILL DISPLAY EFFECTIVE CANMEDS COMPETENCIES - AKI PGY4

<table>
<thead>
<tr>
<th>N/A</th>
<th>1 Unsatisfactory</th>
<th>2 Needs to Improve</th>
<th>3 Satisfactory at an appropriate level</th>
<th>4 Very Good Often exceeds level of training</th>
<th>5 Outstanding Consistently exceeds level of training</th>
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<tr>
<td></td>
<td>Many major Deficiencies</td>
<td>Several Important Deficiencies</td>
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MEDICAL EXPERT:
The resident was able to consult and collaborate with other medical professionals in the provision of optimal patient care
○ 1 2 3 4 5

The resident was able to compare different renal replacement therapy modalities for AKI (including acute IHD, SLED, CRRT, acute PD) and discussed their benefits and disadvantages based on evidence
○ 1 2 3 4 5

The resident had an approach to diagnosis and management of various AKI syndromes including hepatorenal and cardiorenal syndromes
○ 1 2 3 4 5

The resident was able to manage volume in patients with AKI and understood the impact of fluid and AKI
○ 1 2 3 4 5

The resident recognized the association of AKI post coronary artery bypass grafting and cardiac valvular surgery and discussed the risk factors in association with this
○ 1 2 3 4 5

The resident was able to consult upon the potential risk of contrast induced nephropathy and reviewed the evidence and implemented management in regards to minimizing renal injury
○ 1 2 3 4 5

The resident was able to identify and manage electrolyte disorders including but not limited to sodium, potassium, calcium, magnesium and phosphorous
○ 1 2 3 4 5

The resident was able to identify the role of the immune system, inflammation and AKI
○ 1 2 3 4 5

COMMUNICATOR:
The resident listened effectively and was aware and responsive to nonverbal cues. The resident encouraged discussion and questions and helped to facilitate interaction in clinical encounter
○ 1 2 3 4 5

The resident provided clear, concise consultation outlining etiology and management of AKI with an appropriate note in the chart and a dictated note
○ 1 2 3 4 5

COLLABORATOR:
The resident collaborated effectively with other health care providers in ensuring timely care for patients (eg ensured HD orders were written and phoned into dialysis charge nurse, timely consultations and discussions regarding plan were completed)
○ 1 2 3 4 5

MANAGER:
The resident recognized resource limitations and ordered investigations and medications in a cost effective manner.
○ 1 2 3 4 5

The resident had effective time management skills and was able to prioritize duties (eg deciding which hospital to round on initially, based on level of acuity prioritized between consults and patients being seen, etc.)
○ 1 2 3 4 5
OBJECTIVE: THE RESIDENT WILL DISPLAY EFFECTIVE CANMEDS COMPETENCIES - AKI PGY4

PROFESSIONAL:
The resident demonstrated knowledge and understanding of the professional, legal and ethical codes of practice and acted accordingly to enhance patient care and promote collaboration amongst professionals

SCHOLAR:
The resident was able to pose a question (diagnostic or management) at the bedside and looked up evidence from the medical literature, appraised the medical information and applied the evidence to the specific patient.

The resident exhibited professionalism in balancing multi-site consultative service responsibilities with devised a time management strategy which allowed for dedicated time for self education and learning.

The resident was able to identify areas of deficiency, and was able to accept constructive feedback and developed a strategy for continued development

HEALTH ADVOCATE:
The resident identified opportunities for patient education health promotion in the context of treating renal disease as well as prevention of complications of renal disease.

Strengths and Recommendations to Obtain Higher Level of Learning – COMPLETION MANDATORY
Strengths: Identify two strengths in a CanMeds domain and an example resident demonstrated that strength.

Concrete recommendations for trainee to obtain a higher level of performance – COMPLETION MANDATORY:

What Follow Up Plan was Organized – COMPLETION MANDATORY:

OVERALL EVALUATION (see how to grade section on page 1)

The resident MUST receive verbal feedback. Did this trainee receive verbal feedback? Yes No

Attending Staff Evaluator Signature
Objectives for Clinical Skills in the Coronary Care Unit and the Cardiology Ward

Listed below are the Coronary Care Unit and Cardiology Unit rotation specific objectives for Anesthesia residents.

Anesthesia Objectives for Competency in CanMEDS Roles

Medical Expert
- The resident will demonstrate the ability to integrate medical knowledge, clinical skills and professional attitudes in the provision of care to the cardiac patient.

Communicator
- The resident will demonstrate the ability to establish a therapeutic relationship with the patient and family. This includes the ability to obtain and share pertinent information with the patient and the health care team.

Collaborator
- The resident will demonstrate the ability to work effectively in a team environment, by contributing to interdisciplinary patient care activities and by consulting effectively with other physicians.

Professional
- The resident will practice medicine ethically with integrity, honesty and compassion, always demonstrating respect for others.
- The resident's duties will be discharged reliably.

Scholar
- The resident will develop, implement and monitor a personal continuing education strategy that will include the ability to critically appraise the literature.
- The resident will develop teaching skills in order to facilitate the learning of his/her patients and peers.

Manager
- The resident will utilize health care resources effectively to balance patient care, learning needs and outside activities.
- The resident will be able to utilize information technology to optimize patient care and lifelong learning.
- The resident will demonstrate the ability to effectively coordinate the care of their patient and present their management succinctly at rounds.

Health Advocate
- The resident will identify the important determinants of health affecting patients.
- The resident will recognize and respond to those patient care issues where patient advocacy is appropriate.

Specific Goals and Objectives for the Cardiology Rotation

Medical Expert:

At the end of the rotation the resident will display the ability to manage the following cardiovascular diseases and perform the skills as listed:
Cardiovascular Disease

- Diagnosis and management of acute coronary syndromes.
- Diagnosis and management of congestive heart failure.
- Diagnosis and management of arrhythmias.
- Differential diagnosis and management of shock, with emphasis on management of cardiogenic shock.
- Management of hypertensive emergencies and subsequent investigation.
- Cardiopulmonary resuscitation management, using the ACLS algorithms.
- Management of electrolyte and acid base disturbances in the cardiac patient.
- Pharmacology of vasoactive medications, antiplatelet agents and anticoagulants.
- Indications for pacemaker insertion and pacemaker management.
- Issues relating to end-of-life care.
- Hemodynamic monitoring, using arterial catheter, central nervous pressure monitor and pulmonary artery catheter.
- Understands indications for and management of the intra-aortic balloon pump.

Procedural Skills

- Arterial catheter insertion and care.
- Central venous line insertion and care, with demonstration of appropriate sterile technique.
- Cardioversion and defibrillation.
- Must have knowledge of pulmonary artery catheter insertion technique and complications.
- Must have knowledge of external and transvenous pacemaker placement and management.

Communicator:

The resident will display effective doctor-patient communication skills.

- Listens to and effectively communicates with patients and their families regarding their care.
- Encourages full participation of the patient/family in decision-making and management.
- Can obtain an informed consent for treatment and diagnostic procedures.
- Provides clear instructions and checks whether the patient/family understands.
- Communicates a succinct and focused assessment of a patient with cardiac disease, identifying the relevant pathophysiologic problem and considerations for concurrent illnesses.
- Prepares clear, concise and legible problem-oriented medical records.
- Is able to deliver bad news in a compassionate manner and manage discussions of end-of-life care.

Collaborator:

The resident will display good collaborative team skills.

- Able to request and provide consultations with clear understanding of question being asked.
- Understands the importance of a multidisciplinary team approach to cardiac care.
- Interacts effectively with the nursing, physiotherapy, respiratory care and consulting services.
- Has a straightforward and respectful approach with all health care professionals and peers.
- Takes an appropriate share of team assignments and assists others as required.

Manager:

The resident is an effective manager.

- Displays organizational skills with effective time management.
- Effectively uses information technology to optimize patient care and continued self-learning.
- Identifies and addresses issues related to transfer of patients from ICU or CCU to ward settings.
Health Advocate:

The resident is a health advocate.

- Identifies situations where patient advocacy is required.
- Acts as a patient advocate in dealing with issues of resource allocation, bed management and community support systems.
- Understands the impact of socio-economic status on cardiovascular disease.
- Recognizes and addresses modifiable risk factors for cardiovascular disease with patients.

Scholar:

The resident will develop a plan for personal education.

- Attends and contributes to rounds and learning events.
- Accepts and acts on constructive feedback.
- Searches, retrieves and critically appraises relevant literature and applies this information and evidence based medicine appropriately to the CCU and cardiology patient populations.
- Effectively uses opportunities to teach and supervise juniors.

Professional:

The resident will carry out his/her duties in a professional manner.

- Recognizes limitations and seeks advice and consultation when needed.
- Exercises initiative within limits of knowledge and training and seeks help when appropriate.
- Performs duties and assignments dependably and in a timely and ethical manner.
- Reports facts accurately, including own errors.
- Maintains appropriate boundaries in work and learning situations.
- Respects diversity of race, age, gender, disability, intelligence and socio-economic status.
- Considers quality of life of CCU patients and realizes the importance of placing limits on care, when appropriate.
- Realizes the importance of addressing issues of initiation and withdrawal of life support with patients and families.
- Understands the ethical issues of informed consent, substitute decision maker and withdrawal of life support.

January, 2009
Revised May, 2011
McMaster University Department of Anesthesia
Hematology Rotation Objectives

Objectives for Clinical Skills in Hematology

Listed below are the Hematology rotation specific objectives for Anesthesia residents.

Anesthesia Objectives for Competency in CanMEDS Roles

Medical Expert

- The resident will demonstrate the ability to integrate medical knowledge, clinical skills and professional attitudes in the provision of care to the hematology patient.

Communicator

- The resident will demonstrate the ability to establish a therapeutic relationship with the patient and family. This includes the ability to obtain and share pertinent information with the patient and the health care team.

Collaborator

- The resident will demonstrate the ability to work effectively in a team environment, by contributing to interdisciplinary patient care activities and by consulting effectively with other physicians.

Manager

- The resident will utilize health care resources effectively to balance patient care, learning needs and outside activities.
- The resident will be able to utilize information technology to optimize patient care and lifelong learning.

Health Advocate

- The resident will identify the important determinants of health affecting patients.
- The resident will recognize and respond to those patient care issues where patient advocacy is appropriate.

Scholar

- The resident will develop, implement and monitor a personal continuing education strategy that will include the ability to critically appraise the literature.
- The resident will develop teaching skills in order to facilitate the learning of his/her patients and peers.

Professional

- The resident will practice medicine ethically with integrity, honesty and compassion, always demonstrating respect for others.
- The resident's duties will be discharged reliably and they will always strive for excellence.

Specific Goals and Objectives for the Hematology Rotation

Medical Expert:

At the end of the rotation the resident will demonstrate knowledge in the following areas:

- Anatomy and physiology of the normal hematological system.
- Physical signs and symptoms of hematological disease.
- Co-morbid states commonly associated with hematological disease.
- Pathophysiology, assessment and management of anemia.
• Pharmacology of oral and parenteral anticoagulation agents and means available for their reversal.
• Recognition, management and prevention of thromboembolism.
• Recognition and management of infections in the immuno-comprised host.
• Management of febrile neutropenia
• Pathophysiology and management of thrombocytopenia.
• Inherited and acquired disorders of coagulation.
• Polycythemia.
• Hemoglobinopathies.
• Hematological complications of pregnancy.
• Myeloproliferative/myelodysplastic disorders.
• Hematological malignancy, including leukemia, lymphoma and multiple myeloma, and their management.
• Anesthetic implications of inherited or acquired hematological disease.
• Transfusion therapy, including peri-operative optimization of the patient with inherited or acquired disorders of coagulation.
• Understand the natural history of postoperative thrombocytopenia and thrombocytosis
• Diagnosis and management of drug-induced thrombocytopenia, including heparin-induced thrombocytopenia (HIT). Diagnostic tests of coagulation, use of blood smear and bone marrow aspirate/biopsy, thromboelastography.
• Blood-borne viral disease.
• Understand the preparation of blood products for clinical use.

The resident will become proficient in the following procedures:

• Venepuncture and IV access techniques

**Communicator:**

The resident will display effective doctor-patient communication skills.

• Listens to and effectively communicates with patients and their families appropriately.
• Encourages full participation of the patient/family in decision-making and management.
• Can obtain an informed consent for treatment and therapies.
• Provides clear instructions and checks whether the patient/family understand situation.
• Communicates a succinct, system-orientated presentation of a patient's condition, identifying the relevant pathophysiologic medical problem.
• Documents information in the medical records in a clear, concise and legible problem-oriented fashion.
• Provides dictated reports, records and consultation notes in an organized, complete and concise fashion.

**Collaborator:**

The resident will display good collaborative team skills.

• Able to request and provide consultations with clear understanding of question being asked.
• Understands the importance of a multidisciplinary team approach to patient care.
• Interacts effectively with the nursing, hematology, laboratory and consulting services.
• Has a straightforward and respectful approach with all health care professionals and peers.
• Takes an appropriate share of team assignments and assists others as required.
Manager:

The resident is an effective manager.

- Displays organizational skills with effective time management.
- Effectively uses information technology to optimize patient care and continued self-learning.
- Identifies and addresses issues related to transfer of patients with hematological disease.

Health Advocate:

The resident is a health advocate.

- Identifies situations where patient advocacy is required.
- Acts as a patient advocate.
- Recognizes situations where advocacy for the health care profession is required.

Scholar:

The resident will develop a plan for self-improvement.

- Attends and contributes to rounds and learning events.
- Accepts and acts on constructive feedback.
- Searches, retrieves and critically appraises relevant literature and applies this information and evidence based medicine appropriately to the treatment of patients with hematological disease.
- Effectively uses opportunities to teach and supervise juniors.

Professional:

The resident will carry out his/her duties in a professional manner.

- Recognizes limitations and seeks advice and consultation when needed.
- Exercises initiative within limits of knowledge and training.
- Performs duties and assignments dependably and in a timely and ethical manner.
- Reports facts accurately, including own errors.
- Maintains appropriate boundaries in work and learning situations.
- Respects diversity of race, age, gender, disability, intelligence and socio-economic status.
- Considers quality of life of patients with hematological disease and the impact on their families.
- Realizes the importance of addressing issues of initiation and discontinuation of therapy with patients and families.

January, 2009
Reviewed November, 2011,
Revised June, 2015
Objectives for Clinical Skills in the Adult Intensive Care Unit

Listed below are the Adult Intensive Care rotation specific objectives for Anesthesia residents.

Anesthesia Objectives for Competency in CanMEDS Roles

Medical Expert
- The resident will demonstrate the ability to integrate medical knowledge, clinical skills and professional attitudes in the provision of care to the critically ill adult patient.

Communicator
- The resident will demonstrate the ability to establish a therapeutic relationship with the patient and family. This includes the ability to obtain and share pertinent information with the patient and the health care team.
- The resident will demonstrate the ability to effectively coordinate the care of their patient and present their management succinctly at rounds.

Collaborator
- The resident will demonstrate the ability to work effectively in a team environment, by contributing to interdisciplinary patient care activities and by consulting effectively with other physicians.

Manager
- The resident will utilize health care resources effectively to balance patient care, learning needs and outside activities.
- The resident will be able to utilize information technology to optimize patient care and lifelong learning.

Health Advocate
- The resident will identify the important determinants of health affecting patients.
- The resident will recognize and respond to those patient care issues where patient advocacy is appropriate.

Scholar
- The resident will develop, implement and monitor a personal continuing education strategy that will include the ability to critically appraise the literature.
- The resident will develop teaching skills in order to facilitate the learning of his/her patients and peers.

Professional
- The resident will practice medicine ethically with integrity, honesty and compassion, always demonstrating respect for others.

Specific Goals and Objectives for the Adult Intensive Care Unit Rotation

Medical Expert:

By the end of the rotation, the resident will understand the management of common problems presented by the critically ill adult:

Respiratory Disease
- Differential diagnosis and management of respiratory failure, including indications for non-invasive positive pressure ventilation (NIPPV), endotracheal intubation and mechanical ventilation.
- Understand the indications and techniques for weaning from mechanical ventilation.
Be able to interpret arterial, peripheral venous and central or mixed venous blood gases.
Understand the management of common respiratory diseases and disorders including:
  - Acute asthma
  - Pneumonia
  - Acute Respiratory Distress Syndrome (ARDS)
  - Pneumothorax
  - Pulmonary hemorrhage.

**Cardiovascular Disease**
- Differential diagnosis and management of acute coronary syndromes.
- Management of severe hypertension, including pharmacology of anti-hypertensive agents.
- Differential diagnosis of shock and management of the following shock syndromes:
  - Cardiogenic shock
  - Septic shock
  - Hypovolemic shock, including management of massive transfusion
  - Obstructive shock (pulmonary embolism, pericardial tamponade, tension pneumothorax)
  - Anaphylaxis shock
- Know the latest guidelines for the management of cardiopulmonary arrest.
- Understand the principles and practice of hemodynamic monitoring via arterial lines, central line and pulmonary artery catheter.
- Know the mechanism of action and be able to effectively use vasoactive medications.
- Understand the indications for pacemaker insertion, and the management of the patient with a pacemaker or intracardiac defibrillator.
- Arrhythmia management and pharmacology of anti-arrhythmic medications.
- Understand indications for and management of IABP
- Understand the indication for management and interpretation of the data from a pulmonary artery catheter.

**Neurological Disease**
- Differential diagnosis of delirium or decreased level of consciousness.
- Management of central nervous system trauma.
- Monitoring and management of raised intracranial pressure.
- Management of seizures.
- Diagnosis and management of intracranial infections.
- Understand the differential diagnosis and management of intracranial vascular events, including:
  - Subarachnoid hemorrhage
  - Intracerebral bleeding
  - Embolic and thrombotic stroke
  - Venous sinus thrombosis
- Understand the management of post anoxic-ischemic encephalopathy, including indications for therapeutic hypothermia.
- Management of brain death and withdrawal of life support, including management of the patient for organ donation.
- Management of sedation in the ICU.

**Renal and Metabolic Disease**
- Prevention and management of acute renal failure.
- Management of the patient with chronic renal failure, including principles of and indications for dialysis.
- Differential diagnosis and management of electrolyte disorders.
- Differential diagnosis and management of acid-base disorders.
- Common endocrine emergencies, including:
  - Diabetic ketoacidosis
  - Hyperthyroidism, including thyroid storm.
  - Hypothyroidism, including myxedema coma.
  - Adrenal insufficiency.
Gastrointestinal Disease:
- Differential diagnosis and management of acute GI bleeding
- Enteral and parenteral nutrition.
- Differential diagnosis and management of hepatic failure.

Hematological Disease:
- Management of coagulopathy.
- Indications for and management of transfusion therapy.
- Recognition and management of:
  - heparin induced thrombocytopenia
  - thrombotic thrombocytopenia purpura
  - febrile neutropenia

Infectious Disease:
- Diagnosis and management of fever in the ICU.
- Understanding and prevention of line sepsis.
- Infection in the immuno-suppressed host.
- Management of common infections, including:
  - community acquired pneumonia
  - hospital acquired and ventilator associated pneumonia.
  - meningitis and other CNS infections
  - intra abdominal infection
  - soft tissue infection

Trauma:
- Management of the multiple trauma patient.
- Management of the severely burned patient.

Toxicology:
- General principles of management of the patient with toxic drug ingestion.

Post operative Management:
- Management of the critically ill post operative patient.

Competently perform the following procedures:
- Arterial catheter.
- Central venous catheter.
- Endotracheal intubation and mechanical ventilation of the critically ill patient.
- Chest tube insertion and management.

Communicator:

The resident will display effective doctor-patient communication skills.
- Listens to and effectively communicates with patients and their families in emotionally charged situations.
- Encourages full participation of the patient/family in decision-making and management.
- Can obtain an informed consent.
- Provides clear instructions and checks whether the patient/family understands.
- Communicates a succinct, system-orientated presentation of a critically ill patient, identifying the relevant pathophysiologic problem.
- Clear, concise and legible problem-oriented medical records.

Collaborator:

The resident will display good collaborative team skills.
Able to request and provide consultations with clear understanding of question being asked.
Understands the importance of a multidisciplinary team approach to critical care.
Interacts effectively with the nursing, physiotherapy, respiratory care and consulting services.
Provides concise, appropriate handover of patients after night on call.
Has a straightforward and respectful approach with all health care professionals and peers.
Takes an appropriate share of team assignments and assists others as required.
Effectively communicates with other services for the timely investigation and management of
patients, and on transfer of the patient from the ICU to other wards or hospitals.

Manager:

The resident is an effective manager.

- Displays organizational skills with effective time management.
- Effectively uses information technology to optimize patient care and continued self-learning.
- Identifies and addresses issues related to transfer of patients from ICU to ward settings.
- Is aware of bed management issues.
- Is consistently aware of anticipated admissions and patients ready for discharge.

Health Advocate:

The resident is a health advocate.

- Identifies situations where patient advocacy is required.
- Acts as a patient advocate by:
  - optimizing patient condition before transfer to ward and ensuring appropriateness of
    transfer.
  - obtaining appropriate investigations, consultations and transfers to specialized units in a
    timely fashion.

Scholar:

The resident will develop a plan for self-improvement.

- Attends and contributes to rounds and learning events.
- Accepts and acts on constructive feedback.
- Searches, retrieves and critically appraises relevant literature and applies this information
  and evidence based medicine appropriately to relevant ICU population.
- Effectively uses opportunities to teach and supervise juniors.

Professional:

The resident will carry out his/her duties in a professional manner.

- Recognizes limitations and seeks advice and consultation when needed.
- Exercises initiative within limits of knowledge and training.
- Performs duties and assignments dependably and in a timely and ethical manner and seeks
  help when appropriate.
- Reports facts accurately, including own errors.
- Maintains appropriate boundaries in work and learning situations.
- Respects diversity of race, age, gender, disability intelligence and socio-economic status.
- Considers the quality of life of ICU patients and their families.
- Realizes the importance of addressing issues of initiation and withdrawal of life support with
  patients and families and of placing limits on care, when appropriate.

January, 2012
Objectives for Clinical Skills in Infectious Disease

Listed below are the Infectious Disease rotation specific objectives for Anesthesia residents.

Anesthesia Objectives for Competency in CanMEDS Roles

Medical Expert
- The resident will demonstrate the ability to integrate medical knowledge, clinical skills and professional attitudes in the provision of care to the patient with infectious disease.

Communicator
- The resident will demonstrate the ability to establish a therapeutic relationship with the patient and family. This includes the ability to obtain and share pertinent information with the patient and the health care team.
- The resident will demonstrate the ability to effectively coordinate the care of their patient and present their management succinctly at rounds.

Collaborator
- The resident will demonstrate the ability to work effectively in a team environment, by contributing to interdisciplinary patient care activities and by consulting effectively with other physicians.

Manager
- The resident will utilize health care resources effectively to balance patient care, learning needs and outside activities.
- The resident will be able to utilize information technology to optimize patient care and lifelong learning.

Health Advocate
- The resident will identify the important determinants of health affecting patients.
- The resident will recognize and respond to those patient care issues where patient advocacy is appropriate.

Scholar
- The resident will develop, implement and monitor a personal continuing education strategy that will include the ability to critically appraise the literature.
- The resident will develop teaching skills in order to facilitate the learning of his/her patients and peers.

Professional
- The resident will practice medicine ethically with integrity, honesty and compassion, always demonstrating respect for others.

Specific Goals and Objectives for the Infectious Disease Rotation

Medical Expert:

At the end of the rotation the resident will be able to diagnose and manage common infectious disease problems:

Respiratory Disease:
- Community acquired pneumonia
- Diagnosis and management of acute tuberculosis.
- Hospital acquired and ventilator associated pneumonia.
- Opportunistic respiratory infection.
- Understand the principles of outbreak management and containment, including isolation procedures.

**Cardiovascular Disease:**
- Septic shock
- Bacterial endocarditis, prevention and management.

**Neurological Disease:**
- Neurological infection, including meningitis, encephalitis and brain abscess.

**Gastrointestinal Disease:**
- Management of intestinal infection, with emphasis on colitis caused by Clostridia difficile.
- Management of intra abdominal infections.

**Other:**
- Management of febrile neutropenia and infection in the immune compromised host.
- Soft tissue infections.
- Osteomyelitis
- Line sepsis and its prevention.
- Post operative wound infections and their prevention.
- Understand the principles of source control, including indications for drainage of infected material and surgical management.
- Understand the pharmacology and medications for antibiotic therapy.
- Understand the common diagnostic methods in microbiology.
- Understands the diagnosis and management of infected protheses and instrumentation.

**Communicator:**

The resident will display effective doctor-patient communication skills.

- Listens to and effectively communicates with patients and their families regarding their care.
- Encourages full participation of the patient/family in decision-making and management.
- Can obtain an informed consent for treatment and diagnostic procedures.
- Provides clear instructions and checks whether the patient/family understands.
- Communicates a succinct and focussed assessment of a patient with infectious dis ease, identifying the relevant pathophysiologic problem and considerations for concurrent illnesses.
- Prepares clear, concise and legible problem-oriented illnesses.

**Collaborator:**

The resident will display good collaborative team skills.

- Able to request and provide consultations with clear understanding of question being asked.
- Understand the importance of a multidisciplinary team approach to infectious disease.
- Interacts effectively with the nursing, physiotherapy, respiratory care and other consulting services.
- Has a straightforward and respectful approach with all health care professionals and peers.
- Takes an appropriate share of team assignments and assists others as required.

**Manager:**

The resident is an effective manager.
- Displays organizational skills with effective time management.
- Effectively uses information technology to optimize patient care and continued self-learning.
- Identifies and addresses issues related to infectious disease control.

**Health Advocate:**

The resident is a health advocate.

- Identifies situations where patient advocacy is required.
- Acts as a patient advocate to obtain appropriate admissions, investigation and consultation in a timely fashion.
- Understands the determinants of susceptibility to infection and counsels patients appropriately.

**Scholar:**

The resident will develop a plan for self-improvement.

- Attends and contributes to rounds and learning events.
- Accepts and acts on constructive feedback.
- Searches, retrieves and critically appraises relevant literature and applies this information and evidence based medicine appropriately to relevant infectious disease population.
- Effectively uses opportunities to teach and supervise juniors.

**Professional:**

The resident will carry out his/her duties in a professional manner.

- Recognizes limitations and seeks advice and consultation when needed.
- Exercises initiative within limits of knowledge and training.
- Performs duties and assignments dependably and in a timely and ethical manner.
- Reports facts accurately, including own errors.
- Maintains appropriate boundaries in work and learning situations.
- Respects diversity of race, age, gender, disability, intelligence and socio-economic status.
- Considers quality of life of patients and realizes the importance of placing limits on care.
- Realizes the importance of addressing issues of initiation and withdrawal of treatment with patients and families.

Updated February 2012
Reviewed – July 2015
Palliative Care Rotation Learning Objectives
Department of Anesthesia, McMaster University
PGY3 Medical Elective

Medical Expert Role:

The resident will be able to perform a complete palliative medicine consultation, including assessing physical, social, psychological, spiritual and functional parameters.

The resident will be able to describe medical and societal attitudes towards death and dying.
  • The resident will be able to describe current societal attitudes about death and dying, describe societal and environmental factors relevant to care of the dying and identify issues in death and dying relevant to different cultures, faiths and traditions.

The resident will be able to demonstrate a whole person (person-centered) approach to the care of patients facing advanced disease and of their families.
  • The resident will be able to define palliative care and describe its basic principles; describe the physical, psychological, social and spiritual issues encountered by patients living with or dying from an advanced illness and by their families; and demonstrate an ability to work with the patient and family to establish common, patient-centered goals of care.

The resident will be able to demonstrate knowledge, skills and attitudes in managing symptoms of advanced disease.
  • The resident will be able to perform an assessment (including a thorough history, physical exam, and ordering/interpreting appropriate investigations), understand the pathophysiology, and propose an etiology and management strategy for each of the following symptoms: 1) nausea and vomiting, 2) dyspnea, 3) delirium, 4) constipation, 5) skin and mouth care, 6) terminal agitation, 7) anorexia and cachexia, 8) weakness and fatigue, 9) edema, and 10) bleeding/thrombosis
    • The resident will demonstrate an understanding of the role for hydration and nutritional therapies

The resident will be able to demonstrate knowledge, skills and attitudes in managing pain in advanced disease.
  • The resident will be able to demonstrate knowledge of the assessment of pain (including the use of validated assessment tools, history-taking skills, physical examination skills, and appropriate ordering and interpretation of investigations), common cancer pain syndromes, the neurophysiology of pain transmission, the pharmacology (pharmacokinetics and pharmacodynamics) of medications used in pain management, and the special and specific issues in the assessment of pain in patients with cognitive impairment
    • The resident will be able to demonstrate knowledge of dose selection, titration, routes of administration, and effectiveness of pain medications, such as opioids (including methadone) and other adjuvants (NSAIDS, anti-depressants, anti-convulsants, steroids, cannabinoids, ketamine, etc…)
    • The resident will be able to identify side effects of pain medications and their management
The resident will learn indications for, management of, and complications of interventional anaesthetic techniques such as epidurals, intrathecal delivery devices, and neurolytic blocks.

The resident will be able to demonstrate knowledge, skills and attitudes in managing the psychosocial aspects of life-threatening illness.

- The resident will be able to identify psychological, social and spiritual issues associated with life-threatening illnesses and strategies for management;
- understand the role of coping styles in dealing with life-threatening illnesses;
- identify anger, fear and strong affective responses to life-threatening illness;
- identify depression and anxiety in patients with life-threatening illness;
- describe the process of normal grief and features of atypical grief; and understand a basic approach to bereavement work.

The resident will be able to demonstrate an approach to managing pain and other symptoms, in addition to the psychosocial care of patients in the last days to weeks of life.

- The resident will be able to demonstrate knowledge of the role of the physician at the time of death.

The resident will be able to demonstrate effective knowledge, skills and attitudes in assessing and managing palliative patients suffering from advanced non-malignant illnesses.

- The resident will be able to demonstrate knowledge of the assessment and management of patients with advanced non-malignant illnesses such as COPD, CHF, CVA, CRF, Dementias, and progressive neuromuscular diseases.

The resident will be able to describe the principles of oncologic management of common cancers and the role of these treatments throughout the disease trajectory.

- The resident will be able to demonstrate an understanding of the principles of cancer epidemiology, its natural history, possible complications, and basic principles of management of common malignant cancers, such as breast, lung, colon, prostate, pancreas and hematologic cancers.
- The resident will be able to demonstrate basic knowledge of the role of radiation and chemotherapy in the management of patients with cancer at various stages along the disease continuum; demonstrate knowledge of the role of radiation and chemotherapy in the palliative management of patients with cancer; and demonstrate knowledge of the side-effects of radiotherapy and chemotherapy administered with palliative intent and the effective management of these side-effects.
- The resident will demonstrate knowledge of interventional techniques related to the care of patients with cancer, specifically, the indication for, complications of, and methods of obtaining consultation for placement of parenteral lines (Hickman catheters, PICC lines, Port-a-Caths) and interventional radiological procedures (G-tubes, nephrostomy tubes, esophageal and colorectal stents, biliary drain procedures, and vertebroplasty).
- The resident will recognize and describe the pathophysiology and management of the following palliative emergencies/urgencies (including any potential surgical, radiological and oncological therapy, if appropriate): 1) airway obstruction, 3)
catastrophic bleeding, 4) spinal cord compression, 5) SVC syndrome, 6) biliary, urinary or bowel obstruction, 7) DVTs and PEs, and 8) hypercalcemia.

The resident will be able to discuss ethical issues confronting dying patients, their families and health care providers, including end of life decision-making, advance directives, competency, euthanasia and assisted suicide.

- The resident will be able to outline a general framework for ethical decision-making and demonstrate an approach to addressing particular ethical issues at the end of life, including withdrawal or withholding therapy.

Communicator

The resident will be able to develop rapport, trust and ethical therapeutic relationships with patients and families.

- The resident will be able to understand the impact of good patient-physician communication on patient care, patient satisfaction, and clinical outcomes; demonstrate skills in patient-physician communication, including active listening, reflection, and the use of non-verbal cues; demonstrate skill in discussing end of life issues with patients and families, such as treatment choices, location of care and resuscitation decisions; and develop skill in breaking bad news to patients and families.

The resident will be able to demonstrate skill in developing a shared understanding of a patient’s goals of care and demonstrate an ability to communicate these to all the caregivers in the health care team.

- The resident will be able to understand the importance of a patient's beliefs, hopes, expectations and concerns regarding their illness experience in the establishment of goals of care; participate in and facilitate family meetings to discuss relevant issues such as goals of care and future planning; understand the importance of patient confidentiality; demonstrate skill in addressing challenging communication issues such as anger, misunderstanding and grief reactions; and respect diversity and difference, including but not limited to the effect of gender, religion and cultural beliefs on decision-making.

The resident will be able to convey effective oral and written information about a medical encounter.

- The resident will be able to maintain clear, accurate, and appropriate records (e.g. written or electronic) of clinical encounters and plans and effectively present oral accounts of clinical encounters and plans.

Collaborator

The resident will be able to collaborate as a member of the interprofessional team.

- The resident will be able to describe the roles of other health care providers involved in the provision of palliative care; describe the role of palliative medicine to other health care providers; participate in the interprofessional care of patients across different settings of care, including family conferences and team meetings; communicate effectively with other care providers across different settings of care (community, out-patient, in-patient); understand team function.
and strategies to resolve conflict within teams; and demonstrate skills in educating and learning from members of the interprofessional team.

The resident will be able to consult effectively with other physicians and health care professionals.
- The resident will demonstrate effective consultation and communication skills when working with referring physicians and communicating assessments and plans to referring physicians and services.

Manager

The resident will be able to understand the importance of activities that contribute to the effectiveness of the health care organizations within which they work.
- The resident will be able to describe different models of palliative care delivery and their utilization, describe how models of palliative care delivery fit into the broader health care system, and describe the roles of the family physician and the specialist in the provision of palliative care.
- The resident will demonstrate effective use of resources across the health care system, recognizing the importance of just allocation of health care resources, balancing effectiveness, efficiency and access with optimal patient care.

Health Advocate

The resident will be able to demonstrate knowledge and skills in managing patients who are living with or dying from an advanced disease in the communities that they serve.
- The resident will be able to identify the societal, environmental, and resource allocation factors that are relevant to care of the dying and be able to describe the practice communities that they serve, in order to effectively manage patient and family expectations and needs throughout the course of illness.

The resident will be able to demonstrate the ability to act as an advocate within the health care system.
- The Resident will identify the health needs of a patient with an advanced illness; act as an effective advocate for the rights of these patients and families in clinical situations that involve serious ethical considerations; advocate for the needs of patients/families confronted with advanced illness as they receive care throughout the health care system; and be aware of the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity and idealism.

The resident will be able to identify the determinants of health for the populations that they serve.
- The resident will identify the barriers to adequate palliative care for vulnerable or marginalized patients in their patient population
- The resident will describe the barriers to providing effective palliative care to patients in different care settings
Scholar

The resident will be able to incorporate evidence-based clinical decision-making in providing palliative care for patients and their families.

- The resident will be able to appreciate the level of evidence underpinning common palliative care practices/interventions, access the relevant literature to address a specific clinical question; apply critical appraisal skills to the evidence; and integrate evidence-based care into clinical care.

The resident will facilitate the learning of patients, students and other health care professionals.

- The resident will be able to act as an educator to patients and their families regarding end of life issues; act as a role model to other health care providers by demonstrating effective care of patients with palliative needs; and act as an educational resource for undergraduate and junior postgraduate trainees, if appropriate.

Professional

The resident will demonstrate a commitment to their patients, profession and society through ethical practice.

- The resident will be able to demonstrate appropriate professional behavior, such as honesty, integrity, commitment, compassion, respect and altruism; demonstrate a commitment to delivering the highest quality of care; recognize and seek advice regarding ethical issues; appropriately manage conflict of interest; and maintain appropriate relationships with patients and family members.

The resident will demonstrate a commitment to their patients, profession and society through participation in profession-led regulation.

- The resident will be able to appreciate the professional, legal and ethical codes of practice; fulfill the regulatory and legal obligations required of current practice; demonstrate accountability to professional regulatory bodies; and recognize and respond to others’ unprofessional behaviors in practice.

- The resident will be able to describe his/her concerns about caring for dying patients and their families; demonstrate how his/her personal experiences of death and dying may influence his/her attitudes; and discuss methods of managing his/her stress associated with caring for dying patients.

The resident will demonstrate a commitment to physician health and sustainable practice by recognizing and responding to personal needs and to other professionals in need.

April 11, 2012
Objectives for Clinical Skills in Respiratory Medicine

Listed below are the Respiratory Medicine rotation specific objectives for Anesthesia residents.

Anesthesia Objectives for Competency in CanMEDS Roles

Medical Expert
- The resident will demonstrate the ability to integrate medical knowledge, clinical skills and professional attitudes in the provision of care to the patient with respiratory disease.

Communicator
- The resident will demonstrate the ability to establish a therapeutic relationship with the patient and family. This includes the ability to obtain and share pertinent information with the patient and the health care team.

Collaborator
- The resident will demonstrate the ability to work effectively in a team environment, by contributing to interdisciplinary patient care activities and by consulting effectively with other physicians.

Professional
- The resident will practice medicine ethically with integrity, honesty and compassion, always demonstrating respect for others.
- The resident's duties will be discharged reliably and they will always strive for excellence.

Scholar
- The resident will develop, implement and monitor a personal continuing education strategy that will include the ability to critically appraise the literature.
- The resident will develop teaching skills in order to facilitate the learning of his/her patients and peers.

Manager
- The resident will utilize health care resources effectively to balance patient care, learning needs and outside activities.
- The resident will be able to utilize information technology to optimize patient care and lifelong learning.

Health Advocate
- The resident will identify the important determinants of health affecting patients.
- The resident will recognize and respond to those patient care issues where patient advocacy is appropriate.

Specific Goals and Objectives for the Respiratory Medicine Rotation

Medical Expert:

The resident will display the ability to manage common respiratory illness and perform the skills as listed:

- Diagnosis and management of respiratory failure.
• Understand the physiology of the respiratory system and the interaction between respiratory and cardiovascular physiology.
• Understand the pathophysiology, diagnosis and management of:
  ▪ Asthma
  ▪ COPD
  ▪ Pneumonia
  ▪ Pulmonary embolism
  ▪ Pneumothorax
  ▪ Aspiration
  ▪ Obstructive and Central Sleep Apnea
  ▪ Management of post-operative patients with respiratory disease
• Pharmacology of commonly used inhaled and parenteral medications.
• Understand and interpret pulmonary function tests.
• Understands issues related to Intubation of patients with severe asthma.
• Understand and interpret chest x-ray and CT of the thorax
• Arterial and venous blood gas interpretation.
• Acute and chronic respiratory failure and noninvasive ventilation.

Procedural Skills:
  • Thoracentesis.
  • Bronchoscopy.

Communicator:

The resident will display effective doctor-patient communication skills.

• Listens to and effectively communicates with patients and their families regarding their care.
• Encourages full participation of the patient/family in decision-making and management.
• Can obtain an informed consent for treatment and diagnostic procedures.
• Provides clear instructions and checks whether the patient/family understands.
• Communicates a succinct, system-orientated presentation of a patient with respiratory disease, identifying the relevant pathophysiologic problem and considerations for concurrent illnesses.
• Prepares clear, concise and legible problem-oriented medical records.
• Is able to discuss with patients and families issues relating to severe respiratory illness.

Collaborator:

The resident will display good collaborative team skills.

• Able to request and provide consultations with clear understanding of question being asked.
• Understands the importance of a multidisciplinary team approach to respirology.
• Interacts effectively with the nursing, physiotherapy, respiratory care and consulting services.
• Has a straightforward and respectful approach with all health care professionals and peers.
• Takes an appropriate share of team assignments and assists others as required.

Manager:

The resident is an effective manager.

• Displays organizational skills with effective time management.
• Effectively uses information technology to optimize patient care and continued self-learning.
• Identifies and addresses issues related to admission and discharge of respirology patients.

Health Advocate:
The resident is a health advocate.

- Identifies situations where patient advocacy is required.
- Acts as a patient advocate in dealing with issues of resource allocation, bed management and community support systems.
- Recognizes and addresses the modifiable risk factors for respiratory disease in patients.

Scholar:

The resident will develop a plan for self-improvement.

- Attends and contributes to rounds and learning events.
- Accepts and acts on constructive feedback.
- Searches, retrieves and critically appraises relevant literature and applies this information and evidence based medicine appropriately to relevant respirology population.
- Effectively uses opportunities to teach and supervise juniors.

Professional:

The resident will carry out his/her duties in a professional manner.

- Recognizes limitations and seeks advice and consultation when needed.
- Exercises initiative within limits of knowledge and training.
- Discharges duties and assignments dependably and in a timely and ethical manner and seeks help when appropriate.
- Reports facts accurately, including own errors.
- Maintains appropriate boundaries in work and learning situations.
- Respects diversity of race, age, gender, disability, intelligence and socio-economic status.
- Considers the quality of life of respiratory patients and realizes the importance of placing limits on care.
- Realizes the importance of addressing issues of initiation and withdrawal of life support with patients and families.

Experience may vary at individual sites

September, 2012

September, 2012
McMaster Anesthesia Residency Program  
Daily Evaluation Form

Resident: _________________________  Date: ________________
Site: _______________  List: ____________________  Faculty:_______________________

In-patients seen? Yes / No / N/A  On call? Y / N

Application of accumulated knowledge and experience allows residents to progress towards the goal of functioning independently as safe, competent practitioners. Please use the rating scale to describe the role that you played when working with the resident during the cases today. Please apply the scale to each of the described competencies, as well as to a global assessment.

<table>
<thead>
<tr>
<th>Comments</th>
<th>Competency</th>
<th>Rate 1-5 (See scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-op Eval</td>
<td>1= “Staff had to do” (resident required significant hands-on assistance by staff)</td>
</tr>
<tr>
<td></td>
<td>Anesthetic plan</td>
<td>2= “Staff had to talk resident through” (resident was able to perform task but required frequent direction or input by staff)</td>
</tr>
<tr>
<td></td>
<td>Room Setup</td>
<td>3= “Staff had to prompt resident from time to time” (resident demonstrated some independence but needed intermittent direction)</td>
</tr>
<tr>
<td></td>
<td>Work habits</td>
<td>4= “Staff had to be there just in case” (resident was functionally independent but staff needed to be there at times to ensure that unexpected risks and events could be managed or to provide confirmation of management choices)</td>
</tr>
<tr>
<td></td>
<td>Documentation</td>
<td></td>
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<tr>
<td></td>
<td>Knowledge</td>
<td></td>
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<tr>
<td></td>
<td>Technical skills</td>
<td></td>
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<tr>
<td></td>
<td>Judgment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teamwork and Professionalism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Global assessment of resident performance today</td>
<td>5= “Staff didn’t have to be there” (resident performed safely and independently and could handle any unexpected event; understood and managed all risks; practice-ready)</td>
</tr>
</tbody>
</table>

CanMeds Framework
- Medical Expert
- Communicator
- Collaborator
- Manager
- Health Advocate
- Scholar
- Professional

Note: The rating scale mirrors the expected progress of performance of the resident as they move through residency.
Please provide comments:

1) What were the resident's strengths demonstrated today?

2) What should the resident be working to develop or improve?

Was the evaluation discussed in person with the resident? Y/N

_____________________________    ______________________________
Resident signature     Faculty Signature
# EVALUATION of Academic Half Day ANESTHESIA

**CanMEDS Roles / Competencies**

To be completed by __________________________

On this form, you will be evaluating __________________

For dates: __________________

Session: ____________________________

<table>
<thead>
<tr>
<th>OVERALL COMPETENCE</th>
<th>Below Average</th>
<th>Satisfactory</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1*</td>
<td>2*</td>
<td>3</td>
</tr>
</tbody>
</table>

* you must provide comments when choosing this rating

Comments:

<table>
<thead>
<tr>
<th>Expectations</th>
<th>Below Average</th>
<th>Satisfactory</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1*</td>
<td>2*</td>
<td>3</td>
</tr>
</tbody>
</table>

1. Interest for education (preparation, audience engagement, encouraged questions etc.)

2. The Educator shows good understanding of the subject matter. S/he explains and demonstrates the concepts well.

3. Content (important clinical issues addressed, where applicable integrated basic science and clinical problems, addressed appropriate societal, and clinical issues)

4. The Educator promotes a supportive and effective learning environment; demonstrates commitment to teaching.

5. Ability to teach (organization, visual aids, educational techniques)

6. Evidence Based approach (discussion of research evidence and critical appraisal or provided evidence summaries, bottom line and discussed clinical usefulness of evidence)

7. Communication skills (kept audience interest, handled questions well)

8. If references were given, They related to the lecture content?

9. The Lecturer outlined relevance to future practice and exams

10. Would you recommend this speaker again?

* you must provide comments when choosing this rating

COMMENTS:

Met the Following CanMeds Competencies in:

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

As Medical Experts, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centered care. Medical Expert is the central physician Role in the CanMEDS framework.

As Communicators, Anesthesiologists effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

As Collaborators, Anesthesiologists effectively work within a healthcare team to achieve optimal patient care.

As Managers, Anesthesiologists are integral participants in healthcare organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the healthcare system.
<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>As Health Advocates</strong></td>
<td>physicians responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.</td>
</tr>
<tr>
<td><strong>As Scholars</strong></td>
<td>Anesthesiologists demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.</td>
</tr>
<tr>
<td><strong>As Professionals</strong></td>
<td>Anesthesiologists are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.</td>
</tr>
</tbody>
</table>

*you must provide comments when choosing this rating*
McMaster University Department of Anesthesia
Evaluation of Faculty Clinical Teaching

1 - Poor = Does not fulfill the components of the domain. Below expectations.
2-3 - Fair = Fulfills most components of domain with some omissions. Occasionally meets expectations.
4 - Good = Fulfills all components of domain. Meets expectations.
5-6 - Very Good = Fulfills and at times exceeds all components of domain. Above expectations.
7 - Excellent = Consistently exceeds expectations in all components of domain. Exemplary.

<table>
<thead>
<tr>
<th>Overall Effectiveness of Educator</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tr>
</tbody>
</table>

**Content**

<table>
<thead>
<tr>
<th>The Educator shows good understanding of the subject matter. S/he explains and demonstrates the concepts well.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
</tbody>
</table>

Comments:

**Process**

<table>
<thead>
<tr>
<th>The Educator promotes a supportive and effective learning environment; demonstrates commitment to teaching.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Educator uses effective teaching strategies.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

**Organization**

<table>
<thead>
<tr>
<th>The Educator is punctual, well organized, and prepared in his/her teaching.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Educator provides an appropriate level of supervision for clinical care and teaching.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
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<td></td>
</tr>
</tbody>
</table>

Comments:

**Evaluation**

<table>
<thead>
<tr>
<th>The Educator provides timely, constructive and informative feedback and evaluation.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Comments:

Please provide overall comments:

The following will be displayed on forms where feedback is enabled...
(for the evaluator to answer...)

* Did you have an opportunity to meet with this trainee to discuss their performance?
  ○ Yes
  ○ No

(for the evaluee to answer...)

* Did you have an opportunity to discuss your performance with your preceptor/supervisor?
  ○ Yes
  ○ No
Anesthesia Residency Program
Administrative Resident Evaluation Form

Administrative Residents Name: ______________________________
Date: ______________________________
Site: [□] MUMC [□] H [□] SJH [□] JHCC

<table>
<thead>
<tr>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
<th>Full</th>
<th>Exceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OVERALL EVALUATION</strong></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Overall evaluation of this Admin Resident

<table>
<thead>
<tr>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
<th>Full</th>
<th>Exceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communications Skills</strong></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Communicates issues of interest to other residents in a timely fashion
Communications clearly and specifically, in a collegial fashion

<table>
<thead>
<tr>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
<th>Full</th>
<th>Exceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scholar &amp; Manager</strong></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Provides on call schedules in a timely fashion
Deals effectively with problems relating to scheduling/on call etc.
Exhibits organizational leadership.

<table>
<thead>
<tr>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
<th>Full</th>
<th>Exceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collaborative Skills</strong></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Provides call schedules which are fair and equitable.
Schedules resident lists based on level of clinical training/stated need

<table>
<thead>
<tr>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
<th>Full</th>
<th>Exceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional and Management Skills</strong></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Sets an example of personal and professional behaviour
Demonstrates reliability and availability

<table>
<thead>
<tr>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
<th>Full</th>
<th>Exceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

I would enjoy working with this resident again
I would be happy to have this resident participate in the care of the patient that I am looking after

Comments MUST BE MADE if 1, 2 or 5 are clicked:

In general the teaching experience provided by this resident was:

- [ ] Poor
- [ ] Fair
- [ ] Good
- [ ] Very Good
- [ ] Excellent
Anesthesia Residency Program: 360 Evaluations  
PGY 2, 4 (Medical 360)  
To be completed by: Anesthesia (staff) or Surgical Colleague (staff/resident)

Resident Name:____________________ PGY:___ Date:__________

This resident has recently worked alongside you. We ask your assistance in answering the following
questions about the trainee and provide some brief narrative comments. Collated summaries of
feedback from multiple sources will be provided to the resident to maintain reviewer confidentiality.

Please indicate whether you are:
☐ Anesthesia staff ☐ Surgical Staff ☐ Surgical Resident

How well do you know this Anesthesia resident? (Mark one)
☐ Not at All ☐ Not Well ☐ Somewhat Well ☐ Very Well

For each of the following statements, please indicate whether you agree to disagree by checking the
appropriate box on the 0 – 5 scale

<table>
<thead>
<tr>
<th>Communications Skills</th>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal Progress</th>
<th>Satisfactory Progress</th>
<th>Fully Meets Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is non-judgmental towards patients and their families</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicates effectively with patients and families, including the avoidance of jargon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicates effectively with the surgical team intra-operatively, including seeking help when appropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writes hospital orders and records clearly</td>
<td></td>
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</tbody>
</table>

| Scholar & Manager | | | | |
|-------------------|------------------|
| Has a body of core knowledge appropriate to level of training | |
| Facilitates efficient use of operating room resources | |

<p>| Medical Expert | | | | |
|----------------|------------------|
| Performs appropriate pre-operative assessments | |
| Formulates an appropriate pre-operative plan | |
| Performs technical procedures skillfully for their level of training | |
| Selects appropriate interventions (e.g., blood transfusions, use of intraoperative monitors) | |
| Responds appropriately during clinically significant events | |
| Provides appropriate post-operative care during recovery from anesthetic | |</p>
<table>
<thead>
<tr>
<th>Collaborative Skills</th>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
<th>Fully meets</th>
<th>Exceeds expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participates effectively as a member of the multidisciplinary team</td>
<td></td>
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</tr>
<tr>
<td>Demonstrates understanding and respect for the role and opinions of the multidisciplinary team members</td>
<td></td>
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</tr>
<tr>
<td>Professional Skills</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Is punctual</td>
<td></td>
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</tr>
<tr>
<td>Maintains an organized workspace; avoids contamination of equipment, including recapping syringes and appropriate handling of used airway equipment</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Accepts responsibility for care of the patient, appropriate to level of training</td>
<td></td>
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<tr>
<td>Demonstrates vigilance intra-operatively</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performs appropriate transfer of care</td>
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</tr>
<tr>
<td>Demonstrates appropriate behavior in stressful situations</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Overall</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I would enjoy working with this resident again</td>
<td></td>
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</tr>
<tr>
<td>I would be happy to have this resident participate in the care of the patient that I am looking after</td>
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</tr>
</tbody>
</table>

Please provide some comments. Examples of superlative or deficient behaviour would be very helpful. Specific recommendations for improvement help the resident develop these skills in future rotations.

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

**Instructions:**
**Return completed form to Candice Stroud, Program Coordinator Anesthesia**  
**HSC 2V6**  
**Fax: 905 523 1224**  
stroudc@mcmaster.ca  
Extra forms can be obtained from the Program Office at stroudc@mcmaster.ca
Anesthesia Residency Program: 360 Evaluations
PGY 1, 3 (Medical Colleague 360)

To be completed by physicians (staff or residents) with whom the Anesthesia resident worked while on an off-service rotation

Anesthesia Resident Name:____________________ PGY:___ Date:__________

This resident has recently worked alongside you. We ask your assistance in answering the following questions about the trainee and provide some brief narrative comments. Collated summaries of feedback from multiple sources will be provided to the resident to maintain reviewer confidentiality.

This form is used by a variety of medical colleagues. Therefore, not all the following items may be relevant to you. If any of these items are NOT relevant to you, mark these "NA".

What is your specialty?  ____________________

Please indicate whether you are:
☐ Staff  ☐ Resident

How well do you know this Anesthesia resident? (mark one)
☐ Not at All  ☐ Not Well  ☐ Somewhat Well  ☐ Very Well

For each of the following statements, please indicate whether you agree to disagree by checking the appropriate box on the 0 – 5 scale below the statement

<table>
<thead>
<tr>
<th>Communications Skills</th>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal Progress</th>
<th>Satisfactory Progress</th>
<th>Fully Meets</th>
<th>Exceeds expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The resident is able to effectively communicate the medical issues with the patient and families in the appropriate lay language. The resident takes the time to listen and address the specific concerns.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The resident respects the rights of patients to make informed decisions.</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scholar and Manager</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The resident facilitates the learning of co-workers.</td>
<td></td>
</tr>
<tr>
<td>The resident demonstrates appropriate concern for co-worker safety.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medical Expert</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The resident demonstrates an appropriate body of knowledge and is able to apply it in the clinical arena.</td>
<td></td>
</tr>
<tr>
<td>Collaborative Skills</td>
<td>NA</td>
</tr>
<tr>
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<td>The resident demonstrates understanding and respect for the role and opinions of the multidisciplinary team members.</td>
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</tr>
<tr>
<td>Professional Skills</td>
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<td>The resident is punctual for rounds and attends to the needs of the multidisciplinary team.</td>
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<td>The resident carried out responsibilities associated with in-hospital care and discharge planning.</td>
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<td>The resident accepts responsibility for patient care (appropriate for their level of training).</td>
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Please provide some comments. Examples of superlative or deficient behaviour would be very helpful. Specific recommendations for improvement will help the resident developed these skills in future rotations:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Instructions
Return completed form to Candice Stroud, Program Coordinator Anesthesia
HSC 2V6
Fax: 905 523 1224
stroudc@mcmaster.ca
Extra forms can be obtained from the Program Office at stroudc@mcmaster.ca
Anesthesia Residency Program: 360 Evaluations  
PGY 2, 4, 5 (Allied Health 360)  
To be completed by: Allied Health Staff (Nurses, Health Care aides, Ward Clerks, Physiotherapists, Respiratory Therapists, Perfusionists etc.)

Resident Name:____________________  PGY:___  Date:__________

This resident has recently worked alongside you. We ask your assistance in answering the following questions about the trainee and provide some brief narrative comments. Collated summaries of feedback from multiple sources will be provided to the resident to maintain reviewer confidentiality.

This form is used by a variety of Anesthesia co-workers. Therefore, not all the following items may be relevant to you. If any of these items are NOT relevant to you, mark these "NA".

What is your profession:  _________________

How well do you know this Anesthesia resident? (mark one)

- [ ] Not at All  - [ ] Not Well  - [ ] Somewhat Well  - [ ] Very Well

For each of the following statements, please indicate whether you agree to disagree by checking the appropriate box on the 0 – 5 scale below the statement

<table>
<thead>
<tr>
<th>Communications Skills</th>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
<th>Fully Meets</th>
<th>Exceeds expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The resident is non-judgmental of patients and their families.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The resident is able to effectively communicate the medical issues with the patient and families in the appropriate lay language. The resident takes the time to listen and address the specific concerns.</td>
<td></td>
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<tr>
<td>The resident listens to co-workers, considers their perspectives, and communicates effectively with the healthcare team.</td>
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<tr>
<td>The resident writes hospital orders and records clearly.</td>
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<tr>
<td>The resident is continuously available to the patient during anesthesia.</td>
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</table>
### Scholar & Manager

<table>
<thead>
<tr>
<th></th>
<th>NA</th>
<th>Fails to Meet</th>
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<th>Satisfactory Progress</th>
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</tr>
</thead>
<tbody>
<tr>
<td>The resident facilitates the learning of co-workers.</td>
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<tr>
<td>The resident demonstrates appropriate concern for co-worker safety.</td>
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</table>

### Collaborative Skills

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<tr>
<th></th>
<th>NA</th>
<th>Fails to Meet</th>
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</thead>
<tbody>
<tr>
<td>The resident participates effectively as a member of the multidisciplinary team.</td>
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<tr>
<td>The resident demonstrates understanding and respect for the role and opinions of the multidisciplinary team members.</td>
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### Professional Skills

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<th></th>
<th>NA</th>
<th>Fails to Meet</th>
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<th>Satisfactory Progress</th>
<th>Fully meets</th>
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<tbody>
<tr>
<td>The resident is punctual.</td>
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<td>The resident is courteous to co-workers.</td>
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<tr>
<td>The resident accepts responsibility for patient care (appropriate for their level of training).</td>
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<tr>
<td>The resident performs appropriate handovers and transfer of accountability in PACU or ICU.</td>
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<tr>
<td>The resident maintains confidentiality of patients.</td>
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<tr>
<td>The resident demonstrates appropriate behavior in stressful situations.</td>
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### Overall

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<th>NA</th>
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<tr>
<td>I would enjoy working with this resident again.</td>
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<td>I would be happy to have this resident participate in the care of the patient that I am looking after.</td>
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Please provide some comments. Examples of superlative or deficient behaviour would be very helpful. Specific recommendations for improvement will help the resident develop these skills in future rotations:

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**Instructions**

Return completed form to Candice Stroud, Program Coordinator Anesthesia  
HSC 2V6  
Fax: 905 523 1224  
stroudc@mcmaster.ca  
Extra forms can be obtained from the Program Office at stroudc@mcmaster.ca
Anesthesia Residency Program: 360 Evaluations
PGY 1,3 (Allied Health 360)

To be completed by: Allied Health Staff (Nurses, Health Care aides, Ward Clerks, Physiotherapists, Respiratory Therapists, Perfusionists etc.

Resident Name:____________________ PGY:___  Date:__________

This resident has recently worked alongside you. We ask your assistance in answering the following questions about the trainee and provide some brief narrative comments. Collated summaries of feedback from multiple sources will be provided to the resident to maintain reviewer confidentiality.

This form is used by a variety of Anesthesia co-workers. Therefore, not all the following items may be relevant to you. If any of these items are NOT relevant to you, mark these "NA".

What is your profession:  ____________________

How well do you know this Anesthesia resident? (mark one)

☐ Not at All  ☐ Not Well  ☐ Somewhat Well  ☐ Very Well

For each of the following statements, please indicate whether you agree to disagree by checking the appropriate box on the 0 – 5 scale below the statement

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<td>The resident respects the rights of patients to make informed decisions</td>
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**Instructions**

Return completed form to Candice Stroud, Program Coordinator Anesthesia

HSC 2V6
Fax: 905 523 1224
stroudc@mcmaster.ca

Extra forms can be obtained from the Program Office at stroudc@mcmaster.ca
Junior Consultant Days

As implemented in 2014r you are required to have 5 consultant days as per your promotion documents. These should be completed before June 30th. They should start in January and of course, you are welcomed to do more!

Residents: Please work with your admin, CTU Director and the staff to complete these days. As per your promotion documents, you will require 5.

Junior Consultant rooms apply only to routine adult surgery lists. They do not apply to Pediatric lists or to any Adult subspecialty lists such as Neuro, Thoracic, Cardiac, Vascular. If you have any concerns or confusion, please ask your CTU directors. Also, for PGY5’s please remember to distribute your evaluation forms to the Surgeon AND another one to the circulating nurse at the end of the day.

Approved Faculty Listing

**SJH**
Moisiuk, Peter
Rosenblood, Geoff
Kostandoff, Greg
Lajoie, Julie
Blew, Phil
Jackson, Paul
Hamstra, Joel
Ligori, Tania
O'Hare, Turlough

**HHSC**
Bruce, Tracey – ADULT CASES ONLY
Cordovani, Daniel
Dingle, Jon
Parrish, Mike – ADULT CASES ONLY
Paul, James
Raymer, Karen
Reddy, Desi – ADULT CASES ONLY
Rieber, Joanna
Skrinskas, Alena
Zieba, Iwona

We have designed a new form (June 2016) so now there are two different evaluation forms to be used on your JRC day- one for the folks that were in the room with you (surgery and nursing) and one for anaesthesia. The anaesthesia staff form asks very specific questions and also gives guidance to the staff in terms of their role during the JRC day. I ran the form by Iwona and Joanna and they both liked it.
Please have 2 of the Surgery/Nursing forms and have one filled out be nursing and one by surgery. I have written a line on the form that states the form is to go back to you (the resident) so hopefully you won’t get surgeons refusing to give it back to you. Our original intention was to have it be anonymously completed but those forms were not reliably getting returned- fine for a 360 eval, but not so great for a JRC day.

Then have your staff anesthesiologist fill out their form and they should give it back to you. So ideally, 3 forms completed to return to Candice for each day. The minimum acceptable would be 2 forms, one of each type completed. This might seem like a lot of eval forms, but hey, we are doing our final check-out that you’re safe to unleash on the unsuspecting public so it’s not too much to ask, IMHO:)

Thanks for your feedback on this as it will make it a smoother process for the year that follows you!

Karen

Revised May 2016
Anesthesia Residency Program
JUNIOR CONSULTANT DAYS- ANESTHESIA STAFF FORM
This form is to be completed by the supervising Anesthesia staff

Resident Name:____________________  PGY:___  Date:__________

Supervising Staff will:
• discuss the cases at the beginning of the day
• attend the checklist for each patient
• review the chart for each patient in PACU after the case is complete
• discuss the performance of the resident at the end of the day with Surgical and nursing staff to get any feedback. You may get comments that they are not comfortable putting on the form.

<table>
<thead>
<tr>
<th></th>
<th>Multiple Minor or one Major intervention required</th>
<th>Several minor corrections required</th>
<th>1 or 2 minor areas that could be improved</th>
<th>Fully Meets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was the resident able to make appropriate anesthetic plans that took into consideration the procedure and the patient's medical conditions and were they able to do so independently?</td>
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<td>Was the resident able to execute that plan, including being able to cope with unexpected events, where a plan B is required?</td>
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<td>Did the perioperative team express any concerns around any of the CanMeds domains?</td>
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<td>Was the charting complete and accurate? Does it reveal appropriate care? Are there any omissions? (examples, fluid balance, reversal, PACU vitals etc)</td>
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<tr>
<td>Was the resident able to manage the room efficiently to facilitate all the cases getting done?</td>
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</table>

Please provide some comments.
__________________________________________________________________________________
__________________________________________________________________________________
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Instructions: Please return the form to the resident

Name: ______________________  Signature: ______________________
Anesthesia Residency Program

JUNIOR CONSULTANT DAYS- SURGERY AND NURSING FORM

Resident should get one form completed by each of Surgical and Nursing team members (2 FORMS TOTAL)

Resident Name:____________________ PGY:___ Date:__________

This resident has recently worked alongside you. We ask your assistance in answering the following questions about the trainee and provide some brief narrative comments.

Please indicate whether you are:

- [ ] Surgical Staff
- [ ] Surgical Resident
- [ ] Nursing staff

For each of the following statements, please indicate whether you agree to disagree by checking the appropriate box on the 0 – 5 scale. Please only complete items that you feel able to evaluate. Otherwise, use N/A

<table>
<thead>
<tr>
<th>Communications Skills</th>
<th>NA</th>
<th>Fails to Meet</th>
<th>Marginal</th>
<th>Satisfactory Progress</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Is non-judgmental towards patients and their families</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
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<tr>
<td>Communicates effectively with patients and families, including the avoidance of jargon</td>
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<td>Communicates effectively with the surgical team intra-operatively, including seeking help when appropriate</td>
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<tr>
<td>Writes hospital orders and records clearly</td>
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<table>
<thead>
<tr>
<th>Scholar &amp; Manager</th>
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<tbody>
<tr>
<td>Has a body of core knowledge appropriate to level of training</td>
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<td>Facilitates efficient use of operating room resources</td>
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<th>Medical Expert</th>
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<tbody>
<tr>
<td>Performs appropriate pre-operative assessments</td>
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<td>Formulates an appropriate pre-operative plan</td>
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<td>Performs technical procedures skillfully for their level of training</td>
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<td>Selects appropriate interventions (e.g., blood transfusions, use of intraoperative monitors)</td>
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<td>Responds appropriately during clinically significant events</td>
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<td>Provides appropriate post-operative care during recovery from anesthetic</td>
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<td>Participates effectively as a member of the multidisciplinary team</td>
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<td>Demonstrates understanding and respect for the role and opinions of the multidisciplinary team members</td>
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<td>Is punctual</td>
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<td>Maintains an organized workspace; avoids contamination of equipment, including recapping syringes and appropriate handling of used airway equipment</td>
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<tr>
<td>Accepts responsibility for care of the patient, appropriate to level of training</td>
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<tr>
<td>Demonstrates vigilance intra-operatively</td>
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<tr>
<td>Performs appropriate transfer of care</td>
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<tr>
<td>Demonstrates appropriate behavior in stressful situations</td>
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<tr>
<td><strong>Overall</strong></td>
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<tr>
<td>I would enjoy working with this resident again</td>
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<tr>
<td>I would be happy to have this resident participate in the care of the patient that I am looking after</td>
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</tbody>
</table>

Please provide some comments. Examples of superlative or deficient behaviour would be very helpful. Specific recommendations for improvement help the resident develop these skills in future rotations.

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Name: ____________________ Signature: ____________________

Instructions: Please return the form to the resident.
Your eDossier (or electronic dossier) is an electronic folder of important information about you and your experiences as a resident. It is the interface through which you access the one45 system (e.g., to complete evaluations, to view your schedule, to check your marks, to download handouts and notes). By storing all your information in one place, the eDossier streamlines the administrative process and reduces the risk of transmission errors.

Most of the information in your eDossier can only be edited by Katie Niblock (niblock@mcmaster.ca).

Your eDossier consists of a number of subfolders:

**To Do**

The **To Do** subfolder consists of the list of tasks that you have to complete. It is the subfolder that appears when you log into the system. The most common tasks that you will perform here are attending and rotation evaluations and reviewing evaluations of yourself.

When an administrator sends you an evaluation form to complete or distribute, the form automatically appears as a new task in your To Do list (usually, you also receive a sendout email with each new task). To complete a task, click on its title and follow the instructions. Once you’ve finished a task it is removed from your To Do subfolder.
Personal Info

The **Personal Info** subfolder contains your contact information, a headshot photo of you, and your current PGY level. It is very important that this information is kept up to date. To change any of your contact information, please contact your administrator.

This subfolder is also where you can change your username and password. To do this, click the **change username/password** link. A new page appears where you can update this information.

Contact List

The **Contact List** contains email addresses for all the residents in your program.

Handouts & Links

The **Handouts & Links** subfolder contains links to the handouts and notes associated with your program, sites and specific rotations that you are scheduled for. A few examples of learning objects are rotation objectives, reading lists,
maps, websites and journal articles. You can click on the links to download personal copies or to visit specific websites (this option is also available in the Schedule subfolder).

Marks/Grades

The Grades subfolder is where you can view the results of your examinations as they are released by the coordinator. Here you will find the following marks:

- Bi-yearly Oral Exams
- CAGS Exam
- Research Quiz (PGY 1&2 only)

Evaluations

The Evaluations subfolder is an archive of the evaluations you have completed (By Me) as well as the evaluations of your performance (Of Me). The archive includes the evaluations that have been requested but that have not yet been completed.

You can view the results of your performance evaluations. However, many of these results will not be released to you until you've completed the corresponding evaluations (i.e., of your attending and of the rotation itself). If the name of an evaluator is underlined, you can click on it to view the results.
Schedules

My Calendar

The My Calendar subfolder allows you to view your courses and academic sessions (daily events). When you click on this tab you will be able to select a specific timeframe to view the events by selecting day, week, or month on the top right hand corner. Once you have made your selection you will be able to see the events scheduled for the timeframe in the calendar below. To view the specifics of an event you must click on the event name and a box will open which displays the information such as the topic, date, speaker, and location of the item. On the top left hand corner of the page you can choose to print the calendar or export it to another calendar system that you regularly use such as GroupWise or Outlook.

Rotations

The Rotations subfolder consists of your rotation schedule and your academic session schedule. Your rotations are listed in chronological order. If you have leave time scheduled during a rotation it appears under the Vacation/Leave column. Similarly, handouts (e.g., rotation objectives, reading lists) associated with specific rotations appear under the Handouts column. You can view or download them by clicking on their titles.

Duty Hours

The Duty Hours subfolder allows you to track the shifts you work each day.
To record your shifts for a specific day first click on that day in the calendar view at the top of the screen. The bottom of the screen will switch to the view for that week, based on a Monday to Sunday timeframe.

To enter the shift times, click on the dropdown list for the specific day and choose the type of shift you worked. After this selection is made add in the start and end times of the shift in military time. You can also add in a note, which will be viewable by your program administrator.

To add more shifts in a particular day, click on the (+) sign beside the date. This will open another set of shift times for you to enter. Once you have finished entering in all of your shifts you must save the information by clicking confirm hours on the lower right hand side of the page.

Colored dots will appear in the calendar at the top of the page to indicate that the data entry was successful.

Vacation/Leave

The Vacation/Leave subfolder shows a summary of your scheduled leave time. Leave time is categorized by the reason for the leave (i.e., vacation, conference, interview, sick). The last category (other) is reserved for special circumstances (e.g., bereavement). To schedule leave time, you must submit a request via the RTO-Request for Time Off system on your medportal home page. Once your request has been approved by all parties Paulette Aubry will receive an email with your dates/information. She will then enter your dates into One45 so that the program is aware when you are off and all dates will show on the schedule. It is IMPORTANT to notify Paulette of all dates you are not at work.
Academic Sessions

Track Attendance

The Track Attendance subfolder allows you to enter your attendance for academic half day sessions, journal clubs and grand rounds that have occurred in the past. The schedule sorts the academic sessions by calendar months. A coloured dot appears on the day an event is scheduled. If you click on the dot, the event name, topic, presenter and location are listed and you are able to access any handouts associated with the event. Beneath the details you are able to mark your attendance.
1) Introduction

This guide has been designed to assist with the implementation of a Learning Contract (LC) in the Department of Anesthesia when a resident has been identified as having a learning deficit. The deficit would represent a pattern of deficiency in any of the CanMeds domains, as elucidated in the Anesthesia Residency Program Promotions Portfolios (and its supporting documents, including the Post-Grad Professionalism policy and the Resident Manual). Deficits could be in the area of medical expert (knowledge base, technical or clinical skills), or in other Canmeds domains such as communication or professionalism. The PD or others in leadership positions within the program will likely become aware of an issue through personal observation, feedback from others (including nursing, resident peers, administration), formal In-Training Evaluation Reports or other program evaluation tools (AKT, ABA exams, in-house MCQ’s, program oral exams, simulation sessions etc.)

A deficit does not necessarily instantly trigger an LC. For example, most deficiencies in clinical or global academic performance are identified over a longer period of time, and meeting(s) would occur between the resident and PD (or delegate-any faculty member of the RTC) in an attempt to develop strategies for resolution without the use of a formal LC. If that resolution does not occur, then an LC could be used. Other sorts of deficiencies may immediately trigger an LC. These would include deficits in professionalism as well as deficits in specific domains where expectations are well defined and circumscribed, such as a research elective, specific elements of the promotions portfolio or other specific academic project.

When a deficit is identified, a meeting is arranged between the resident and the PD (or delegate) to discuss the concern(s) and develop a plan for resolution. The Learning Contract has been developed to structure an approach to the concerns and the resolution. It is recommended that the PD (or delegate) and resident meet to prepare this contract as an agreement whereby both parties constructively discuss the learning gaps/difficulties and to negotiate how they can be resolved through positive learning outcomes in a specified period of time.

2) Prior to the Meeting

In preparation, a Program Director (or delegate) would complete the following steps:

1. Complete the “Identified Learning Deficiency” section through documenting the issues.
2. Apply the appropriate CanMEDS competency roles to the identified deficiency,
3. Complete the “Contract Period”. The timeframe should a no less than 8-weeks and a maximum of 20 weeks. Certain deficits may require significant amount of time to address. Furthermore, some outcome assessment tools may only occur twice yearly. The timeframe does not need to coincide with a specific clinical rotation or training period. The contract must provide enough time to ensure the objectives are achievable while still allowing the Program to resolve the concern within a reasonable amount of time.
4. Arrange the Progress meeting, determined by the Program Director (or delegate), to determine if the contract is on target.
5. Arrange the Final Contract Review Meeting.

3) The Meeting

The resident should discuss their SWOT analysis. SWOT is the process when a learner is asked to self-reflect or assess their Strengths and Weaknesses; to discuss Opportunities that are available for learning (ie. skills opportunities, resources such as texts or videos) and Threats that may impede their learning.

After understanding these factors, it is important for the PD/delegate to reassure the resident that their strengths are recognized and to explain the rationale in developing a Learning Contract: to further their development as a resident by improving on identified weaknesses.

Learning Objective(s)

Both the Program Director/delegate and Resident will list learning objectives applicable and obtainable to the identified deficiencies. Please ensure the objectives are achievable within the defined Contract Period.

Approaches & Resources: Identify what methods will be used to achieve the Learning Objectives
Supervisor (Department of Anesthesia Faculty Member): Define the role of a supervisor to the resident (one who is there to guide the resident through good practice and professionalism). In choosing a supervisor for this contract, ask the resident what characteristics they consider important when choosing a faculty member for this role. Advise them they must approach the proposed supervisor and confirm their participation with your Program Administrator.

Participation in lecture/workshop: Part of the requirement of the contract is mandatory attendance at a course (could be online), lecture or workshop. Courses may have limited registration or they may not be available during the desired Contract Period. If other sources are required and there is a cost, it will have to be negotiated with the Program and/or Department of Anesthesia.

Self-Directed Learning: Program Directors must negotiate with the resident what they feel should undertake to effectively complete this option.

Work with peer(s) - Resident, faculty member, fellow, administrator, nursing, other health care team member: The resident must be reminded that they will have to provide a list to their Program Administrator as comments will be asked for as part of the Review Criteria.

Other: Please be specific with the list if choosing this option.

Review Criteria must include one or more of the following, depending on the learning deficit, learning objectives and approaches/resources that are being used:

- Report from Academic Supervisor
- In-Training Evaluation Report (ITER)
- Participation in lecture/workshop
- Direct Observation
- Review of Self-Directed Learning report (Resident must provide a report)
- Program evaluation tool (in-house MCQ, ABA, program oral exams): __________________________ (specify)
- Simulation session(s)
- Other: __________________________ (specify)

Notification of other parties: CTU directors will be made aware of any resident at the onset of a learning contract. As well, any other relevant member of the RTC will be made aware of a learning contract that pertains to them or their portfolio on the RTC. Apart from that, other members of the RTC would only be aware of the learning contract at the time of the Outcome decision when the LC is brought to the RTC at the end of the contract for ratification of the outcome decision.

4) Subsequent Meetings

The PD/delegate must meet with the resident for:
- Progress meeting
- Final Contract Review meeting (PD must attend)

5) Outcome

After these meetings, the PD/delegate may gather more information as necessary. The Outcome is determined by the PD (and in conjunction with the delegate when a delegate has been involved). The learning contract is either successfully or unsuccessfully resolved. Every LC Outcome must be discussed and ratified by the RTC. The resident will be notified by the PD of the outcome after RTC ratification. The Outcome of the Learning Contract will become part of the Promotions Portfolio and will impact on both the Promotions decision for that resident and ultimately, the resident’s progress in the program. Specific consequences of an unresolved LC will be decided on a case by case basis. It may result in the generation of another LC, with different objectives, resources and review criteria. A resident must have no unresolved LC’s to be considered “in good standing”.

Review Criteria
A Learning Contract (LC) shall be used for a resident identified by the Program Director (PD) to be experiencing a deficit manifesting as a pattern of deficiency in any of the CanMeds domains as described within the Residency Program Promotions Criteria (including its supporting documents, such as the Resident Manual and the Post-Graduate Professionalism Policy). Deficits are identified through program evaluation tools, observation, feedback from others (including faculty, nurses, resident peers and administration), rotation evaluations, incident reports and informal discussions.

Where possible, a meeting to discuss the deficit would occur to allow for resolution without the use of a LC. For example, clinical and global academic performance deficiencies are identified over a longer timeframe, and a meeting should take place to discuss strategies and allow for improvement before considering an LC. Other types of deficits might immediately trigger a LC, without a preliminary meeting. These would include deficiencies in domains where expectations are specific and well-defined. Examples include failure to fulfill research elective objectives or specific components of the promotions portfolio, or any issue around professionalism.

The LC is prepared by the resident and the PD (or delegate). Delegates include any faculty member of the Residency Training Committee (RTC), at the request of the PD. They will meet at the beginning of the contract, mid-way (progress review) and at the end of the contract. The outcome of the LC is determined by the PD (in conjunction with the delegate where appropriate) and must then be ratified by the RTC.

Dr ___________________________, a PGY-___________ resident in the Anesthesia Residency Program at McMaster requires a formal Learning Contact to address the following:

<table>
<thead>
<tr>
<th>Identified Learning Deficiency</th>
<th>CanMeds Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ___________________________</td>
<td>__________________</td>
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<tr>
<td>• ___________________________</td>
<td>__________________</td>
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</table>

Contract Period: From ______ / _____ / ________ to _____ / _____ / ________

The Progress Review Meeting will take place on: _____ / _____ / ________

The Final Contract Review Meeting will take place on: _____ / _____ / ________

Learning Objective(s): Co-Prepared by Program Director (or delegate) and Resident. Learning Objectives should be categorized (i.e. knowledge base, communication skills, professionalism, clinical skills) and should be elucidated as specifically as possible:

• ______________________________________________________________________

• ______________________________________________________________________
**Approaches & Resources:** How the objectives will be achieved: may select more than one.

- Work with an Academic Supervisor: ____________________________ (Resident to arrange his/her Supervisor, report back to Program Assistant, Candice Stroud)
- Self-Directed Learning (books, journals, on-line resources): Resident must provide a report to Program Director/delegate
- Work with peer(s) - Resident, faculty, fellow, administrator, nurse or other health care team member
- Participation in lecture/workshop
- Other: __________________________________________________________(please specify)

**Review Criteria** (may include more than one, as applicable)

- Report from Academic Supervisor
- In-Training Evaluation Report (ITER)
- Participation in lecture/workshop
- Direct Observation
- Review of Self-Directed Learning report – Resident must provide a report
- Program evaluation tool (in-house MCQ, ABA, AKT): __________________________ (specify)
- Simulation session
- Other: __________________________________________________________(specify)

Specify below what will be required for successful resolution of the LC:

Upon the Contract Review Date, the PD will assess the outcome of the LC, based on the review criteria. The LC will be determined to be either successfully or unsuccessfully resolved. The outcome must be ratified by the RTC, after which the resident will be notified of the decision. Resolution of the LC, whether successful or unsuccessful, will be applied to Promotion Portfolio and will be considered in the Promotion Process and may impact on the resident's progress in the program. Consequence of unsuccessful resolution will be determined on an individual basis and may include the initiation of a new LC. Resolution of the LC is required for the resident to be considered “**in good standing**” within the program.

**Signatures** (By signing below, the resident and Program Director indicate that they understand the nature and structure of this Learning Contract.)

Resident: ___________________________________________ Date: _______________________

Program Director: ________________________________ Date: _______________________

**Outcome of Learning Contract** (to be completed after Final Contract Review meeting and RTC ratification of result):

- Successful resolution of Learning Contract
- Unsuccessful resolution of Learning Contract

Program Director: ___________________________________________ Date: _______________________

Files/Content.Outlook/LJECMZKW/Learning Contract Anesthesia (revised).doc  SEO: 08/08
Policy and Procedures for the Evaluation of Postgraduate Students’ Performance – effective July 1, 2009

Highlights of Changes to the Policy

Background: The Faculty Postgraduate Medical Education Committee has worked very hard on developing a policy that is clear and transparent to the trainees, clinical supervisors and the programs. The policy has had wide input from Evaluation Subcommittee, the Evaluation Review Board, Residency Program Committees, PAIRO, Chairs of departments, the Deanery, and legal counsel. It represents over two years of work by the committee and will come into effect for the 2009 academic year.

Highlights:
The Bottomline categories:

- There will be a minimum of four “bottomline” categories: Satisfactory, Provisional Satisfactory, Unsatisfactory or Incomplete. The new categories are:
  - **Provisional Satisfactory** – this is where significant deficiencies have been identified, but they are not so severe that they require the trainee to repeat entire rotation, i.e. the deficiencies could be addressed within another rotation and **Incomplete** – the clinical supervisor is unable to fully evaluate the trainee because time spent in the rotation was insufficient. (Guideline is 50%).

Appeals:

- All appeals must be made within **15 days** after the trainee becomes aware of the decision under appeal.
- The first level of appeal is made to the program (Level 1).
- If not resolved at Level 1, it can be directed to the Postgraduate Medical Education Office, which is Level 2. The PGME Office will convene a meeting of the **Appeal Review Board**.
- Level 3 is the final level. Level 3 is to the Dean, Faculty of Health Sciences. The Dean will strike a Tribunal, whose decision is final. There is no access to University Senate.
- Level 2 Appeals (PGME Office) – there are two categories:
  
  **Category 1:** grounds of process or academic (substantive) issues – may include medical, compassionate, or extenuating circumstances, bias, inaccuracy or unfairness.
  
  **Category 2:** The PG Dean may refer an adverse recommendation of a Residency Program Committee to the Appeal Review Board.

- Pre-Entry Assessment Programs (PEAP), Assessment Verification Periods (AVP), Practice Ready Assessments (PRA) or clinical examinations (STACER’s) now fall within the appeals process. The sole remedy is to repeat the relevant components, one more time only.

Re-structuring of the Evaluation Review Board: The Evaluation Review Board has acted as the educational advisor and hearing appeals. A decision has been made that it would be more effective to separate these functions and therefore there will now be two boards: (1) the **Appeals Review Board** and (2) the **Educational Advisory Board**.

Key Guidelines for the Evaluation of Postgraduate trainees:

1. **Beginning of rotation** – discuss objectives and how the trainee will be evaluated.
2. **During the rotation** - regular ongoing informal feedback and,
3. Recommended mid-rotation evaluation; **if concerns identified a formal mid-rotation evaluation must** take place – **face-to-face** and occur **generally within 2 weeks of the midpoint date**, so the trainee has an opportunity to address deficiencies.
4. **End of rotation** - Clinical Supervisor to:
   
   - **synthesize information and complete ITER.**
Discuss with the trainee prior to the end of rotation. If the supervisor is not able and has not met with trainee within 10 working days after the rotation, the clinical supervisor should send to the Home Program Director.

Ensure Home Program Director receives a copy of ITER and supporting documentation.

5. It is expected that the trainee will review the evaluation within 20 working days from the end of rotation.

The policy in its entirety is available through medportal: http://postgrad.medportal.ca/, in the Administration area, under Policies and Procedures. It is also available on the PG website: http://www.fhs.mcmaster.ca/postgrad/  06/09
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April 30, 2009
I. PREAMBLE

The purpose of evaluating students is, two fold:

1. to assess their individual strengths and weaknesses in order that they may further develop their strengths and address their weaknesses
2. and to ensure that the graduates of the program meet or exceed defined levels of competence.

Evaluations should be based on both program and rotation specific goals and objectives. They should be both formative and summative and not a one-time report card. Evaluation should encourage continuous quality improvement and form the basis for an educational prescription for the student. It should not be punitive in nature.

The process of evaluating students must be fair and based on objective tools. The process should ensure that evaluations are constructive, accurate, timely and delivered in a face-to-face manner. Evaluation is a process that requires active participation of the faculty and student in order to share information. Once an evaluation has occurred it is important that the documentation is both entered and reviewed in a timely manner by the faculty and student.

This policy takes effect July 1st, 2009 for all new and outstanding matters, which have proceeded under the previous policy.

II. PURPOSE

The purpose of this policy is:

➢ To provide minimum process and substantive standards for the evaluation and remediation, where necessary, of postgraduate students in order to ensure consistency with the standards of Faculty of Health Sciences, McMaster University, the requirements of the Royal College of Physicians and Surgeons of Canada (RCPSC) / the College of Family Physicians of Canada (CFPC) and the College of Physicians and Surgeons of Ontario (CPSO).

➢ To provide minimum process and substantive standards for an appeal of a decision made through the evaluation process in order to ensure objectivity, fairness and consistency of treatment among students.

III. SCOPE

This policy applies to all postgraduate students (Residents and Fellows) who are registered with the Postgraduate Medical Education Office, (collectively “Students”). All matters surrounding evaluation will fall within the jurisdiction of the Postgraduate Medical Education Office, Faculty of Health Sciences, McMaster University. Postgraduate Students do not have access to the University Senate process.

IV. DEFINITIONS

Clinical Supervisor:
The most responsible staff physician to whom the Student reports.

Clinical Teaching Unit (CTU) Director:
The staff physician who is responsible for the overall functioning of the teaching unit. (It is recognized that in some departments the CTU Director and the Clinical Supervisor may be the same individual.)

Program Director/Home Program Director:
The Program Director of the Student’s program who is the officer responsible for the overall conduct of the integrated residency program in a discipline, reporting to the head of the department concerned and to the Assistant Dean, Postgraduate Medical Education, for the Faculty.

Assistant Dean, Postgraduate Medical Education (or Postgraduate Dean):
The officer responsible for the overall conduct and supervision of postgraduate medical education within the Faculty, reporting to the Associate Dean (Education).

Dean, Faculty of Health Sciences
The officer responsible for all matters within the Faculty of Health Sciences

Appeals Review Board (ARB):
Is an arm’s length body that adjudicates appeals and academic decisions that have been reviewed at the Program level (Level 1 Appeal). The ARB:

- Adjudicates and investigates on behalf of the Postgraduate Medical Education Office, Residency Program committees and/or the Assistant Dean, Postgraduate Medical Education concerning:
  - Level 2 appeals.
  - the dismissal, failure, suspension of postgraduate medical students.

Education Advisory Board (EAB)
Is an arm’s length body that assists the programs and residents on academic matters. The EAB:

- Acts on behalf of the Postgraduate Medical Education Office:
- Acts as an educational advisor for residents and programs.
- Considers the performance of any Student whose name has been referred to it by a Program Director, and/or Residency Program Committee or by the Assistant Dean, Postgraduate Medical Education.

V. EVALUATION PROCESS

Beginning of the rotation

1. The Clinical Supervisor or CTU Director should meet with the Student at the beginning of the rotation to discuss the evaluation process, and in particular, should discuss the following:
   a. delineate the Student’s role during the rotation;
   b. outline the duties and responsibilities expected of the Student;
   c. outline the goals and objectives of the program and rotation, with reference to the standards of the RCPSC or the CFPC;
   d. explain the structure and interrelationships of the health care team, where
appropriate; and

e. advise the student on what evaluation tools will be used in the evaluation process, the prescribed evaluation format particular to the Student’s home program, how the ITER (in-training evaluation report) is completed and the timing of evaluations (including on-going informal feedback, the mid-rotation evaluation and the ITER).

During the rotation

2. The Clinical Supervisor should provide regular ongoing informal feedback to Students during the rotation.

3. Normally, a mid-rotation evaluation is recommended; however, where concerns or deficiencies regarding a Student’s performance arise during a rotation, a formal mid-rotation evaluation must take place. The Clinical Supervisor should meet with the Student to discuss the concerns or deficiencies. This face-to-face meeting should occur as soon as reasonably possible during the rotation (generally within two weeks of the midpoint date) so that the Student has an opportunity to address and correct such concerns or deficiencies. A mid-rotation ITER will be completed and provided to the Student in a timely manner.

4. For rotations longer than 3 months the interval between written evaluations should be no longer than 3 months and a formal, documented mid-unit evaluation must take place.

End of the rotation

5. It is the responsibility of the Clinical Supervisor, and ultimately the Home Program Director, to ensure that an ITER is completed and submitted for each Student for each rotation.

6. In completing the ITER, the Clinical Supervisor should draw on the feedback of other members of the health care team; the Clinical Supervisor should synthesize all information (e.g., correspondence) received from the team about the Student’s performance during the rotation.

7. Within each domain and for each goal and objective on the ITER, there may be several levels of competence identified. However, the overall (summative) evaluation on the ITER should indicate one of the following designations:

<table>
<thead>
<tr>
<th>Satisfactory</th>
<th>Student has successfully met the goals and objectives of the rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisional Satisfactory</td>
<td>Student has demonstrated significant deficiencies in one or more of the RCPSC/CFPC competencies identified in the rotation objectives, or any other requirement of the rotation, and that while such deficiencies require remediation, they are not so severe to necessitate the Student repeating the entire rotation; the Clinical Supervisor believes that the Student can satisfy the deficient rotation objective(s) or requirement(s) during other rotations.</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>Student has demonstrated significant deficiencies in one or more...</td>
</tr>
</tbody>
</table>
of the RCPSC/CFPC competencies identified in the rotation objectives, or any other requirement, and the Clinical Supervisor believes that the rotation objective(s) or requirement(s) **can only be reasonably met by remediation and having the Student repeat the entire rotation.** (For example, a designation of “Unsatisfactory” is appropriate and remediation is necessary where the deficiency is in the “Medical Expert” category of the rotation.)

Incomplete

“Incomplete” indicates that the Clinical Supervisor has been **unable to properly and fully evaluate the Student because the Student’s time spent on the rotation was insufficient, for whatever reason, e.g. illness, extenuating circumstances etc.** As the rotation is incomplete, time will have to be made up to fulfill the requirements of the rotation.

As a guideline, a designation of “Incomplete” may be appropriate where the Student has not spent at least 50% of the required time on the rotation. Even where a designation of “Incomplete” is indicated, the Clinical Supervisor should complete the ITER in order to document the Student’s time spent in the rotation and the Student’s performance during that limited time.

8. Prior to the end of the Student’s rotation, the Clinical Supervisor should meet with the Student to discuss and review the completed ITER and all supporting documentation, which documentation is necessary to substantiate the ITER. Where a designation of “Unsatisfactory” or “Provisional Satisfactory” is indicated, the supporting documentation should include an identification of the Student’s deficiencies and, if appropriate, the Clinical Supervisor’s recommendation for remediation.

9. The Clinical Supervisor should sign (by written signature or electronically) and date the ITER and ask the Student to do the same. The Student should be advised that his/her signature does not imply agreement with the ITER but simply signifies that s/he has read it. The Student may add comments to the ITER, e.g. to indicate agreement or disagreement or to clarify specific points.

10. It is the responsibility of the Clinical Supervisor to ensure that the Home Program Director receives a signed copy of the ITER and all supporting documentation.

11. In exceptional circumstances where it is not possible for the Clinical Supervisor to meet with the Student prior to the end of the rotation, the Clinical Supervisor should attempt to meet with the Student as soon as possible thereafter. If the Clinical Supervisor and Student have not met within 10 working days after the

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1 It is recognized that it is legitimate for a Program Director to inform the College of Physicians and Surgeons of Ontario or other authority that an unsatisfactory evaluation has been given. If an appeal is underway that should be indicated. If the results of the appeal are known then they must be indicated as well.

2 Students should be aware that time away from rotations (e.g., vacation, professional leave, etc.) exceeding one week per one month rotation period may interfere with the acquisition of the competencies outlined by the goals and objectives of the rotation. While ultimately, the PAIRO collective agreement regulates time allowed away from rotations, students/residents and faculty are advised to consider this when requesting or authorizing time away from the rotation.
end of the rotation, the Clinical Supervisor should proceed to send the Home Program Director a copy of the ITER and all supporting documentation, including any documentation which evidences the Clinical Supervisor’s failed attempt(s) to meet with the Student.

12. It is expected that a student will review his or her evaluation either on-line through Webeval or in paper format within 20 working days from the end of the rotation.

VI. DESIGNATION OTHER THAN SATISFACTORY
(PROVISIONAL SATISFACTORY, UNSATISFACTORY, INCOMPLETE)

1. In all cases, the Home Program Director and Student should meet as soon as reasonably possible to discuss and review the ITER and all supporting documentation. This may lead to discussion at the Residency Program Committee.

2. The Student may elect to accept or reject the designation. If s/he elects to reject the designation, s/he may appeal the designation at Level 1 Appeals – Program Level, in accordance with Section VII (Appeals).

Remediation Plan

3. If the Student accepts the designation, a Remediation Plan designed to address the Student’s deficiencies should be implemented as soon as possible.

4. The terms of the Remediation Plan shall be subject to the agreement of the Student, the Home Program Director and the Clinical Supervisor but should include:

   a. Nature of the Remediation Plan;
   b. A statement of the expected outcomes of the rotation;
   c. Identification of the areas of deficiency;
   d. Defined time frame for completion of the Remediation Plan;
   e. Specification of how the Remediation Plan will be evaluated; and
   f. Consequences of receiving a designation of “Unsatisfactory”.

5. The Home Program Director shall provide a copy of the ITER and Remediation Plan to the Education Advisory Board and to the Student’s file. The EAB will review the Remediation Plan and may or may not offer comments.

6. The Student and/or the Home Program Director may request the assistance of the Education Advisory Board in designing the Remediation Plan. Such requests should be made in writing to the Postgraduate Medical Education Office, outlining any specific concerns. The Postgraduate Medical Education Office will facilitate a meeting of the Education Advisory Board. (see below, Meeting of the EAB).

7. If the Student completes the Remediation Plan with a designation of “Satisfactory”, as determined by the Home Program Director, then the Student will proceed in the program and the Home Program Director will notify the Education Advisory Board of the outcome. The documentation surrounding the remediation will remain part of the Student’s file.
Meeting of the EAB

8. In the event that the program requests assistance of the Education Advisory Board (as noted in #6 above), the EAB shall review the past performance of the Student with reference to documentation presented by the Home Program Director and the Student. Additional information may be presented to the EAB at the time of the meeting.

9. The purpose of the meeting will be to gather information to assist the EAB in developing recommendations and strategies that will help address the Student’s issues. The Student will be offered the opportunity to invite an individual for support.

10. The Chair of the EAB shall ensure that the Assistant Dean, Postgraduate Medical Education, the Home Program Director and the Student are notified, in writing, of the EAB’s discussion and recommendations.

11. The Home Program Director and/or the Student may wish to discuss the recommendations made by the EAB, with the Assistant Dean, Postgraduate Medical Education.

Remediation is designated Provisional Satisfactory, Unsatisfactory, or Incomplete

12. If the Student completes the Remediation Plan with a designation of Provisional Satisfactory, Unsatisfactory or Incomplete, then the case would be reviewed by the Residency Program Committee. The Student may, at any time, elect to reject the designation, within the Appeal guidelines as outlined in the Level 1 Appeals – in accordance with Section VII.

13. The RPC should review and make one of the following recommendations to the Assistant Dean, Postgraduate Medical Education:

   a. the Student be allowed to continue in his / her normal program;
   b. the Student be allowed to continue in a modified program to be designed by the Student, the Home Program Director and the Clinical Supervisor, and approved by the Education Advisory Board;
   c. that the Student be dismissed from the program; or
   d. any other recommendation deemed by the Residency Program Committee to be just and reasonable in the circumstances.

The Program Director will advise the Assistant Dean, Postgraduate Medical Education of the RPC’s decision, in writing.

14. In the case where the recommendation has been made that the Student be dismissed from the program, or any other recommendation from the Residency Program Committee, the Assistant Dean, PGME has the authority to request a meeting of the Appeals Review Board (ARB). The Assistant Dean, PGME, will advise the Student and the Home Program Director, in writing, of a decision to convene the ARB.
15. A meeting of the Appeals Review Board will be convened for the purpose of reviewing the case and making a recommendation to the Assistant Dean, Postgraduate Medical Education, of a course of action in respect of the Student’s continued participation in the program. (Refer to Level 2 Appeals - Appeals Review Board (ARB), page 9).

16. The Assistant Dean, Postgraduate Medical Education, may suspend the Student, without loss of pay, from all activities involving the care or investigation of patients, pending the findings and recommendations of the Appeals Review Board.

17. The Appeals Review Board will make written recommendations to the Assistant Dean, PGME and the Assistant Dean will make a decision based on those recommendations. (Refer to page 10, Decision of the Assistant Dean.)

**VII. APPEALS**

**Level 1 Appeals – Program Level**
*(Within 15 working days after having become aware of the decision under appeal.)*

1. A Student may submit an appeal, in writing, to the Home Program Director in respect of any process or substantive decision (i.e. decisions involving academic judgment or specialty specific skills) arising out of the Evaluation Process, including a decision to indicate a designation other than “Satisfactory” on the Student’s ITER.

All appeals submitted at Level 1 must include a written statement from the Student clearly stating the decision(s) under appeal, providing detailed reasons why the decision is thought to be incorrect or inaccurate, and the desired result. The Student must submit the appeal within 15 working days after having become aware of the decision under appeal.

2. Level 1 Appeals should consider both the procedure of the evaluation as well as the substantive content.

3. For decisions in respect of rotations within the Student’s specialty, the Student’s home program appeals process will apply. Other rotations may be arranged within McMaster teaching hospitals or at another academic centre to provide second opinions regarding specialty specific ability. This would be mutually agreed upon by student and program.

For appeals in respect of process and substantive decisions, if the appeal is denied, it may proceed to Level 2 Appeals – Appeals Review Board, in accordance with this Section VII.

4. For decisions in respect of rotations outside the Student’s specialty, the Home Program Director should consider the appeal and will consult the Clinical Supervisor and / or the Program Director of that rotation, along with other appropriate individuals, e.g., the CTU Director. If the appeal is denied, the

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3 See Appendix A in respect of suspensions for “Emergent Situations”, such as situations involving danger to patient safety or lack of professionalism.

4 Students should contact their home program for details of its appeals process.
appeal may proceed to Level 2 Appeals – Appeals Review Board, in accordance with this Section VII.

5. For Students completing a Pre-Entry Assessment Program (PEAP), an Assessment Verification Period (AVP), a Practice Ready Assessment (PRA), or clinical examinations (STACERs), the sole remedy that may be granted following a successful appeal is the ability to repeat relevant components of the assessment or the clinical event, as applicable, one more time only. In these instances, if the appeal is denied at Level 1 (Program), the student has the option to appeal to Levels 2 and 3 however, the sole remedy remains - to repeat relevant components, one more time only.

6. The Chair of the Residency Program Committee shall ensure that a record of the meeting be kept, including any written submissions and the findings and recommendation of the Residency Program Committee concerning the matters before it. The Chair of the Residency Program Committee shall provide the Student with a written report of the findings and recommendations of the committee. A copy of the report will be sent to the Assistant Dean, Postgraduate Medical Education.

7. The Student shall have the right to appeal the recommendation of the Residency Program Committee, to Level 2 Appeals, for both process and substantive issues. The Student must submit the appeal within 15 working days after having become aware of the decision.

**Level 2 Appeals – Appeals Review Board (ARB)**

 *(Within 15 working days after having become aware of the decision under appeal.)*

The ARB may be convened:

**Category 1**

*By the Student* - to submit an appeal in respect of a process and/or substantive recommendation denied at Level 1. Grounds of appeal may include medical, compassionate or extenuating circumstances, bias, inaccuracy or unfairness.

All appeals at Level 2 must be directed to the Postgraduate Medical Education Office, with a copy sent to the Home Program Director, and include a written statement from the Student clearly stating the recommendation(s) under appeal, providing detailed reasons why the recommendation at Level 1 is thought to have been incorrect, inaccurate or unfair, and the desired result. The Student must submit the appeal within 15 working days after having become aware of the recommendation under appeal.

**Category 2**

*By the Assistant Dean, Postgraduate Medical Education* - to review an adverse recommendation made by the Residency Program Committee.

On receipt of a Level 2 appeal, the Postgraduate Medical Education Office will convene a meeting of the Appeals Review Board at its earliest convenience to hear the appeal.

**Meeting of the Appeals Review Board (ARB)**

1. The Appeals Review Board shall review the past performance of the Student with reference to documentation presented by the Home Program Director and the
Student. All reports of the Education Advisory Board will be submitted. The Home Program Director and the Student shall be entitled to make written submissions to the Appeals Review Board. Additional information may be presented to the ARB in writing or orally through a party’s own testimony or other individuals.

2. The Student, with counsel if desired, and the Home Program Director will be invited to attend the meeting of the ARB, along with any other appropriate individuals, as determined by the Appeals Review Board, e.g. the Clinical Supervisor who completed the ITER.

3. The Student and the Home Program Director shall be entitled to make written submissions to the ARB.

4. The Chair of the ARB shall ensure that a record of the meeting be kept, including any written submissions and the findings and recommendations of the ARB concerning the matters before it.

5. The Chair of the Appeals Review Board shall ensure that the Assistant Dean, Postgraduate Medical Education, the Home Program Director and the Student are notified, in writing, of the ARB’s recommendation, reasons for the recommendation and remedy, if any.

**Recommendations of the ARB**

**Category 1 - ARB convened at the request of the Student**

**Category 2 – ARB convened at the request of the Assistant Dean, PGME**

For both Category 1 and 2 the Chair of the ARB may recommend one of the following:

1. the Student be allowed to continue in his / her normal program;

2. where the Student had been suspended in accordance with paragraph 10, page 7, that the suspension be lifted and the Student be allowed to continue in a modified program to be designed by the Home Program Director and approved by the Education Advisory Board;

3. that the Student be dismissed from the program; or

4. any other recommendation deemed by the Appeals Review Board to be just and reasonable in the circumstances.

The Chair of the ARB will ensure that the Assistant Dean, Postgraduate Medical Education, the Home Program Director and the Student are notified, in writing, of the ARB’s findings and recommendations.

**Decision of the Assistant Dean, Postgraduate Medical Education**

1. As soon as possible following receipt of the findings and recommendations of the ARB, the Assistant Dean, Postgraduate Medical Education, shall, at his/her sole discretion, decide to accept the recommendation of the ARB or to substitute any other course of action.

2. The decision of the Assistant Dean, Postgraduate Medical Education will be final in
substantive matters.

3. The Student shall have the right to appeal the decision of the Assistant Dean, Postgraduate Medical Education, to Level 3 Appeals, for process issues only. The Student must submit the appeal within 15 working days after having become aware of the decision under appeal.

**Level 3 Appeals – Dean, Faculty of Health Sciences**

*(Within 15 working days after having become aware of the decision under appeal.)*

1. A Student may submit a Level 3 appeal to the Dean, Faculty of Health Sciences in respect to any appeal of a process decision denied at Level 2. Grounds of appeal may include medical, compassionate or extenuating circumstances, bias, inaccuracy or unfairness. The Student must submit the appeal within 15 working days after having become aware of the decision under appeal.

2. The Student’s submission must include a written statement outlining the decision(s) under appeal, providing detailed reasons why the decision at Level 2 is thought to have been incorrect, inaccurate or unfair, and the desired result.

3. The Dean shall arrange for a hearing to be held in accordance with Faculty-approved procedures before the Faculty Postgraduate Tribunal, defined by the Faculty, as the final adjudicator of this appeal.

4. The three members of the Faculty Postgraduate Tribunal will be chosen from a pre-selected group of faculty and postgraduate students (refer to Terms of Reference for the Postgraduate Tribunal).

5. The Designate appointed by the Dean, Faculty of Health Sciences, will request the Postgraduate Medical Education Office to prepare a file consisting of the Student's written evaluation reports, ITERs, other relevant reports and correspondence, and a summary statement of actions relevant to the appeal. The Deputy should ensure that the parties to the appeal (the Student and the Assistant Dean, Postgraduate Medical Education) have a copy of this file in reasonable time to prepare for the meeting to hear the appeal.

6. At any time throughout the process, the Tribunal may request documents from the Assistant Dean if the Tribunal finds that such documents are relevant to the proceeding.

7. The Postgraduate Tribunal has sole jurisdiction to hear and make a final adjudication on the appeal.

8. The Postgraduate Tribunal shall conduct itself in accordance with the principles of natural justice as maintained in the Statutory Powers Procedure Act. It is recommended that the Tribunal follow the procedures outlined in Appendix B, which are consistent with the Statutory Powers Procedure Act (Copies of the Statutory Powers Procedure Act are available in the University Secretariat, Room 210, Gilmour Hall).

9. The Postgraduate Tribunal shall give written notice of the decision, with reasons, to the student and to the other parties involved. This decision will be delivered as soon as reasonably possible following the conclusion of the hearing. The Postgraduate
Tribunal shall make one of the following decisions:

a. to uphold the appeal and grant the remedy sought by the Student;

b. to uphold the appeal and re-instate the Student at the appropriate stage of his/her Postgraduate program, with no remedy; or

c. to uphold the appeal and fashion any remedy deemed just and reasonable in the circumstances;


d. to deny the appeal and to require the Student to complete a Remediation Plan developed by the Postgraduate program with a designation of “Satisfactory” prior to being permitted to continue in the Postgraduate program; or


e. to deny the appeal and to require the Student to withdraw from the Postgraduate program.

6. The decision of the Postgraduate Tribunal is final. Postgraduate Students do not have access to the University Senate process. (Refer to McMaster University, Student Appeals Procedures, September 1, 2009; page 6, item (vii).)
Emergent situations include the following:

- **Danger to patient safety** i.e., inappropriate and/or harmful clinical actions (e.g. improper technique, lack of judgment etc.). *Refer to Guidelines re Patient Safety.*
- **Lack of professionalism** i.e., inappropriate professional behaviours (e.g. sexual misconduct, blatant, inappropriate breaches of confidentiality, harassment, boundary issues etc.) *Refer to the McMaster University, Postgraduate Medical Education, Guidelines on Professional Behaviour and Ethical Performance,*

**Process:**

1. A Clinical Supervisor may make a decision to relieve a Postgraduate Student from clinical duties if there are grounds to show that patient care is likely to be adversely affected if the Student continues in the placement.

2. The Clinical Supervisor and/or Clinical Teaching Unit Director should recommend immediately to the Home Program Director that the Postgraduate Student be suspended.

3. The Home Program Director will investigate the situation. At the same time, the Program Director shall notify and consult with the Assistant Dean, Postgraduate Medical Education.

   The Assistant Dean, Postgraduate Medical Education, shall notify the Student, in writing, that s/he has been suspended, without loss of pay pending the investigation of the Program Director.

4. On receipt of the written report and supporting documentation, at the discretion of the Assistant Dean, PGME, the Assistant Dean shall conduct an investigation as required. The Assistant Dean has the authority to request a meeting of the Appeals Review Board (ARB). The Assistant Dean, PGME, will advise the Student and the Home Program Director, in writing, of a decision to convene the ARB.

5. The ARB will conduct a thorough review of the documentation. The ARB may wish to meet with appropriate individuals, including the Student. The Student will have the opportunity to seek clarification of the documentation presented and will have the right to request clarification as required and invite appropriate individuals that can support his/her case.

6. The recommendation of the ARB shall be one of the following:
   - i) the postgraduate Student shall be re-instated;
   - ii) the postgraduate Student be re-assigned to another similar rotation;
   - iii) a Remediation Plan shall be implemented; or
   - iii) the postgraduate Student shall be dismissed from the program.

7. The Chair of the ARB shall ensure that the Assistant Dean, Postgraduate Medical Education, the Home Program Director and the Student are notified, in writing, of the Appeals Review Board findings and recommendations.

8. As soon as possible following receipt of the findings and recommendations of the ARB, the Assistant Dean, Postgraduate Medical Education, shall, at his/her sole discretion, decide to accept the recommendation of the ARB or to substitute any other course of action. The decision of the Assistant Dean, Postgraduate Medical Education, including reasons for the decision shall be provided in writing to the Student and the Home Program Director with copies to the ARB and the Student’s file. The Student shall have the right to appeal the decision of the Assistant Dean, Postgraduate Medical Education, at Level 3 Appeals – Appeals Committee, in accordance with Section VII (Appeals).
Documents for Further Reference:

1. McMaster University, Postgraduate Medical Education, Guidelines on Professional Behaviour and Ethical Performance.
2. Guidelines re Patient Safety.
3. Terms of Reference Education Advisory Board.
4. Terms of Reference Appeals Review Board.
5. Terms of Reference Faculty Postgraduate Tribunal
6. Appendix B-Rules of Procedure for Faculty Postgraduate Tribunal
7. McMaster University Student Appeal Procedures
Chart 1: Evaluation Process

Clinical Supervisor

MEET WITH STUDENT
- To discuss goals and objectives
- Outline responsibilities/duties

MIDPOINT EVALUATION
- Concerns to be documented
- Discussed face-to-face
- Timely

FINAL EVALUATION
- Face-to-face
- Timely

PROVISIONAL SATISFACTORY
SATISFACTORY
UNSATISFACTORY
INCOMPLETE

On-going formal evaluation
Chart 2: DESIGNATION OTHER THAN SATISFACTORY
(Refer to Section VI, page 5 for details)

- **PROVISIONAL SATISFACTORY**
  (remediation is within another rotation)
- **UNSATISFACTORY**
  (remediation requires a repeat rotation)
- **INCOMPLETE**
  (repeat rotation)

Student and Program Director Meet to discuss Evaluation

- **AGREES**
  A remediation plan is negotiated and agreed to. Plan is sent to EAB FYI.

- **TO EDUCATION ADVISORY BOARD**

- **DISAGREES**
  Student can appeal the evaluation in writing.

  - **APPEAL**
    Refer to Chart 4 ARB

- **REMEDIATION SATISFACTORY**

  - **If remediation is anything but satisfactory, student may appeal. Assistant Dean will review and may refer to ARB**
Chart 3: APPEALS - OVERVIEW
(All appeals must be made within 15 working days after having become aware of situation)
(Refer to Section VII, page 7 for details)

APPEAL
- Resident submits appeal in writing to program

LEVEL 1: PROGRAM
- Academic issues
- Process issues

Resolved

LEVEL 2: APPEAL REVIEW BOARD
- Academic Issues
- Process Issues

Resolved

LEVEL 3: DEAN’S TRIBUNAL
- Process Issues only

DECISION FINAL
Chart 4: APPEALS LEVEL 1 (PROGRAM)
(within 15 working days after having become aware of situation)

APPEAL
- Resident submits appeal in writing
  - Academic Issues
  - Process

RESIDENCY PROGRAM COMMITTEE
Reviews and submits report

STUDENT

Assistant Dean PGME
Informed and may refer to ARB

AGREES

DISAGREES
Student can appeal in writing
Refer to Level 2 (ARB)
Chart 5: APPEALS LEVEL 2
(within 15 working days after having become aware of situation)

CATEGORY 1 – APPEAL
By Student
• Resident submits appeal in writing
  o Academic Issues
  o Process

APPEALS REVIEW BOARD
Recommendation

Assistant Dean
PGME

RECOMMENDATION
CAT 1: (APPEAL)
• Student continues in program
• Student continues modified program
• Student dismissed from program
• Or any other recommendations

ASSISTANT DEAN
Reviews ARB’s findings and recommendation and makes decision
Assistant Dean then notifies Program and Student

STUDENT AGREES

STUDENT DISAGREES
Can appeal in writing
Refer to Level 3 Process only

CATEGORY 2 – ADVERSE RECOMMENDATIONS FROM RPC
PG Dean submits to ARB for adjudication

RECOMMENDATION
CAT 2: (APPEAL) DECISION
• Student continues in program
• Student continues modified program
• Student dismissed from program
• Or any other recommendations
Chart 6: APPEALS LEVEL 3 (DEAN’S TRIBUNAL)
(within 15 working days after having become aware of situation)

APPEAL
Resident submits appeal in writing
PROCESS ISSUES ONLY

Dean FHSc

PG TRIBUNAL

Decisions to uphold appeal
OR
Deny the appeal

Decision of Tribunal
FINAL
Chart 7: EMERGENT SITUATION — refer to Appendix A, page 11 for details

**EMERGENT SITUATION**
- Patient Safety
- Professionalism

Clinical Supervisor – decision to suspend Student. Clinical Supervisor/CTU Director to immediately notify Student’s Home Program Director.

**PROGRAM DIRECTOR**
Will consult/notify Assistant Dean, PGME

**ASSISTANT DEAN**
Will notify student in writing of suspension, pending urgent enquiry of ARB

**APPEAL REVIEW BOARD**
Recommends:
- Student reinstated
- Student reassigned to another similar rotation
- A remedial program implemented
- Student dismissed

**STUDENT MAY APPEAL DECISION OF ARB to DEAN FHSc**
FACULTY OF HEALTH SCIENCES

POSTGRADUATE MEDICAL EDUCATION: LEVEL 3 APPEAL
POSTGRADUATE TRIBUNAL

Function:

To hear appeals from a postgraduate medical student based on procedural issues only as described in the “McMaster Postgraduate Medical Education Policy and Procedures for the Evaluation of Postgraduate Student’s Performance”. Each hearing of the Postgraduate Tribunal shall consist of three members; two faculty members selected by the Dean/Vice-President, Health Sciences from the membership of the Standing Committee (from outside of the discipline of the postgraduate students who submits the appeal) and one postgraduate medical student selected by the Assistant Dean, Postgraduate Medical Education, from the membership of the Postgraduate Standing Committee (also from outside the residency program of the appellant). The decision of the Tribunal is final. The postgraduate medical student does not have access to the Student Appeals Procedures of the University Senate.

Composition of the Standing Committee:

Chair: To be appointed for one year renewable term by the Faculty Executive Council from among the faculty members for the Postgraduate Tribunal.

Faculty: Seven faculty members who are experienced in the training of postgraduate students, appointed by Faculty Executive Council for staggered three-year terms. The faculty member may or may not be a Program Director. No educational program shall have more than two representatives.

Student: Three postgraduate medical students, appointed by Faculty Executive Council for one-year terms, renewable. No residency program shall have more than one representative.

Secretary: Secretary for the Faculty of Health Sciences or delegate.
POSTGRADUATE MEDICAL EDUCATION

EDUCATION ADVISORY BOARD (EAB) - TERMS OF REFERENCE

Membership:

(a) Chair, appointed by the Assistant Dean, Postgraduate Medical Education.

(b) Three faculty members (a member should not concurrently be a Director of Residency Training Program) appointed by the Faculty Postgraduate Medical Education Committee.

(c) Two postgraduate students appointed by the Faculty Postgraduate Medical Education Committee.

(d) Postgraduate Administrator (non-voting).

Note:

1. A quorum will be four members, including the Chair, at least one of whom is a postgraduate medical student.

2. Student and faculty members shall be voting members of the Board, but will be excluded from such deliberations upon request of any student or faculty member, whose case is being considered.

Function:

To consider the performance of any student whose name has been referred to the Education Advisory Board by a Program Director and/or the Residency Training Program Committee or by the Assistant Dean, Postgraduate Medical Education.
A resident or staff member in the Department of Anesthesiology may submit an appeal to the Program Director with respect to any procedural or academic, specialty specific issue, arising out of the evaluation process. Both issues of process of evaluation and content of the evaluation are open to review.

This appeal and the events leading to it will be reviewed by the Anesthesia Residency Training Committee. The Department Chair will be made aware of the details of the appeal and the process being undertaken to resolve it.

To the extent possible, confidentiality will be protected at all levels of the review. The following guidelines will apply to the management of evaluation appeals in the Department of Anesthesia:

1. All appeals must be submitted in writing to the home Program Director. The email/letter should state clearly the grounds for the appeal and provide details and examples related to the problem. The resident or staff is encouraged to submit the appeal as soon as possible after having become aware of the decision that is being appealed. Timeliness is considered important in order to obtain clear information surrounding the issue at hand.

2. Once the Program Director has received an appeal, s/he will provide the Resident or staff with a copy of the Postgraduate Evaluation Policy and Procedures, along with any program specific evaluation policies.

3. A meeting of the RTC will be scheduled to review the appeal.

4. With respect to decisions made of rotations outside the resident’s specialty, the home Program Director will consult with the Clinical Supervisor and/or the Program Director of that rotation, along with other appropriate individuals.

5. The Resident or staff must be offered the opportunity to attend the committee meeting where his/her case is being reviewed. The resident must be provided the opportunity to invite relevant individuals and/or counsel.

6. If the resident or staff does not agree with the committee’s decision, s/he has the option to appeal all matters of process to the Appeal Review Board (ARB). Matters dealing with clinical expertise are dealt with at the Department level. Matters dealing with the process of evaluation and academic issues are dealt with by the ARB.

7. If the program committee is unable to reach a decision on the issue, the Program may elect to refer the matter to the ARB.

8. There must be a written report documenting the details and the outcome of all appeals. A copy is sent to the Assistant Dean, Postgraduate Medical Education, as well as a copy to be maintained in the Resident’s file.

9. Further actions to be taken will follow the Postgraduate Medicine Evaluation Policy and Procedures for the Evaluation of Student’s Performance

May, 2011
Reviewed September 2014
In Training Examinations

During the months of January (PGY2) and May, (PGY4), residents will be writing the AK2 and 24 examinations (http://www.metricsinc.org/index.html).

The ABA will be written as per their direction and will be written by the PGY3s & 4s.

In House MCQ's

The residency program has instituted in-house MCQ exams, to be held three times per year. The exams will be held as follows:

September: PGY2-5 (encompassing all topics, same exam for all year)
February: PGY2-4  (based on the previous half-years’ core curriculum topics for each PGY year)
June: PGY2-4 (based on the previous half-years’ core curriculum topics for each PGY year)

The exams are formative in nature and will serve the following purposes:
- To provide motivation for core curriculum preparation and provide an alternate method of feedback on the effectiveness of that study preparation
- To support the development of exam-taking skills throughout residency
- To support the more gradual, steady preparation for the Royal College written exam

Attendance is mandatory unless post call or on vacation. If absent for one of the preceding reasons, a make-up exam must be arranged. Please arrange this with Candice. Residents should arrange the make-up during their academic day or during a day off (e.g. PL day). Make-up exams should not, under any circumstances, disrupt clinical time.

Residents are asked not to discuss the questions after because some residents will be writing later. Exam results will be reported to each resident along with an anonymous comparison of the results of the rest cohort taking that same exam, by PGY cohort. The exams are prepared the PD and comprise mostly new questions from the PD or other faculty members, in particular from academic session preceptors. Validity and results will be studied.

The in-house exams have been found to correlate very closely to results of in-training exams (AKA and ABA).

Consistently poor results on In-house exam would have an effect on “Good Standing” as well as Promotions Criteria.

June 2016
Simulation Training in the Anesthesia Residency Program

Overview

The Anesthesia Training Program at McMaster University has an extensive medical simulation training component for both Undergraduate Medical Education and Postgraduate Residency Training. The intent of the simulation experience is to provide training opportunities with deliberate exposure to and teaching of topics that may be difficult to observe or assess in the clinical setting but which are crucial to preparation for independent practice. The goals are to teach and reinforce knowledge, skills and behaviours in a controlled, safe and reproducible environment that will ultimately be translated and applied to clinical practice.

The teaching framework is based on Royal College of Physicians and Surgeons of Canada (RCPSC) CanMEDs, Anaesthesia Non-Technical Skills (ANTS) and Canadian Patient Safety Institute (CPSI) Patient Safety Competencies. Major elements focus on skills acquisition under the Medical Expert, Communicator, Professional and Manager domains. Aspects of Task Management, Team Working, Situational Awareness, and Decision Making are concepts and skills that are also key elements of simulation training. Underpinning all aspect of instruction in simulation is the concept of Patient Safety.

The majority of simulation training in the program is conducted at the Centre for Simulation Based Learning (CSBL) at MUMC. The Centre has significant staff and equipment resources with part-task trainers and medium to high fidelity simulators. Simulations may utilize standardized patients or may be equipment based with high fidelity patient simulators to set the stage for a realistic experience. Residents are expected to be familiar with and comply with standards and the professional code of conduct of the CSBL that include aspects of confidentiality. (See Appendix A)

Simulation Training in the Undergraduate Anesthesia Clerkship Program

As part of the mandatory Clerkship Anesthesia Training, learners will receive instruction on airway and intravenous access skills with the use of part-task trainers. Residents in the Anesthesia Training Program will be the instructors for these small group sessions and should be familiar with the specific training objectives, the use and care of the equipment.

Residents are also involved in the medium fidelity simulations provided to the Clerks at the end of the 2-week rotation. Residents will work with a Faculty member and one of the Simulation Operators from the CSBL. The goal is to provide Residents with experience in using simulation training as an educational technique and to develop an appreciation of the elements in organizing and running simulated training exercises for junior learners. The Clerkship sessions involve part task training for airway and IV skills. This coupled with didactic teaching sessions prepares them for their clinical experience in the operating room. In addition to the part task training sessions, a series of medium fidelity simulations are provided on the last day of the Anesthesia Clerkship rotation. These simulations present clinical situations requiring the Clerks to perform patient assessments and conduct an anesthetic with attention to the monitoring, airway management and induction sequence. During each simulation a problem occurs that requires diagnosis and intervention. The events are basic in nature, appropriate to the level of training and are used to reinforce concepts of physiology and pharmacology applied to direct patient care. The Resident’s role will involve participation in the simulation as a confederate or instructor imbedded in the simulation. The Resident also participates in the debriefing to provide assessment and feedback to develop skills in instructional technique consistent with adult learning theory. Senior Residents may be involved in running the simulations and
conducting the debriefing more independently. Residents should be familiar with the Clerkship scenarios and objectives of training linked with each. Evaluations for the Clerks will be completed by the Faculty and the participating Resident. Evaluations will also be completed by the Faculty on the Residents based on participation in the teaching session.

Simulation Training in the Postgraduate Anesthesia Residency Program

Introduction to Simulation Training is provided during the Transitions Course held in July and August of each year. These sessions are directed at the PGY1 and PGY2 level of training. Simulation with part-task and full mannequin sessions will be provided on a variety of topics selected to help Residents transition into their clinical roles. Topics included in the Transitions Course Simulation Program include the following:
  - Introduction to Simulation Training and Clerkship Teaching
  - Advanced Cardiac Life Support
  - Basic and Advance Airway Management skills
  - Invasive IV Access/Monitoring Techniques
  - Epidural and Spinal Techniques
  - Management of Trauma

Throughout the course of the 5-year training program residents will be scheduled to participate in simulation sessions as learners. Topics for simulation training are reviewed and determined annually by the Faculty Simulation Curriculum Committee. In addition, simulation topics required by the Royal College of Physicians and Surgeons of Canada established by the Canadian National Anesthesia Simulation Curriculum (CanNASC) Committee are also included in the curriculum. The CanNASC scenarios are geared to the senior residents at the PGY4 or PGY5 level and will be used to evaluate preparation for independent practice in Anesthesiology.

Faculty with formal credentials as simulation instructors will conduct these sessions. The construct of the simulation sessions will be similar to that described for the Clerks although the scenarios will be more complex in nature and fidelity. Pre-brief materials and orientation to the simulation will be provided as appropriate to each scenario. Generally, the specific topic of individual scenarios is not disclosed prior to the session but each scenario has been developed with learning objectives that will be discussed during the debriefing exercise. Residents should be familiar with the General Objectives of Simulation Training. (see Appendix B)

The training experience will usually focus on critical events in anesthesia and crisis resource management. In most cases professional staff such as nurses or respiratory therapists will be involved as instructors imbedded into the simulation to augment the interactive nature of the training. Simulations will involve audio and visual recording of the scenarios and potentially the debriefing exercise. These recordings will be archived for review, teaching and faculty development purposes. The use of audio and video recordings will be subject to strict confidentiality and consent rules. The debriefing component of the Resident Simulation sessions will be more extensive during which time all instructors and participants will discuss the interpretation of the scenario, the actions of the learners and the specific teaching objectives of the scenario. The debrief will also provide the scaffolding for on going education and continuing professional development. Resident assessment and feedback for general simulation sessions will be formative.

Assessment, feedback and evaluation for CanNASC scenarios will be both formative and summative. Assessment and evaluation for CanNASC scenarios will be based upon the scenario specific assessment rubrics developed by the CanNASC Committee. Performance scores will be submitted to the CanNASC national registry and will be collated with scores on the Royal College oral examinations. It is anticipated
that successful completion of the CanNASC scenarios will eventually become a requirement for eligibility to sit the oral examinations.

Residents will complete evaluations to provide the Faculty feedback regarding the teaching effectiveness of the simulation experience and feedback will be used for CQI for the simulation program. Resident evaluations will be collected in a confidential manner and reported in an anonymous fashion consistent with the McMaster University policies.

The simulation curriculum will include topics on the Management of Emergencies in Pediatric Anesthesia (MEPA) simulations. Residents will be scheduled to complete MEPA scenarios twice during their Residency Training Program. The first exposure will occur in the PGY2 year and the second in their PGY4 or PGY5 year. Intra-Disciplinary Education (IDE) simulations with the Department of Obstetrics and Gynecology are also included in the curriculum. Both Anesthesia and Obstetrical Residents participate as learners in simulations involving obstetrical situations or emergencies. Faculty from both Departments attend and participate in the assessment and debriefing exercises. Evaluation and feedback for these sessions are formative at this stage.

By the completion of the PGY4 and 5 years of training Residents will have had the opportunity to participate in approximately 10-15 simulations including the 5 mandatory CanNASC scenarios.

The nature and content of the simulation curriculum makes it impossible to coordinate simulation topics with those covered in the sequence of the Core Teaching Program. The simulation curriculum will include topics and situations that are relevant to any level of training and which may be experienced at any time in clinical training. Some scenarios are geared toward the junior resident while others are designed for the more experienced resident. However, there are elements of all simulation training exercises that are applicable to learners at any stage of training. The random nature of topics is intended to add to the self-assessment and competency-based evaluation process as an indicator of practice preparedness.

**Scheduling and Attendance**

**Clerkship Simulations**

Residents will be notified of the Clerkship Simulations in which they will be involved as instructors in advance of the sessions and will be released from clinical duties and assignments to participate. Residents involved in the Airway and IV Access part-task training sessions should review the instructional material and arrive at the session in time to ensure the equipment is set up as required. The CSBL staff will be responsible for the primary set up and take down of the equipment. Any equipment issues or problems should be reported to the CSBL staff.

Residents involved in the medium fidelity simulations should be prepared to meet with the Faculty instructor 30 minutes prior to the start of the session to review procedures, the scenarios and clarify the roles and division of responsibilities. Residents will be expected to wear appropriate operating room attire in the CSBL. Residents will be responsible for covering their assigned sessions and should notify the Administrative Assistant (Ms. Tammy Purchase) if changes are made to the schedule. Residents are expected to stay until the completion of the teaching session for the group and participate in the session evaluation.
**Resident Simulation Sessions, IDE and CanNASC Simulations**

Residents will be scheduled as learners in simulations and will be notified of the date of the session in advance. Vacation and call schedule is taken into account when the simulation schedule is made. Therefore, instances where the resident would need to make a change to the simulation schedule should be very unusual and should only occur in extenuating circumstance. If changes to the schedule are necessary for personal reasons, these need to be communicated to the Department of Anesthesia Faculty Lead in Simulation (Dr. Greg Peachey) and the Administrative Assistant (Ms. Tammy Purchase) in order that an appropriate alternative may be scheduled for the planned session. Residents will not be permitted to switch their assignments between themselves since resident assignments will be based on individual need to complete specific scenarios. The scheduling of resident simulation training sessions for regular topics, IDE (Inter-Disciplinary Education) scenarios and CanNASC scenarios will occur on designated academic days so as not to interfere or conflict with clinical activities. Generally these will be on Wednesdays for the PGY4s and on Thursdays for the PGY2s and PGY5s. Days allocated for Simulation will be protected as academic days and may involve free study time but residents must make themselves available for their scheduled simulation session.

Sessions will generally last approximately 1 hour including the debriefing and evaluation component. Residents should try to arrive for their sessions 5-10 minutes before the scheduled time and allow ample time for travel and parking if they are not at the MUMC site. Residents arriving late will be allowed to participate in the simulation only if it does not interfere with the schedule for subsequent simulations for their colleagues or the staffing for the CSBL. Residents who do not attend a scheduled simulation session or who arrive late and are unable to do the simulation due to time constraints will receive an “incomplete” on their assessment. A resident who receives an “incomplete” evaluation might be able to participate in the scenario if it is conducted at a later date but they will not be given priority assignment over those who have not been scheduled for the session.

**MEPA Sessions**

MEPA sessions will be run as half-day sessions involving 2 residents at a time. Residents will be notified of their assigned dates for MEPA sessions and will be excused from clinical duties for the morning or afternoon sessions. It is expected that residents will participate in the usual clinical activities on the corresponding half day when MEPA is scheduled.

**Summary**

The personnel and equipment resources that are organized to provide the Simulation Training Component represent a considerable investment for the Program. Every effort should be made to optimize the use of resources and gain the most personal benefit from the experience. The Faculty and staff look forward to participating with the Residents in this unique area of medical education.

Appendix A Standards of Conduct for the Centre for Simulation Based Training

Greg Peachey
Faculty Lead in Simulation, Department of Anesthesia

2016/06/16
Appendix A

Learner contract

The Centre for Simulation-Based Learning (CSBL) provides educational opportunities using simulation to improve care of actual patients. Simulation is used to mimic real situations for educational benefit. Simulation may require models, manikins and/or role-play by students, volunteers, standardized patients, staff or faculty. As a learner in the CSBL, I will act professionally and responsibly at all times, treating simulation equipment, standardized patients, staff, faculty and peers with respect. I will treat the simulation as if it were real, act with a genuine desire to learn, and suspend my disbelief of the simulation even when it is difficult to do so.

Confidentiality agreement

To preserve the educational value, integrity and safety of the learning environment, I agree to maintain strict confidentiality about the proceedings of the simulation session, details of training scenarios, and the performance of all participants. I will not view, discuss, share, record or disclose in any manner including on social media any confidential information pertaining to the session. I understand that lapses in confidentiality are considered academic misconduct, and could result in my access to the centre being revoked and/or dismissal from my academic program.
Photography and video recording release

Video recording is often necessary to meet the learning objectives of simulation sessions. I authorize the use of photography and video recording for educational purposes including but not limited to: debriefing, training staff and faculty, educational presentations and quality assurance.

Appendix B

McMaster University Anesthesia Residency Training
Objectives of Simulation Training

The goal of simulation training is to provide an educational experience to enable trainees to demonstrate the acquisition and application of medical knowledge and skills at a level deemed appropriate for independent practice in Anesthesiology.

Simulation training and evaluation exercises will focus on knowledge content areas contained in the National Core Curriculum for Anesthesia Training.

Performance expectations will be consistent with established guidelines and standards of anesthetic practice for the care of patients and management of emergency or critical events that may be encountered in the peri-operative period.

Simulation training, feedback and evaluation will focus on the knowledge, skills and abilities of the trainee to function in the capacity of an independent practitioner in Anesthesia framed in the CanMeds and Canadian Patient Safety Institute (CPSI) competencies and Anesthesia Non-Technical Skills (ANTS) and Crew Resource management (CRM) principles.

CANMEDS Competencies

1. Medical expert
2. Communicator
3. Collaborator
4. Professional
5. Manager
6. Health Advocate
7. Scholar

CPSI Safety Competencies

1. Culture of Safety
2. Working in Teams
3. Communicating
4. Managing Risk
5. Human Factors
6. Adverse Events

ANTS Principles:

1. Task management
2. Team Working
3. Situational Awareness
4. Decision Making

**CRM Principles:**

1. Leadership
2. Task delegation
3. Closed loop communication
4. Shared mental model
5. Monitor and crosscheck
6. Decision making
7. Conflict resolution
8. Dealing with hierarchy

**General objectives of simulation training will require the trainee to:**

- Demonstrate content knowledge of scenario specific topics at a level consistent with level of training.
- Demonstrate the ability to diagnose and identify clinical problems that may be encountered in the course of providing anesthesia care.
- Demonstrate the ability to select and implement appropriate treatment, responses or interventions congruent with the clinical presentation and problems presented.
- Demonstrate appropriate technical skills required in the practice of anesthesia including but not limited to airway management, resuscitation procedures and use of anesthesia related equipment and supplies.
- Demonstrate an ability to function as a member of a professional healthcare team either in the role of team leader or team member as the circumstances dictate.
- Demonstrate an ability to communicate effectively with patients, colleagues and staff in the provision of acute and ongoing care situations.
- Demonstrate professional conduct and behaviours consistent with standards of the profession.
- Demonstrate a knowledge and ability to apply principles of patient, colleague and personal safety to minimize the occurrence of adverse outcomes.
- Demonstrate an ability to manage personnel and equipment resources to optimize patient care.
- Demonstrate an ability to recognize and elucidate opportunities for personal professional development through for self-reflection and analysis of personal performance.

**Topic specific objectives are elucidated for individual scenarios and are discussed during scenario debriefing, evaluation, and assessment component of the simulation exercise**

Revised 2016/06/18
### Simulation Evaluation

**Scenario:** ____________________________

**Faculty:** _______________________________  **Trainee:** _______________________________  **PGY Level:** _____  **Date:** _______

<table>
<thead>
<tr>
<th>Categories</th>
<th>Elements</th>
<th>Element Rating</th>
<th>Debriefing notes and category rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task Management</strong></td>
<td>Planning &amp; preparing</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prioritising</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing &amp; maintaining standards</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identifying and utilising resources</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td><strong>Team Working</strong></td>
<td>Co-ordinating activities with team</td>
<td>1 2 3 4</td>
<td>Overall: 1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>Exchanging information</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Using authority &amp; assertiveness</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assessing capabilities</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supporting others</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td><strong>Situation Awareness</strong></td>
<td>Gathering information</td>
<td>1 2 3 4</td>
<td>Overall: 1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>Recognising &amp; understanding</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anticipating</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td><strong>Decision Making</strong></td>
<td>Identifying options</td>
<td>1 2 3 4</td>
<td>Overall: 1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>Balancing risks &amp; selecting options</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Re-evaluating</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td><strong>Add'l CanMEDS</strong></td>
<td><strong>Medical Expert</strong></td>
<td><em>Not observed</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowledge of topic</td>
<td><em>Not observed</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Performance of Technical skills</td>
<td><em>Not observed</em></td>
<td></td>
</tr>
<tr>
<td><strong>Professional</strong></td>
<td>Appropriate interaction with others</td>
<td>1 2 3 4</td>
<td>Overall: 1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>Respects others</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>Patient</td>
<td>1 2 3 4</td>
<td>Overall: 1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>Self</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-worker</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

**Rating Options**

4 – **Good**  Performance was of a consistently high standard, enhancing patient safety; it could be used as a positive example for others

3 – **Acceptable**  Performance was of a satisfactory standard but could be improved

2 – **Marginal**  Performance indicated cause for concern, considerable improvement is needed

1 – **Poor**  Performance endangered or potentially endangered patient safety, serious remediation is required

**Not observed**  Skill could not be observed in this scenario
Medical Expert (Content areas) comments:

Clinical knowledge of topic area
Application of clinical knowledge to case
Generation of a differential diagnosis for problem solving
Knowledge of applied pharmacology/therapies
Use of investigations

Critical errors

Educational recommendations/CPD:

<table>
<thead>
<tr>
<th>Global performance in this scenario:</th>
<th>On the continuum from “Clerk” to “Consultant” indicate the learner’s level of functioning for this scenario.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Requires closely supervised practice. Significant omissions or errors observed requiring more in depth training in knowledge or skills.</td>
</tr>
<tr>
<td>2</td>
<td>Requires minimal to no supervision for non-complex cases. Some errors, omissions or inconsistencies in practice requiring further development of knowledge or skills.</td>
</tr>
<tr>
<td>3</td>
<td>Requires minimal to no supervision for moderately complex cases. Minor errors, omissions or inconsistencies in practice requiring some improvement</td>
</tr>
<tr>
<td>4</td>
<td>Requires minimal to no supervision for complex cases. No significant errors, omissions or inconsistencies in practice</td>
</tr>
<tr>
<td>5</td>
<td>Knowledge and skills demonstrated are consistent with the ability to manage complex cases at a level suitable for unsupervised independent practice.</td>
</tr>
</tbody>
</table>

A score of 4 or greater is indicative of performance suitable for independent practice provided there are no critical errors made. Critical errors will be identified on the evaluation and will be considered a failure.
# POSTGRADUATE MEDICAL EDUCATION: PROMOTING PROFESSIONALISM

**POLICY AND PROCEDURES**

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<tr>
<td>Egregious Behaviour</td>
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PROMOTING PROFESSIONALISM IN POSTGRADUATE MEDICAL EDUCATION

POLICY AND PROCEDURES

I  Preamble

Professionalism is an essential set of attitudes and behaviours expected of physicians through all stages of their career. As members of a self-regulated profession, physicians are entrusted to maintain professional accountability to themselves, patients, families, colleagues and their profession. The required attitudes and behaviours of professionalism are derived from multiple CanMEDs competencies, as indicated in the Professionalism in Practice (PIP) document (Appendix A) illustrating the complex and multi-faceted nature of professionalism, which is reflected in this policy.

The importance of demonstrated proficiency in Professionalism among physicians is supported by both our provincial regulatory body, the College of Physicians and Surgeons of Ontario (CPSO); and the national accreditation authorities – the Royal College of Physicians and Surgeons of Canada (RCPSC) and the College of Family Physicians of Canada (CFPC). (See references.) All postgraduate learners are subject to the requirements of the aforementioned regulatory and accreditation bodies, in addition to those outlined in this policy. Should Learners engage in a behavior or set of behaviours that violate the policy and procedures outlined under this policy and / or any other Postgraduate Medical Education policy, and the Faculty of Health Sciences Professional Behaviour Code of Conduct for Learners simultaneously, the breach shall properly be addressed under this policy in the first instance. However, at the discretion of the Assistant Dean, Postgraduate Medical Education, the election may be made to proceed secondarily in also applying the procedures of the Faculty of Health Sciences Professional Behaviour Code of Conduct for Learners should s/he reasonably decide it appropriate to do so in the circumstances.

II  Scope

This policy applies to all postgraduate learners registered with the Postgraduate Medical Education Office. Professional behavior is expected in all clinical and academic settings and roles, including, but not limited to: clinical, administrative, research, both in clinical / university sites and off-site, as well as real or on-line environments. (Refer to Guidelines for appropriate use of the Internet, Electronic Networking and Other Media) This policy shall be applicable to all contexts and circumstances in which postgraduate learners are, or could reasonably be considered to be, representing the profession, their educational program and / or McMaster University.

Each program will specify how this policy will be applied to its evaluation-related hierarchy, including in any Distributed Medical Education sites. For example, evaluation information that would normally go directly to the Program Director in Hamilton may instead go to a DME site lead. However, the Program Director is ultimately responsible for ensuring that monitoring of a Learner’s progress is being completed as per the program’s organizational structure.

It is recognized that the structure of training programs vary from program to program; the relevant committee, for the purposes of this document, may be the Residency Program Committee or a subcommittee of the RPC. It will vary for fellowship programs.
III  Definitions:

Postgraduate Learner – Resident, Clinical Fellow, Research Fellow – referred to as the ‘Learner’.

Program Director – the individual who is the officer responsible for the overall conduct of the residency program, reporting to the Assistant Dean of Postgraduate Medical Education for the Faculty. If the incident is with a Clinical or Research Fellow the “Program Director” would be his / her Supervisor or Department Chair, or whoever is deemed most appropriate.

Lead Educator (LE) – the individual who is most directly responsible for the postgraduate learner’s performance in the educational component where the learning is taking place e.g.: clinical supervisor; seminar coordinator; speaker or organizer at academic half day; senior residents with program-defined educational supervisory responsibilities.

Residency Program Committee (RPC) – Residency Program Committee (RPC) that oversees postgraduate education for the specialty; may be a subcommittee of the RPC. It is recognized that the program structure may vary for fellowship training.

IV  Domains of Professional Behaviour

An outline of the key subdomains, the CanMEDs roles they reflect, and a description of behaviours consistent with professional practice is documented in the Undergraduate and Postgraduate Professionalism in Practice (PIP) Document (See Appendix A).

All postgraduate medical learners at McMaster University are expected to conduct themselves in a manner consistent with Professionalism in Practice (PIP) and strive for exemplary behavior within the three domains of Professional Behaviour:

1. Professional Responsibility / Integrity
2. Pursuit of Excellence / Insight
3. Personal Interactions – Learning and Clinical Environments

V  Principles

1. To promote and recognize exemplary behaviour in Professionalism for postgraduate learners.
2. To support the development of professional behavior in postgraduate learners.
3. To encourage respectful dialogue about Professionalism in all aspects of the learning environment, both clinical and academic.
4. To outline a process to be followed for behaviour(s) inconsistent with professional practice.
VI **Guidelines for Assessing Professionalism in Practice**

Below are broad definitions that may be used as a guideline in order to provide some standard of professionalism.

1. **Exemplary Behaviour** – defined in the “Exemplary Professional Practice” column of the PIP document.

2. **Minor Breach** – a one-time incident in any of the three domains in the PIP document, for which feedback / remediation can be almost immediately applied due to its low level of severity in that single incidence. The specific behavior descriptor is identified in the “Inconsistent with Professional Practice” column.

3. **Significant Breach** – A series of incidents of behavior Inconsistent with Professional Practice in one or more subdomains as defined in the PIP document, where feedback / remediation has been provided in regards to the earlier incidents or

   A single event of behavior Inconsistent with Professional Practice, as defined in the PIP document, that is considered by the Lead Educator or Program Director as significant in severity.

4. **Egregious Breach** – any incident for which there is concern of significant risk to others or illegal activity.

VII **Reporting of Professional Behaviour**

Anyone who is associated with postgraduate learners is encouraged to provide feedback, both in instances of Exemplary Professionalism in Practice, as well as behaviours Inconsistent with Professionalism in Practice. This would include but not be limited to: teaching faculty, allied health professionals, peers, administrative personnel, junior learners, etc.

It is recognized that incidents may occur in clinical or non-clinical settings. Feedback should be given as close in time to the occurrence as the situation allows, following commonly accepted principles of giving feedback.

All occurrences of behaviour inconsistent with professional behaviour must be submitted to the Program Director in writing in order for the Program Director to formally address it.

Documentation may be in any form deemed acceptable by the program. This may include email, field note, progress note or any other program-specific form. The report will remain a part of the learner’s file.

- **Occurrences of Exemplary Professional Behaviour**

  If the event occurred in the context of a rotation-specific activity, this positive report should be sent to the Program Director and be copied to the faculty member completing the Learner’s evaluation for the educational component in which the behaviour occurred.
Occurrences of Behaviour Inconsistent with Professionalism in Practice

When there is an occurrence of possible unprofessional behaviour:

1. The individual who has observed or been part of this incident may choose to discuss the incident with the postgraduate learner.

   If the observing individual does not feel comfortable with this discussion, they may report the incident to the Lead Educator. If it is unclear as to who is the LE applicable to the situation, the incident can be reported to the Program Director who may investigate the incident themselves, or if appropriate, may ask the LE to do so.

2. The purpose of the conversation should be as follows:

   Clarify what happened:
   a. Describe what was observed;
   b. Allow the learner to describe their interpretation of what happened;
   c. Determine what motivations/intentions led to the behaviour including potential underlying personal circumstances.
   d. Give feedback appropriate to the circumstances, including strategies for improvement and potential resources or supports appropriate to the situation
   e. Describe what will be done next (e.g. report the occurrence further, monitor for improvement, acknowledge a misunderstanding, etc.)

3. The details of this discussion should be documented by the person having the discussion with the Learner.

   a. The Learner must be provided with a copy of the documentation. The Learner may wish to submit a written response to the note.

   b. Copies of the documentation should go to each of the:
      - Lead Educator
      - Program Director
      - Person Responsible for completing the evaluation for the educational component in which the incident occurred, where one exists

VIII Review / Monitoring by the Program

1. On receiving documentation of Behaviour Inconsistent with PIP, the Program Director will separately contact the individual(s) who have submitted the report as well as the Learner, to review the concerns. This should be done within 10 working days of learning of the incident. This discussion should include exploration with the Learner of their interpretation of what occurred as well as any underlying motivations, intentions or personal circumstances that may have contributed to the situation.
2. Based on their review, the Program Director will determine the severity of the breach (i.e. Minor, Significant or Egregious) based on the aforementioned definitions.
   
a. At the discretion of the Program Director, or at the request of the Learner, the Program Director may review the incident with the Residency Program Committee in order to determine the severity of the incident.
   
b. Previously documented incidents of Behaviour Inconsistent with PIP will be considered in determining the severity of the current breach, as per the definition of Significant Breach.
   
3. The Program Director will document his / her findings and the determination of the severity of the breach. (Refer to Appendix B for suggested elements of the documentation)
   
a. These findings will be shared with the Learner, LE and, if different, the person responsible for completing the applicable evaluation (if one exists for the situation in which the incident occurred), for the purpose of providing feedback and future direction.
   
b. The findings will become a part of the Learner’s academic record.
   
4. The Learner may appeal the findings. Refer to Postgraduate Policy and Procedures for the Evaluation of Postgraduate Students’ Performance, Section V on Appeals.

IX Categories of Behaviour Inconsistent with PIP

1. Minor Breach

The Program Director will ensure that monitoring of the Learner’s professional behaviour is occurring.

a. If the incident occurred in a setting for which there is an applicable evaluation, the person responsible for completing the evaluation will be expected to monitor for improvement in the behaviour. This person will be expected to gather feedback from other supervisors who have continuity in working with the Learner in that setting.

b. Further incidents should be documented and reported as per the same process as described above.

c. Progress in the Learner’s development of professional behaviours should also be noted to the Learner and to the Program Director.

2. Significant Breach

The Program Director, together with the Learner, will develop an Remediation Plan (see below) for the Learner. The Program Director may also wish to consult with the Advisor, Professionalism in Clinically Based Education at any time in the process, and / or the Educational Advisory Board (EAB). If they have been consulted, the EAB should receive a copy of the remediation plan for review.
a. At the Program Director’s discretion or at the request of the Learner, the Program Director may arrange for a meeting of the Residency Program Committee to advise them around the development of the Remediation Plan.

b. The LE and person responsible for completing the evaluation may be invited to participate in the development of the Remediation Plan.

c. Monitoring of the Learner’s progress within the Remediation Plan is the responsibility of the Program Director and the RPC Residency Program Committee

   - Monitoring of incorporation of recommendations will occur within the evaluation hierarchy of the program.

   - If the behaviour inconsistent with PIP occurred in a setting for which there is an applicable evaluation, the person responsible for completing the evaluation will be expected to monitor for incorporation of recommendations and improvement in the behaviour. This person will be expected to gather feedback from other supervisors who have continuity in working with the Learner in that setting.

   - It is also expected that the Program Director will need to gather feedback from LEs in future settings in order to monitor progress.

   - Further incidents of behaviour inconsistent with PIP should be documented and reported as per the same process as described above.

   - Progress in the Learner’s development of professional behaviours should also be noted to the Learner and to the Program Director.

3. **Egregious Behaviour**

   Refer to the process outlined in the *Policy and Procedures for the Evaluation of Postgraduate Students’ Performance, Appendix A: Suspension for Emergency Situations*, should be followed. (see medportal under Policies). Program Directors are advised to also consult with the Assistant Dean of Postgraduate Medical Education.

X **Remediation Plan**

1. The learner must be seen as integral to the development of a plan for working towards improvement and thus should be encouraged to be involved in the process. The learner’s level of engagement in this process may reflect their insight into the issues identified and should be considered in the development of the Remediation Plan, discipline, and/or sanctions. This process should follow that outlined by the Postgraduate Medical Education Evaluation Policy. *(See medportal, under Policies)*. The Residency Program may wish to consult the Educational Advisory Board (EAB).

2. Remediation plans should include potential resources and/or supports appropriate to the situation.
3. The Program Director and when requested, Residency Program Committee will develop and oversee the implementation of the Remediaiton Plan.

4. Appropriate documentation regarding the Remediation Plan (e.g., plan outline, meeting minutes, etc.) will be provided to all relevant parties. A copy of the report will be maintained in the Learner’s file, as should follow-up reports documenting outcome of recommendations. All parties involved in the implementation of recommendations and monitoring of the learner’s progress should also receive a copy of any relevant documentation including the Remediation Plan. In some circumstances this may necessitate the sharing of some aspects of the remediation plan with subsequent supervisors with whom the resident works while monitoring is required.

5. Where applicable, the incident(s) and learner’s progress should also be incorporated into the appropriate evaluation tool used for that educational component in which the behaviour was occurring. (e.g. ITER for a clinical rotation if behaviour occurred in this context)

6. Consideration should be given to advising the individuals who reported the incident of the outcome in general terms.

XI Appeal

1. Appeals will be conducted in accordance with the Policy and Procedures for the Evaluation of Postgraduate Student Performance.

XII References

1. McMaster University, Faculty of Health Sciences Professional Code of conduct for Learners
   http://www.fhs.mcmaster.ca/postgrad/

2. College of Physicians and Surgeons of Ontario (CPSO) - Disruptive Physician Behaviour Initiative
   http://www.cpso.on.ca/policies/positions/default.aspx?id=1730

3. College of Physicians and Surgeons of Ontario (CPSO) – Professional Responsibilities in Postgraduate Education

4. College of Physicians and Surgeons of Ontario (CPSO) – Physician Behaviour in the Professional Environment


6. Postgraduate Medical Education Policy and Procedures for the Evaluation of Postgraduate Student Performance
   http://www.fhs.mcmaster.ca/postgrad/policies.html

7. Guidelines for appropriate use of the Internet, Electronic Networking and Other Media
   http://www.fhs.mcmaster.ca/postgrad/policies.html

To be reviewed annually
Appendix A:: Professionalism in Practice

### DOMAIN # 1: PROFESSIONAL RESPONSIBILITY/INTEGRITY

<table>
<thead>
<tr>
<th>Subdomains</th>
<th>Inconsistent with Professional Practice</th>
<th>Consistent with Professional Practice</th>
<th>Exemplary Professional Practice</th>
<th>CanMEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task completion</strong></td>
<td>Failure to complete required tasks including administrative tasks</td>
<td>Completes required tasks including administrative tasks</td>
<td>Demonstrates leadership for system improvement, anticipates needs and is proactive in ensuring task completion</td>
<td>Expert, Manager, Advocate, Professional</td>
</tr>
<tr>
<td><strong>Honesty</strong></td>
<td>Dishonest or falsifies information</td>
<td>Truthful and honest</td>
<td>Discloses proactively and effectively to improve patient care and educational environment</td>
<td>Collaborator Professional</td>
</tr>
<tr>
<td><strong>Responsibility</strong></td>
<td>Fails to accept responsibility/blames others</td>
<td>Acknowledges and demonstrates ability to take appropriate responsibility</td>
<td>Accurately discerns complex challenges with appropriate engagement of resources.</td>
<td>Collaborator, Manager, Professional</td>
</tr>
<tr>
<td><strong>Confidentiality</strong></td>
<td>Fails to respect/neglects confidentiality</td>
<td>Respects confidentiality</td>
<td>Identifying potential risks to confidentiality</td>
<td>Advocate, Professional</td>
</tr>
<tr>
<td><strong>Respect of learning environment</strong></td>
<td>Abuses or damages physical learning environment and shared resources</td>
<td>Respects physical learning environment and shared resources</td>
<td>Contributes or improves the physical learning environment</td>
<td>Professional</td>
</tr>
<tr>
<td><strong>Balance of interest: self and other</strong></td>
<td>Chooses personal interest to the detriment of patient and colleagues</td>
<td>Can balance personal interests with the needs of patients or colleagues</td>
<td>Is a role model for balancing the needs of patients or colleagues</td>
<td>Communicator, Manager, Advocate, Professional</td>
</tr>
<tr>
<td>Subdomains</td>
<td>Inconsistent with Professional Practice</td>
<td>Consistent with Professional Practice</td>
<td>Exemplary in Professional Practice</td>
<td>CanMEDS</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Feedback</td>
<td>Resistant or defensive in receiving feedback</td>
<td>Willing to learn from and explore feedback</td>
<td>Actively seeks and integrates feedback</td>
<td>Collaborator Communicator Professional</td>
</tr>
<tr>
<td>Personal limits and reflective practice</td>
<td>Unaware of or difficulty acknowledging limits of knowledge, skills and attitudes</td>
<td>Aware and able to acknowledge limits of knowledge, skills and attitudes</td>
<td>Continually tests assumptions and conclusions around one’s own practice</td>
<td>Expert Professional Scholar</td>
</tr>
<tr>
<td>Personal development</td>
<td>Neglects significant elements in all domains of education and development</td>
<td>Demonstrates commitment to continued growth in all domains of education and development</td>
<td>Recognized as role model in all domains of education</td>
<td>Expert Communicator Professional Scholar</td>
</tr>
<tr>
<td>Personal impairment</td>
<td>Impairment. Failing to recognize or take action regarding a personal impairment (i.e. physical, cognitive, emotional)</td>
<td>No evidence of impairment. Recognizing or taking action in the face of potential impairment</td>
<td>Intervenes to address situational or environmental factors which could lead to impairment in self or others</td>
<td>Manager Professional</td>
</tr>
<tr>
<td>Initiative and motivation</td>
<td>Does not demonstrate initiative and motivation</td>
<td>Achieves an appropriate level of initiative and motivation for the required task</td>
<td>A role model for balancing responsibilities and achievements; inspires initiative and motivation in others</td>
<td>Manager Professional Scholar</td>
</tr>
<tr>
<td>Subdomains</td>
<td>Inconsistent with Professional Practice</td>
<td>Consistent with Professional Practice</td>
<td>Exemplary in Professional Practice</td>
<td>CanMEDS</td>
</tr>
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</tr>
<tr>
<td>Respect</td>
<td>Disrespectful towards others</td>
<td>Respectful towards others</td>
<td>Exceptional insight and actions that enhance a culture of respect</td>
<td>Collaborator Advocate Professional</td>
</tr>
<tr>
<td>Different points of view</td>
<td>Lack of awareness of or devaluing different points of view</td>
<td>Aware of and acts with acceptance of different points of view</td>
<td>Develops a shared understanding of different points of view</td>
<td>Collaborator Communicator Professional</td>
</tr>
<tr>
<td>Impact on others</td>
<td>Demonstrates a lack of awareness and disinterest in understanding impact of self on others</td>
<td>Demonstrates awareness and willingness to reflect, receive feedback and learn about the impact of self on others</td>
<td>Actively seeks opportunities for enhanced self awareness to improve practice effectiveness</td>
<td>Collaborator Professional</td>
</tr>
<tr>
<td>Needs and feelings of others</td>
<td>Does not engage with needs, feelings of others</td>
<td>Willing to engage with the needs, and feelings of others</td>
<td>Acknowledged by others as committed to excellence in addressing the needs and feelings of others</td>
<td>Collaborator Communicator Professional</td>
</tr>
<tr>
<td>Effect of stress</td>
<td>Lacks insight into how stress impacts one’s interactions with others</td>
<td>Appreciates how one’s stress impacts interaction with others</td>
<td>Demonstrates management of own stress and facilitates positive communication during stressful situations</td>
<td>Collaborator Professional</td>
</tr>
<tr>
<td>Personal appearance</td>
<td>Appearance is not appropriate for context and lacks insight into how appearance affects relationship with patients and colleagues</td>
<td>Maintains an appearance consistent with a professional role in a setting that inspires trust</td>
<td>Actively builds trust through interpretation of the clinical context and subjective selection of attire</td>
<td>Manager Professional</td>
</tr>
</tbody>
</table>
Appendix B

Documentation by Program Director

The following elements are suggested for inclusion in the documentation completed by Program Directors when reviewing possible incidents of behavior inconsistent with Professional Practice and when monitoring progress and development of progress of professional development.

ii. Resident Information (name, year, rotation, dates, etc)

iii. Details of Incident

iv. Details of Discussion/Review of Incident

v. Responses to the Review

1. By resident

2. By Residency Program Committee

   vi. Plan

   vii. Progress over time
APPENDIX C: MANAGING INCIDENTS OF INCONSISTENT WITH PROFESSIONAL BEHAVIOR

Documented discussion with LEARNER by Observer, LE or PD

Copies of documentation to LE, PD and person responsible for completing the evaluation

PROGRAM DIRECTOR to discuss with individual submitting report and Learner

PROGRAM DIRECTOR to determine severity of incident

SIGNIFICANT BREECH
Meeting of RPC Evaluation Subcommittee to develop Remediation Plan including:
- Learner
- Lead Educator
- Person completing applicable evaluation
- Program Director
Program Director may consult with:
- Advisor, Professionalism
- Educ Advisory Board
Monitoring of Progress in Remediation Plan by:
- Person(s) completing applicable evaluation
- Program Director
- Subsequent Lead Educators where applicable

EGREGIOUS BEHAVIOR
Follow Policy & Procedures for the Evaluation of Postgraduate Students’ Performance, Appendix A: Suspension for Emergency Situations
Program Directors should consult Assistant Dean of Postgraduate Medical Education

MINOR BREECH
Monitoring by:
- Person completing applicable evaluation
- Program Director
Professional Responsibilities in Postgraduate Medical Education

APPROVED BY COUNCIL: September 2003
REVIEWED AND UPDATED: May 2011
PUBLICATION DATE: Dialogue, Issue 2, 2011
KEY WORDS: Postgraduate trainee, most responsible physician, supervisor, resident, clinical fellow, assessment, supervision, training, professional behaviour, consent
COLLEGE CONTACT: Quality Management Division
INTRODUCTION
The delivery of postgraduate medical education in Ontario has significantly evolved over time. Today training occurs in a variety of environments — teaching sites are not limited to traditional teaching hospitals, but also extend to community settings, such as physicians’ private practices. Also, training relies on a team-based approach to care, involving the provision of comprehensive health services to patients by multiple health-care professionals. There are no longer exclusive domains of practice; rather, care is delivered through multidisciplinary teams. This collaborative, team-based approach promotes optimal health care for patients.

In order to ensure both an appropriate educational experience for trainees and a safe and effective delivery of health care to patients, it is essential that supervisors and trainees in the postgraduate environment are aware of the responsibilities and expectations that their roles entail.

Trainees need to be given opportunities to observe and actively participate in clinical interactions in order to acquire the knowledge, skills, and judgment required for future practice. This occurs through a process of graduated responsibility, whereby trainees are expected to take on increased responsibility as they acquire greater competence. For this to occur safely, supervisors must be capable of assessing the competencies of the trainees they are supervising on an ongoing basis.

Trainees cultivate attitudes about professionalism through observing the attitudes and behaviours displayed by their supervisors. Positive role-modeling is therefore of the utmost importance and supervisors are expected not only to demonstrate a model of compassionate and ethical care, but also to interact with colleagues, patients, trainees, and other support staff in a professional manner.

An understanding of the responsibilities and expectations placed on supervisors and trainees is essential for ensuring patient safety in this complex environment. Thus, while this policy focuses on professional responsibilities in the postgraduate environment, supervisors and trainees are expected to be familiar with other applicable CPSO policies as well; these include, but are not limited to Delegation of Controlled Acts, Mandatory Reporting, Consent to Medical Treatment, Disclosure of Harm, Medical Records, and Physician Behaviour in the Professional Environment.

PURPOSE
The purpose of this policy is to clarify the roles and responsibilities of the most responsible physicians (MRPs), supervisors and postgraduate trainees engaged in postgraduate medical education programs. This policy focuses on professional responsibilities related to the following aspects of postgraduate medical education:

1. Supervision and Training
2. Professional Relationships
3. Patient Care within the Postgraduate Educational Environment

SCOPE
This policy applies to all physicians who are involved in the guidance, observation and assessment of postgraduate trainees enrolled in postgraduate medical programs in Ontario and to the postgraduate trainees, themselves.

DEFINITIONS
Postgraduate Trainees (“trainees”) are physicians who hold a degree in medicine and are continuing in postgraduate medical education. Regardless of the class of certificate of registration held, postgraduate trainees cannot practice independently within the confines of the training program.

Most Responsible Physician is the physician who has final accountability for the medical care of a patient when the trainee is providing care.

Supervisors are physicians who have taken on the responsibility by their respective training programs to guide, observe and assess the educational activities of trainees. The supervisor of a trainee involved in the care of a patient may or may not be the most responsible physician for that patient. Residents or fellows often serve in the role of supervisors, but do not act as the most responsible physician for patient care.

PRINCIPLES
1. Safe and effective care of the patient takes priority over the training endeavour.
2. Proper training optimizes patient care as well as the educational experience.
3. The autonomy and personal dignity of trainees and patients must be respected.

4. Joint decision-making and exchange of information between most responsible physician, supervisor, and trainee provides an optimal educational experience.

5. Professionalism, which includes demonstration of compassion, service, altruism, and trustworthiness, is essential in all interactions in the training environment in order to provide the best quality care to patients.  

1. Supervision and Training

The supervisor and/or most responsible physician must provide appropriate supervision to the trainee. This includes:

a) being familiar with program objectives;

b) making the patient or substitute decision-maker aware of the identity of the most responsible physician, and the fact that the most responsible physician is ultimately accountable for the patient’s care;

c) making the patient or substitute decision-maker aware of the identity of trainee(s) who are members of the treatment team, their stage in the postgraduate program, as well as their degree of involvement in patient care;

d) being willing and available to see patients when required or when requested;

e) regularly evaluating a trainee’s clinical competence and learning needs, and assigning graduated responsibility accordingly;

f) making reasonable efforts to determine that the trainee has the necessary competence (knowledge, skill and judgment) to participate in a patient’s care and does not compromise that care;

g) ensuring that all relevant clinical information is made available to the trainee, and directly assessing the patient as appropriate; and

h) communicating regularly with the trainee to discuss and review the trainee’s patient assessments, management, and documentation of patient care in the medical record.

The trainee must:

a) participate in the care of patients as appropriate to his or her competencies, and specific circumstances, as well as to meet identified educational needs;

b) make the patient or substitute decision-maker aware of their name, role, stage in the postgraduate program, and degree of involvement in patient care;

c) make the patient or substitute decision-maker aware of the name and role of the most responsible physician, and the fact that the most responsible physician is ultimately accountable for the patient’s care;

d) communicate with the supervisor and/or most responsible physician:

i) in accordance with guidelines of the postgraduate program and/or clinical placement setting;

ii) about patient assessments performed by the trainee;

iii) when there is a significant change in a patient’s condition;

iv) when the trainee is considering a significant change in a patient’s treatment plan or has a question about the proper treatment plan;

v) about a patient discharge;

vi) when a patient or substitute decision-maker and family expresses significant concerns; or

vii) in any emergency situation or when there is significant risk to the patient’s well-being;

c) document his or her clinical findings and treatment plans and discuss these with the most responsible physician and/or the supervisor.

2. Professional Relationships

The most responsible physician, supervisor and trainee must demonstrate professional behaviour in their interactions with each other, as well as with patients, other trainees, colleagues and support staff. Displaying appropriate behaviour and providing an ethical and compassionate model of patient care is particularly important for the most responsible physician and supervisor, as trainees often gain knowledge and develop attitudes about professionalism.

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2. For more information about professionalism and the key values of practice, please refer to The Practice Guide: Medical Professionalism and College Policies.

3. For details about substitute decision-maker and consent, please refer to the CPSO policy Consent to Medical Treatment.
through role modeling.

The most responsible physician and supervisor must be mindful of the power differential in their relationship with the trainee. Also, they should not allow any personal relationships to interfere with their supervision and evaluation of the trainee. Any personal relationship, which pre-dates or develops during the training phase between the most responsible physician or supervisor and the trainee, e.g., family, dating, business, friendship, etc., must be disclosed to the appropriate responsible member of faculty (such as department or division head or postgraduate program director). The appropriate faculty member would need to decide whether alternate arrangements for supervision and evaluation of the trainee are merited and, if necessary, make these arrangements.

Any form of behaviour that interferes with, or is likely to interfere with, quality health-care delivery or quality medical education is considered “disruptive behaviour.” This includes the use of inappropriate words, actions or inactions that interfere with the ability to function well with others. Physicians, in any setting, are expected to display professional behaviour at all times.

3. Patient Care within the Postgraduate Educational Environment

In the postgraduate environment, it is important for patients to understand that care involves a collaborative, team-based approach and that trainees are integral members of the health-care team. The delivery of care relies on MRP’s, supervisors, and trainees fulfilling each of their obligations as outlined in section one “Supervision and Training”.

Trainee involvement in patient care will vary according to the trainee’s stage in a postgraduate training program as well as their individual level of competency. Trainees are expected to take on a graduated level of clinical responsibility in step with their demonstrated growing competency, although never completely independent of appropriate supervision.

In accordance with the Health Care Consent Act and the CPSO’s policy on Consent to Medical Treatment, patient consent is required in all situations where a treatment or a change in treatment is proposed. In addition, there are some factors unique to the postgraduate environment which should be disclosed to the patient in order for them to make an informed decision as to whether to give or refuse consent:

a) Significant component of procedure performed independently by trainee

When a significant component, or all, of a medical procedure is to be performed by a trainee without direct supervision, the patient must be made aware of this fact and where possible, express consent must be obtained. Express consent is directly given, either orally or in writing.

b) Examinations performed solely for educational purposes

An examination is defined as solely “educational” when it is unrelated to or unnecessary for patient care or treatment. An explanation of the educational purpose behind the proposed examination or clinical demonstration must be provided to the patient and their express consent must be obtained. This must occur whether or not the patient will be conscious during the examination. If express consent cannot be obtained, e.g., the patient is unconscious then the examination cannot be performed. The most responsible physician and/or supervisor should be confident that the proposed examination or clinical demonstration will not be detrimental to the patient, either physically or psychologically.

4. For more information, please refer to the CPSO policy Physician Behaviour in the Professional Environment.

5. Typically, hospitals and other clinical settings would have signage notifying patients that they are teaching institutions. However, physicians in private offices and clinics need to explicitly communicate this information.


7. For more information, please refer to the CPSO policy Consent to Medical Treatment.
McMaster University, Faculty of Health Sciences Code of Conduct For Students in the Health Sciences Professional Programs

Preamble

The Faculty of Health Sciences at McMaster University has identified as its mission statement "Together, Advancing Health Through Learning and Discovery". Within a culture of innovation, courage and collaboration, the Faculty of Health Sciences at McMaster will lead by challenging what is and embracing what could be.

In 2005, the Faculty of Health Sciences adopted a guiding statement of purpose for the Faculty of Health Science, namely, “In Health Sciences Education Research and Practice we are here to question, to learn, to discover and to communicate”.

As current and future members of the caring professions, health science learners at McMaster shall demonstrate their commitment to the professional behaviors that are outlined in this document. These professional behaviors exemplify the six tenets of the Faculty of Health Sciences guiding vision, namely: inter-professional collaboration, commitment to our communities, accountability/responsibility, excellence, integrity and respect, and optimism. As such, health science students at McMaster are held to a standard beyond the basic conduct expected of other students at McMaster University.

All learners at McMaster are required to adhere to the McMaster University “Student Code of Conduct” for non-academic offences, as revised May 1, 2009. Procedures for handling allegations, complaints or charges are set out in that document. Additionally, breaches of academic integrity including academic dishonesty, cheating and plagiarism are defined in the McMaster University “Academic Integrity Policy”, most recent approval September 1, 2008. As with non-academic offenses, procedures for handling allegations, complaints or charges are set out in that document.

Scope of the Code

All Faculty of Health Science’s learners shall demonstrate these professional behaviors in all academic and clinical settings at all times. For the purposes of this Code, Faculty of Health Sciences students shall be governed by this policy whether they are engaged in purely academic or academic/clinical activities, whether they are engaged in administrative functions associated with their learning, whether they are conducting or assisting in research, and whether the activities be on or off site, in real time or in a virtual reality online. Furthermore, the Faculty of Health Sciences Code of Conduct for Students and learners shall be applicable to all contexts and circumstances in which learners were, or could reasonably be, considered to be representing their educational program in either a real-world or on-line setting.

The “tenets” articulated in this Code do not replace nor limit the legal or ethical standards established by the professional and regulatory bodies, or by any other applicable University standard, policy or procedure.
Should a student engage in a behaviour or set of behaviours that constitutes a simultaneous violation of both the Master University Student Code of Conduct and the Faculty of Health Sciences Code of Conduct For Students and Learners, the breach shall properly be addressed under the former in the first instance; however, the Faculty of Health Sciences reserves the right to proceed secondarily in applying the procedures of the Faculty of Health Sciences Code of Conduct For Students and Learners should it reasonably decide it appropriate to do so in the circumstances.

**Domains of Professional Behaviour**

Guided by the tenets of the Faculty of Health Sciences and a review of the published literature assessing professional behaviour, an Inter-professional Task Force of the Faculty of Health Sciences has identified three priority domains of Professional Behaviour. For each of these domains, explanatory examples are provided; these examples may not be interpreted as defining, describing or limiting the domains themselves, but are held out merely as instructive aids. For further explanation of these domains, learners and faculty are referred to more detailed lists of expected professional behavior published by each of the Health Science Educational Programs.

**Domain 1: Professional Responsibility, Integrity and Accountability**

Professional responsibility, integrity and accountability will be demonstrated by the learner who fulfills responsibilities reliably and promptly; engages in ethical practice; represents information accurately and accepts responsibility for one’s actions; respects confidentiality and student privileges and advocates for the patient/client and profession rather than promoting self-interest.

**Domain 2: Self-improvement and Pursuit of Excellence**

Self-improvement and the pursuit of excellence will be demonstrated by the learner who recognizes and acknowledges one’s own limitations or difficulties; who responds reasonably and responsibly to feedback, is motivated to self-improvement; seeks the means to correct deficiencies or weaknesses; and whom adapts to changing circumstances with the goal of achieving excellence.

**Domain 3: Respectful Professional Relationships and Communication**

Respectful, professional relationships and communication will be demonstrated by the learner who uses respectful language; recognizes appropriate professional boundaries, is sensitive to the values, attitudes and assumptions of other cultures and how these effect practice; remains open to exploring the personal impact of self on others; listens attentively to the concerns of others; and demonstrates empathy and compassion.
If a Breach Occurs and it is Reported

**Academic and Clinical Setting.** The Health Science Professional Education Programs currently evaluate professional behaviour of learners in the academic and clinical setting. Breaches of the Faculty of Health Sciences Code of Conduct for Students and Learners will be deemed to occur when the student has not met the expected professional behaviours within the three domains as defined by their respective professional programs. Learners are expected to have acquired a strong understanding of the expectations of their respective program.

**Outside of the Academic and Clinical Setting.** The Faculty of Health Science regards breaches of professional behaviour outside of the academic and clinical environment as a serious academic matter. Such breaches of conduct include behaviours that violate these standards, whether or not a learner knew or ought to have known that a breach would occur as a result of their actions, and those behaviours that were breached through the negligence of a learner.

Breaches should be reported in writing to the administrative heads of the relevant program (either the Assistant Dean or the Program Administrator). It is expected that faculty will apply their own professional discretion in determining whether a breach has occurred and importantly, whether the seriousness of the breach requires that it be dealt with by the application of this policy. That is to say, that it is accepted that some minor breaches may be better dealt with informally, outside of this policy and at the discretion of the involved Faculty. It is further acknowledged however, that while a single ‘minor breach’ may be dealt with outside of this policy, it is also acknowledged that a series of minor breaches similar in character, time, or context may be considered as a “single” breach and thus must necessarily fall under the jurisdiction of this policy.

In the case of a breach having been reported, the Program Assistant Dean or Program Administrator shall contact both the complainant and the respondent to a complaint separately and confidentially, investigate the allegation, including providing each party with the fair and equitable opportunity of sharing their perspective of the event or events that had transpired.

Where the Program Assistant Dean or Program Administrator determines, based on the evidence provided, that a breach has occurred, the Health Science Program-specific committees for evaluation and/or discipline of the offending party shall be convened within thirty (30) calendar days to determine what remedy or remediation shall be required of the offending party.

**Sanctions**

A sanction, where appropriate, shall be administered under this Code to ensure a student’s future compliance or conformity with the Faculty of Health Sciences Code of Conduct For Students and Learners. It is acknowledged that all sanctions shall reflect the faculty’s primary commitment to remediation in the first instance.

Consequences for breaching the Faculty of Health Sciences Code of Conduct For Students and Learners are at the discretion of each of the Health Science Professional Programs
and may include but not be limited to the sanctions described in the McMaster University “Student Code of Conduct” (approved March 11, 2009, effective May 2, 2009).

**Appeals**

Any student who receives a sanction, academic or otherwise in relation to the decision made around a determined breach of the Faculty of Health Sciences Code of Conduct for Students and Learners is entitled to fair and equitable process. Learners who have been found to be in violation of this code may seek remedy by written application within 30 business days from the date of their receipt of the written notification outlining that they have been held to have been in breach of this policy. With written permission from the Program Assistant Dean, and at his or her sole discretion, mediation with the Advisor on Professionalism may be provided to the learner as an option for alternative resolution. Such mediation would only be with respect to determining remediation for the breach, not with respect to whether a breach has occurred.

Should mediation not be offered or not sought by the learner prior to a formal Appeal being initiated, then for all learners (aside from postgraduate medical learners), a formal appeal is to be made in accordance with the McMaster Student Appeal Procedures (approved by Senate, March 11, 2009, effective September 1, 2009) and will be governed in accordance with such policy. Postgraduate medical learners shall avail themselves of the appeal process outlined in the document “Postgraduate Medical Education Policy and Procedures for the Evaluation of Postgraduate Student Performance”.

HSEC February 23, 2011
CODE OF CONDUCT FOR POSTGRADUATE TEACHERS

PREAMBLE:

This Code of Conduct for postgraduate teachers has been developed from the Queen's University's Guide to Ethical Behaviour of Clinical Teachers. This document must be viewed in context with the Canadian Medical Association of Code of Ethics, which is appended.

The Code of Conduct is applicable to all individuals who accept the responsibility to train postgraduate medical trainees.

RESPONSIBILITIES TO STUDENTS:

The ethical clinical teacher will:

1. treat students with respect regardless of level of training, race, creed, colour, gender, sexual orientation, or field of study, recognizing that there is a power differential between the teacher and student;

2. refrain from the intimidation and harassment of student in any fashion - emotional, physical or sexual;

3. maintain a professional teacher/student relationship at all times and avoid the development of sexual and/or financial relationships with students;

4. be willing and able to see patients under their own care or under the care of their service when so requested by students;

5. teach the knowledge, skills, attitudes and behaviour and provide the experience that the student requires to become a physician in his/her chosen career;

6. supervise students and allow them responsibility as is appropriate to their level of training and commensurate with their ability, as well as to the extent that is allowed by law;

7. support and encourage students in their endeavours to learn, and to develop their skills, attitudes and a sense of enquiry;
8. demonstrate to students the rational basis for clinical decision making from investigation to diagnosis and to treatment, based on the best evidence available;

9. assess carefully and accurately with a minimum of personal bias, the student's abilities and provide timely verbal and written feedback to the student and to the student's program;

10. support and facilitate remedial teaching when it is necessary;

11. conduct herself/himself as exemplary physician.

If a student has concern that s/he has not been dealt with by a teacher in an ethical manner s/he has the option and should be encouraged to discuss the situation more fully with one or more of the following individuals:

- Individual with whom the student is having the problem
- Friend, confidante
- Program Director
- Assistant Dean, Postgraduate Education
- Associate Dean (Education)
- Faculty of Health Sciences Liaison Officer
- Human Rights and Equity Services Office, McMaster University
POLICY

All persons carrying on activities at St. Joseph’s Healthcare Hamilton (including employees, contract workers, volunteers, physicians, students, undergraduates, post graduates, and medical trainers) shall promote a professional image by appearing well groomed and appropriately attired.

This policy is applicable seven days a week, 24 hours a day.

Individuals who fail to comply with this policy may be subject to formal disciplinary actions.

PROCEDURE

30.1 Identification

ALL STAFF MUST WEAR THEIR ST. JOSEPH’S HEALTHCARE PHOTO IDENTIFICATION BADGE SO THAT IT IS CLEARLY VISIBLE.

Staff must be readily identifiable as a member of staff at St. Joseph’s Healthcare. This includes the employee first and last name and the title of staff, i.e., Educator, Registered Nurse, Pharmacist, Unit Communication Clerk, Physiotherapist, etc., via identification badges.

30.2 All employees are to present a tidy, well groomed professional appearance. All attire shall be clean and in good repair. All clothing must cover the individual from the shoulder to the knee.

a) Tops – tops with advertising or slogans are unacceptable. A discrete logo indicating the professional designation is acceptable. Midriff tops are not to be worn. Sleeves of tops shall cover the shoulder. Revealing neck lines shall not be worn. Tops shall not be made of transparent fabric.
b) All denim of any colour (pants, skirts, dresses, jackets, tops) shall not be worn.

c) Skirts and dress shall not have revealing hem lines.

d) Pants – Cargo pants, leggings and jogging pants shall not be worn. Knee length walking shorts are acceptable.

e) Footwear – Footwear which give good support and which cover the foot shall be worn. Flip flops, thong footwear and slippers are not to be worn. Footwear shall be kept clean and in good condition. For protective footwear, refer to policy 12-OH&S entitled Protective Footwear. Sandals are not to be worn. Directors/Managers may only permit sandals to be worn when an employee is not at risk of a foot injury.

f) Hair – must be neat, clean, and worn away from the face. Long hair is to be pinned back when required for aseptic or safety reasons.

g) Hats - shall be removed in all clinical settings when in the building if a hat is not part of the assigned uniform.

h) Beards and Moustaches – needs to be neatly trimmed.

i) Jewellery – shall be minimal. For staff safety, hoop or dangling earrings shall not be worn. Small hoops that release when pulled can be worn.

j) Rings - Multiple rings on several fingers may not be worn. This is to maintain asepsis and safety for patients and staff to reduce the risk of infection.

k) Nails - For patient safety and asepsis, nails shall be neatly groomed and clean.

l) Personal Hygiene – Employees need to maintain good personal hygiene.

30.3 Patient/Client Services

This policy applies to all staff who work with patients/clients or staff who work part or all of their shift in any clinical area.

The information identified in Article 30.1 and 30.2 is also applicable to staff in patient/client services.
Appearance in Uniform

Uniforms must be clean, in good condition, properly fitted, and well pressed. The fabric shall not be transparent. Two piece uniforms shall be the same colour or co-ordinating colours.

a) Dress, pant suits, culottes/dress shorts only, in white or co-ordinated colours. Green scrubs are restricted to designated areas.

b) A neatly tailored sweater or co-ordinated jacket may be worn with the uniform.

c) Socks/Stockings – socks or stockings must be worn and shall be white, skin tone or matching the colour of the pants.

d) The wearing of uniforms, caps, etc. which are not supplied by St. Joseph’s Healthcare is subject to the approval of the employee’s Director/Manager.

30.4 Scrub Colour Designations – Employees in the following areas/classifications are required to wear the following designated scrub colour:

Porters – blue scrubs
USSP – maroon scrubs
Contract Housekeepers – forest green scrubs
Food Services – white scrubs
Emergency Room – caribbean blue scrubs with SJHH logo

Greens – In the following areas, “greens” are the accepted dress:

a) Endoscopy
ii) Hemodialysis Centre
iii) Labour and Delivery
iv) Operating Room
v) Neonatal Intensive Care
vi) P.A.R.
ii) SPD
viii) Respiratory Therapy
ix) Any other area in accordance with the collective agreement.

Greens must not be worn outside St. Joseph’s Healthcare or to and from work.

Lab Coats – should not be worn outside of the department/unit. Only under certain circumstances will lab coats be worn outside the department/unit with the Manager’s/Director’s approval.

30.5 Exceptions
a) Any isolation or patient gown (blue/yellow) shall only be used for protection due to direct patient contact. It is not to worn for warmth and not to be worn out of the patient room or outside the building.

b) Each program/discipline may need to develop specific guidelines regarding dress code that facilitates their particular work with patients, i.e., Recreation. These guidelines shall be approved by Human Resources Advisory Committee.

c) When SJHH identifies a specific day to encourage participation or awareness for a cause (i.e., United Way), the Marketing and Community Relations Department will communicate the event to staff in advance and the appropriate dress code for this cause.
CALL STIPENDS

Residents are entitled to receive a call stipend amount for in-hospital call, home call and qualifying shifts as outlined in 23.1, worked under the Collective Agreement, on the following terms:

23.1 There will be a call stipend payable in the amount of $105 for residents scheduled for in-hospital call, and $52.50 for residents scheduled for home call or for qualifying shifts (including emergency department and other night shifts worked under article 16.5). Qualifying shifts are only those shifts where one full hour worked on the shift occurs between midnight and 6 a.m.

23.2 A resident who is scheduled on home call but who works more than four hours in hospital during the call period, of which more than one hour is past midnight and before 6 a.m., is entitled to be paid the in-hospital call stipend. PAIRO agrees that the hospitals have the right to implement reasonable rules to verify that residents are entitled to be paid the in-hospital call stipend rate for that call.

23.3 The parties reaffirm that no resident is permitted to work call or shifts under the Collective Agreement in excess of the maximums permitted under the Collective Agreement. Subject to an Agreement by the parties respecting implementation of non-traditional work hours, no resident will be paid a call stipend for call worked in excess of the maximums permitted under the Collective Agreement, nor will residents working shifts receive more than 31 call stipend payments per quarter for qualifying shifts.

23.4 The call stipend will be paid no less frequently than on a quarterly basis, payable in the second pay period following the end of the quarter. Entitlement to the call stipend may be determined from examination by the hospitals of the monthly call schedules, or by such other measures as the hospital reasonably requires of the resident.

23.5 PAIRO will be provided, no less frequently than on a quarterly basis, with information concerning the number of call stipends paid to each resident, and the dates on which each call or shift was worked, by type of call stipend paid (i.e., the number of call stipend payments for in hospital call, for home call, and for qualifying shifts). This information will include each resident’s full name, service and hospital site.
23.6 For certainty, it is agreed that PAIRO dues will be deducted from call stipend payments, and that the call stipend shall continue in effect during negotiation for a renewal Collective Agreement, as provided in Article 4.3 of the Collective Agreement.

23.7 For further certainty, it is agreed that the terms and conditions of the call stipend are arbitrable pursuant to Article 4 of the Collective Agreement. However, for even further certainty, this does not include arbitration of the maximum call frequency provisions reflected in the call stipend provisions and provided for elsewhere in the Collective Agreement.

**ADMINISTRATIVE BONUSES**

17.1 A Chief Resident, for the purpose of administrative bonus, shall be defined as a resident who has responsibility for six (6) or more assistant residents. There will be only one (1) Chief Resident in a hospital department.

17.2 A Senior Resident for the purpose of administrative bonus, shall be defined as a resident who is the most senior in an approved specialty/subspecialty training program within a clinical department or in a department with no Chief Resident who supervises clinical clerks, or residents, or has the responsibilities for administrative or educational duties.

17.3 In a hospital or department without a Chief or Senior Resident for periods of six (6) months or longer, it is agreed that the PGY1 assigned administrative responsibilities will be paid the administrative stipend.

17.4 Administrative supplements shall be:

- Chief Resident $3,951
- Senior Resident $1,976

17.5 Where the resident is a Chief or Senior Resident for only part of the year, the amount of the supplement to be paid shall be pro-rated according to the time spent in that category.

17.6 The hospital shall maintain an up-to-date list of Chief Residents and Senior Residents by department and name, and make this list available on request.

**ATTACHMENT 18**

**ELECTRONIC CALL SCHEDULES**

PAIRO and CAHO agree to establish an Electronic Call Schedule Task Force, comprised of up to three PAIRO representatives, three CAHO representatives and potentially a participant from PGE COFM, to undertake a feasibility study for electronic call scheduling. The Task Force will have its initial meeting within one month of the ratification of the Collective Agreement, with the objective of completing the feasibility study within six months of ratification of the Collective Agreement. The Task Force will seek advice and input from hospital administrators, residency program directors, chief residents and others as required. If the Task Force concludes that electronic call scheduling is
feasible, the parties will establish a representative pilot project(s) to commence within six months of completion of the feasibility study.

ATTACHMENT 19

LETTER OF UNDERSTANDING

MAXIMUM CALL CALCULATIONS – IN HOSPITAL CALL

1. Where a resident is scheduled on a "one-month" rotation that is not 28 days, the following formula would apply, replacing the 7:28 call limitations. (The reference to numbers of days on service is specific to any individual resident, and reflects the number of working days subtracting, as the Collective Agreement requires in Article 16.3, any time the resident is away from the workplace for any reason, including vacation and leaves):

19-22 days on service - 5 calls
23-26 days on service - 6 calls
27-29 days on service - 7 calls
30-34 days on service - 8 calls
35-38 days on service - 9 calls

2. Where the rotations are more than one month in duration the maximum number of call periods would be determined by dividing the number of days the resident is on the service (i.e. minus vacation, leaves and other absences) by 4, and rounding up if the decimal is equal to or greater than .5, to get the maximum calls over that period. The maximum averaging period is 3 months (even where the rotation is longer than 3 months). However, there would be an overall limitation of 9 calls in any given calendar month, with calls correspondingly reduced in other months of the schedule to make up for this excessive call. For example, if over a 3 month period, a resident was on the service 90 days, 90 divided by 4 equals 22.5 which is rounded up to 23 call periods. However, if the resident were only on the service for 89 days, 89 divided by 4 equals 22.25 which would mean that the resident can only work 22 call periods.

3. As well, the hospitals agree that any and all occurrences of the employer exercising its right under Article 16.1 c(iii) - to schedule a resident for call without notice in exceptional and unexpected circumstances - will be documented by the employer and forwarded to the joint Provincial Call Monitoring Committee at the time it occurs.

ATTACHMENT 20

NON TRADITIONAL WORK HOURS

“The parties agree that the restrictions under the maximum hour/call provisions in the Collective Agreement on scheduling residents to work hours outside of daytime working hours, including call and shift limitations, may prevent implementation of some alternate scheduling arrangements. As a
result, the parties agree that any proposal to schedule residents to work in a manner which violates
the provisions of the Collective Agreement providing for night time or weekend call following
daytime working hours or providing for shift work, may be implemented, but only following
agreement by the parties following discussions at the Provincial Call Monitoring Committee
(PCMC). Such new scheduling arrangements may be discontinued by either party with 90 days
notice.“

ATTACHMENT 21

SUBCOMMITTEE – ADMIN SUPPLEMENTS

In the 1991-1992 Agreement the parties agreed to establish the following committee. The parties
agree to continue in effect the provisions of this attachment to the Agreement.

Administrative Supplements

The parties agree to establish a sub-committee comprised of an equal number of representatives
from the Hospitals, PAIRO and COFM to establish and propose to the parties, for the next round
of negotiations, a clear and concise definition of "Senior and Chief" residents for the purpose of
administrative supplements.

ATTACHMENT 22

Letter of Understanding Re: Implementation of Call Stipends

1. Call Stipends were implemented on July 1, 2006, pursuant to Article 23 of the Collective
Agreement. Recognizing that some details of implementation may vary on a hospital by hospital
basis, the parties nonetheless recognize the importance of some province-wide standards and rules,
and a common and consistent approach in certain aspects of the implementation of the call stipends
provisions. In this respect, the collective agreement specifically recognizes that the “hospitals have
the right to implement reasonable rules to verify that residents are entitled to be paid the in-hospital
call stipend for that call.”

2. As a result, the parties have now agreed to the following rules, which will be deemed to be
reasonable in the context of the collective agreement:

a) Call stipend claims must be submitted to the person(s) designated by the hospitals to receive such
claims within 30 days following the end of the month in which the call was worked, save and except
for circumstances reasonably beyond the control of the resident. Otherwise, untimely call stipends
will not be paid.

b) Any call stipend claims which have not been submitted as required by a) above will be paid, so
long as they are submitted by July 20, 2007, and relate to call worked on or after April 1, 2007.
c) Residents claiming entitlement to a call stipend, including conversion from a home call stipend to an in-hospital call stipend (or to a qualifying shift stipend) will not be required to obtain sign-off or confirmation from an attending or supervising physician. However, where a hospital demonstrates what it reasonably believes to be an excessive pattern of conversions within a program or service, it may implement reasonable monitoring and sign-off mechanisms for that program or service. Furthermore, PAIRO agrees to facilitate the hospital’s efforts in this regard, having regard to the obligation on residents, as physicians and as hospital employees, to conduct themselves in a professional manner.

d) The hospitals agree to provide the information specified in Article 23.7 of the collective agreement in an excel spreadsheet or equivalent format, in the form that they have been accumulating the information to date for internal review and analysis, including information about any calls converted to in hospital call, but it is agreed that the information provided does not have to include the specific date on which each call or shift was worked, so long as PAIRO is able to determine the amount and kind of call worked by each resident on a monthly basis.

3. PAIRO and CAHO agree to continue to meet on a regular basis to review such other implementation issues or concerns as may arise in relation to the call stipend, with a view to resolving any such matters.

Signed at Toronto, this 29th day of June, 2007

"Alim Pardhan, MD" "Robert Bass" on behalf of
Mary Catherine Lindberg

For PAIRO For CAHO

ATTACHMENT 23

Letter of Understanding Re: Administrative Rules for Call Stipends
(As amended by Memorandum of Settlement dated September 23, 2012)

1. Clarification that the sub clause (c) of paragraph 2 of the initial Administrative Rules sign-off applies to individual incidents of call and that the monthly or quarterly sign off by both the Resident and Program Chief or Chief Resident or an administrator, scheduler, etc. would continue to be required where it had previously been required.

2. In circumstances where the sign off official is "not at work" in the same hospital or physical location as the resident, the resident can avoid the inconvenience of obtaining the appropriate signature by emailing their schedule to the sign off official and filing the email response confirming the call frequency within the 30 day deadline. In such circumstances, if the sign off official does not provide to the resident a sign off /confirmatory email by the 30 day deadline the resident will not be paid unless the exception set out in 2a) of the initial Letter of Understanding applies (i.e. circumstances reasonably beyond the control of the resident) [For clarity "not at work" would
capture situations where the sign off official is on vacation or an extended absence. In any case, where the resident cannot obtain timely sign off but believes that the exception set out in 2 a) applies, the resident should submit their call stipend claim with an explanation for there being no sign off and should attempt to obtain the sign off as soon as possible.

3. Any resident that sent in the call information in a timely fashion pursuant to 2a) of the original settlement, but without the sign off, after the date of the original settlement but before the date of notification being provided of this clarifying settlement would not lose payments but would not be paid until the call pattern was verified. In these unique circumstances, the resident could accomplish this verification by signature of the Program Chief or Chief Resident (as appropriate) or by emailing the Program Chief (or administrator) or Resident (as appropriate) and receiving email response confirming the call frequency. A copy of such emails (provided by the resident within 30 days following notification of the signing of this document) will be deemed to be acceptable by the employer for this window of time (i.e. after June 28, 2007 but before October 11, 2007). This paragraph would only apply where signatures have previously been required - but not in new sites that have historically not needed signature - e.g. Mac, UWO.

4. The process described in Item 2 above can be used for non-CAHO hospital call frequency confirmations.

5. PAIRO and CAHO endorse the Hospital for Sick Children's Call Frequency form as a template for use in those hospitals currently requiring sign off, absent any reference to the reasons for conversion.

6. PAIRO and CAHO hereby endorse the St. Mike's electronic call stipend and will mutually encourage and recommend its use to both residents and the hospitals.

7. OB Family Call Language: Where a family medicine resident carries a pager for obstetrics call to fulfill the requirements of the resident's training program, the resident is not entitled to claim the home call stipend unless he or she is required or expected to respond to the page by providing medical care or attendance. Where the resident is required or expected to respond to the page, either the home or in hospital call stipend should be paid, depending on the time in attendance at a delivery, the amount of such call stipends not to exceed the maximums specified in the collective agreement. However, it is agreed that, where the resident is not required or expected to respond to the page, there should be no call stipend paid. The parties agree that where such family medicine resident responds to a page and is required to return to the hospital, the normal conversion rules apply.

8. Where 24-hour weekend in-hospital call (or 24-hour statutory holiday call) is split into two shifts, only the resident working the night call shift will receive the in-house call stipend, unless the employer has already determined or determines in future that each resident will receive the Home Call Stipend. For clarity, the total amount paid for each 24-hour in-hospital call worked will be $103 (increased to $105).

9. The Home Call Stipend rate will be paid in the following scenarios where the call does not extend beyond 11 pm:
(a) a resident works a shorter in hospital call on either a weekday, or a weekend; or

(b) where a family medicine resident works a shift on either a weekday or a weekend. For clarity, (b) applies where a family medicine resident works a shift on a weekday or weekend, after working a normal five-day week of clinical duties.

This rule does not apply where a resident works 12 hours or more of in hospital call on a weekend day, in which case the resident is, unless covered by paragraph 8 above (split 24 hour call), entitled to receive the In Hospital Call Stipend.

The In Hospital Call Stipend rate will be paid in the following scenarios where the call extends beyond 11 pm:

(a) a resident works a shorter in hospital call on either a weekday or a weekend; or

(b) where a family medicine resident works a shift on either a weekday or a weekend. For clarity, (b) applies where a family medicine resident works a shift on a weekday or weekend, after working a normal five-day week of clinical duties.

10. The parties agree that no stipend will be payable when a resident is required to work an evening clinic up to 8 pm.

11. The parties confirm that where residents who are not otherwise on-call are scheduled or required to round on weekends, and actually attend in hospital for such rounding, they will be paid the Home Call Stipend.

12. Where a resident arranges to work home call over a full weekend (Friday to Monday morning) or to work three (3) twenty-four (24) hour calls, they will receive three (3) Home Call Stipends. Where a resident agrees to work a full week of Home Call, inclusive of weekends, they will receive the Home Call Stipend for each shift up to the Home Call Stipend maximum as set out in the agreement.

13. Where a resident is required to work a half day of clinic or other formally scheduled duties, followed by working a regularly scheduled shift, they will receive the Home Call Stipend if the shift does not go beyond 11 pm; however they will receive the In Hospital Call Stipend if the shift does go beyond 11 pm.

SIGNED at Toronto, this 4th day of October, 2007.

"Alim Pardhan, MD"   "Kevin Ramchandar, MD"   "Robert Bass" on behalf of Mary Catherine Lindberg

For PAIRO          For PAIRO          For CAHO
Anesthesia Resident Call Duty Learning Objectives

The purpose of residents taking call shifts is to prepare them for the multiple responsibilities an anesthesiologist has to a hospital while on call. These responsibilities include: providing anesthetic care during emergent surgery, preoperative consultations, acute pain management, critical and resuscitative care, trauma team support and obstetrical anesthesia. Graded on call experience is a critical learning opportunity for the anesthesia resident. They will be exposed to unique clinical situations that are not encountered during elective surgical cases while learning to balance the demands and responsibility of providing anesthesia services outside of the operating room.

CANMEDS Medical Expert Role

Clinical Ability

- Complete a thorough pre-operative assessment which is coupled with an understanding of patient, medical and surgical considerations to produce a rational anesthetic plan.
- Be able to provide multiple alternative anesthesia plans as required in emergent situations.
- Be able to manage ASA 1-5 patients for urgent and emergent surgery with and without time to optimize the patient preoperatively with graded level of responsibility.
- Identify, provide a complete differential diagnosis and timely, rational treatment plan for intra-operative emergencies. (Hypotension, hypertension, bradycardia, tachycardia, hypoxemia, hypocapnia, raised inflation pressure, laryngospasm).
- Manage a patient with a full stomach, and high risk of aspiration.
- Identify and manage difficult and emergency airway problems, demonstrating a comprehensive plan with multiple options for patients in the OR and in remote locations
- Provide resuscitative care to the unstable patient in the OR and throughout the hospital as a member of the Code Blue Team
- Manage Trauma patients as a member of the Trauma Team
- Management of pathological states associated with pregnancy including preeclampsia and PIH variants, coagulopathies and causes for antepartum and post-partum hemorrhage.
- Identify indications and contraindications for regional and general anesthesia in pregnant patient.
- Demonstrate ability to perform anesthesia for urgent/emergent (cord prolapse, previa, abruptio, eclampsia) caesarean section and operative delivery with either regional or general anesthesia.

Knowledge Base

- Sound knowledge of anesthetic, resuscitation and hemodynamic medication pharmacology.
- Demonstrate a level of training appropriate understanding of interactions between major medical problems, anesthetic techniques and surgical procedures.
- Knowledge of ACLS and ATLS guidelines.
- Understand indications for regional vs. general anesthesia with the ability to provide plausible backup plan.
- Have a comprehensive knowledge of complications and critical incidents which may occur with regional and general anesthesia including laryngospasm, inadvertent medication administration, awareness, aspiration, bronchospasm, delayed emergence, anaphylaxis.
- Demonstrate knowledge of modes and options for acute pain management.
- Knowledge of how to manage patients in various states of shock coming to the OR including septic, cardiogenic, hemorrhagic, obstructive.
- Have an understanding of massive transfusion protocols
- Knowledge of how to acutely correct coagulopathies.
- Understand criteria for organ harvesting in both cerebral death and deceased cardiac donation situations

**Technical Skills**

- Demonstrate facility with all forms of routine and difficult airway management including endotracheal intubation, laryngeal mask airway, bougie, glide scope, and fiberoptic bronchoscope.
- Obtain arterial line and CVP access at a skill level appropriate for the level of training.
- Demonstrate level appropriate ability to perform spinal and epidural anesthesia independently.
- Demonstrate ability to perform upper and lower limb peripheral nerve blocks including Interscalene, supraclavicular, Infraclavicular, axillary, femoral, sciatic, fascia iliaca compartment, ankle, TAP, paravertebral.

**CAN MEDS Collaborator Role**

- Demonstrate an ability to work together with all members of the health care team.
- Exhibit professional interpersonal behaviour with patients and staff.
- Provide consultations independently.
- Communicate need for further consultation and investigations in order to optimize the patient.
- Discuss intraoperative plan with the surgical team identifying goals and objectives of the anesthetic and surgical plan including alternatives to the planned surgery that may reduce a patient’s intraoperative risk.
- Arrange and discuss appropriate bed for post-perative disposition of the patient. (ICU, CCU, SDU, oximetry)
**CAN MEDS Communicator Role**

- Present anesthetic concerns and pre-operative assessment in an organized fashion.
- Produce complete, legible and concise anesthesia charting and consultation reports.
- Communicate anesthesia concerns and issues to patients clearly and in understandable terms.
- Present anesthesia concerns and issues to other members of the healthcare team in a collegial and appropriate fashion.

**CAN MEDS Health Advocate Role**

- Identify health issues in patient management which will improve the patient’s perioperative care.
- Know and understand the standards for anesthesia management with respect to the CAS guidelines and local standards of practice.
- Recognize and respond appropriately in advocacy situations particularly with regard to patient safety.
- Clarify, define and discuss DNR status and its suspension with a patient during the perioperative period.
- Ensure adequate resources are available to provide a safe pre/intra and postoperative course.

**CAN MEDS Manager Role**

- Have a comprehensive understanding of OR and obstetrical anesthesia resource management.
- Display skill at identifying, prioritizing and managing urgent and emergent situations.
- Learn to work efficiently and develop strategies to maximize OR resources and limit idle time.
- Develop effective practice management strategies for dispute resolution amongst surgeons competing for the available emergent surgery OR time and limited hospital resources.
- Learn to prioritize and manage the frequent need to provide anesthesia services concurrently in the OR, on L&D as well as complete pre-operative consultations and manage patients on the acute pain service.
- Employ anesthetic techniques that will provide optimal care for the patient while minimizing waste and freeing up limited hospital resources.

**CAN MEDS Scholar Role**

- Demonstrate a commitment to the requirement for continuing personal education.
- Understand critical appraisal issues as they pertain to anesthesia practice.
- Take part in the education of junior learners with regard to anesthesia knowledge and skills.
- Demonstrate academic qualities consistent with the standard required for independent practice.
- Obtain knowledge to safely manage situations and patient conditions/conflicts that are unique and may have not been encountered before during elective surgical cases.

**CANMEDS Professional Role**

- Arrive on time for handover from the person previously on call.
- Honour on-call responsibilities and respond to calls in a timely fashion.
- Consider the ethical management of patient issues.
- Demonstrate awareness of own limitations, seeking advice when necessary.
- Ensure complete handover of outstanding patients and consults.

June 2014
**Call distribution:**

Call distribution should be fair and equitable and not disproportionately or systematically penalize one specific PGY year. Where OR resources allow (i.e. ensuring at least one resident in each operating room site to carry the pager), call assignments should take into account the academic half day of a given resident.

PGY3 should not be disproportionately assigned to Tuesday call in an effort to minimize their days missed from their medicine rotation. As well, PGY2’s should not be disproportionately assigned to Wednesday call just so that PGY4’s can continue their study time past 5 pm on the Wednesday.

Disproportionate call (favouring PGY5’s) occurs in the time period prior to the Royal College written exams (blocks 9 and 10) without payback.

Call distribution is tracked on a “Call Tally” so that equalization of disparity can occur over the course of the academic year.

**Limits on the number of STAT days that can be requested “off”, as well as a limit on the number of no-call requests (weekend and weekday) are also in place, and are tracked by Candice.**

**Max 36 NC requests per year, and requests cannot involve more than one weekend per block.**

**A limit of 5 STAT days can be requested per academic year.**

Revised November 2015
Revised June 2015
Buddy Call

During certain times of the year a senior resident will be assigned to do call along with a junior resident. The senior resident should be available to attend traumas, codes, ICU calls along with the junior resident during these calls. The senior resident should report to the staff on call along with the junior resident and take direction from the staff as to what their role during the call should be. Some staff will dismiss the senior resident from the OR and manage the cases with the junior resident only, in which case the senior resident is free to do what they want with their time. However there are many times when the senior resident may be needed to stay and work. These instances may be a challenging case or sick patient when more hands are needed, a long difficult case where the staff may not want to leave the junior alone with a patient (in which case the senior resident may need to give the staff a break), or where two rooms are running there may be a good learning opportunity in the second room. There may also be instances where both residents are in the OR while the staff is out and in that case I hope that the senior resident can take the opportunity to teach/discuss with the junior resident the case at hand, trauma management, airway management etc. Most importantly please remember that a buddy call is part of the regular call schedule and counts towards the total number of calls so it does not excuse absence from clinical OR activity for the senior resident.

Iwona Zieba BSc MD FRCPC
Assistant Clinical Professor
Dept of Anesthesia, McMaster University, Michael G. Degroote School of Medicine
Clinical Teaching Unit Director, HHS, Hamilton General Site

Email from Dr. Raymer – sent to residents on March 2nd, 2015

Hi everyone,
Just another reminder re buddy call- when you are the senior resident, you are not meant to work with/shadow the junior buddy in their OR, except under very exceptional circumstances when the complexity of the case might dictate that, or if the on-call staff requests the assistance. The expectation would be that you would attach yourself to the other operating room that is running. (Most evenings and weekend days, there are two rooms running.) Obviously, you are there to assist the PGY2 during trauma codes and you should be shadowing them during those calls. If there is no second room running, then please report to the staff anesthesiologist on call.

If you have any questions or concerns, please contact me.

Thank you,
Karen
Being on call

Clarification of the role of the buddy call buddy at the HGH:

The senior resident should be available to attend traumas, codes, ICU calls along with the junior resident during these calls. The senior resident should report to the staff on call along with the junior resident and take direction from the staff as to what their role during the call should be. Some staff will dismiss you from the OR and manage the cases with the junior resident only, in which case you are free to do what you want with your time. However there are many times when you may be needed to stay and work. These instances may be a challenging case or sick patient when more hands are needed, a long difficult case where the staff may not want to leave the junior alone with a patient (in which case you may need to give the staff a break), or where two rooms are running there may be a good learning opportunity in the second room. There may also be instances where both residents are in the OR while the staff is out and in that case I hope that the senior resident can take the opportunity to teach/discuss with the junior resident the case at hand, trauma management, airway management etc. Most importantly please remember that a buddy call is part of the regular call schedule and counts towards the total number of calls so it does not excuse absence from clinical OR activity for the senior resident.

Call switches

Switches to the on-call schedules are acceptable but must be accompanied by documentation of the switch to the following four locations:

1) Candice Stroud, Program Coordinator
2) CTU Director of the site affected
3) Senior Administrative Resident of the site affected
4) Telecommunications
Peds-OB on call MUMC

MUMC resident call duties- OB and Peds ER cases after hours (Draft)

The MUMC on call resident is in the unique position of working with 2 different staff people (OB and Peds) and can, in certain circumstances, get caught in the middle of competing demands.

One of the recognized strengths of our program is that both OB and Peds experiences are available throughout residency. Both are areas where much experience in “everyday” cases is necessary in order to build competence. Neither Obstetrical nor Pediatric cases are ever “routine” and one never knows when a unique and uncommon learning experience may arise.

Pediatric exposure is protected to MUMC-rotating residents in that residents are rarely assigned to an OB day list (when not on the OB rotation) in order to maximize their Peds exposure. In addition, residents are not pulled away from their MUMC day lists to perform epidurals.

The following is to provide guidance on how to negotiate the circumstances where clinical activity is occurring in OB while the Peds OR is still running after hours:

*The resident should receive and accept all calls from OB while on call at MUMC and should not direct clerical staff to do otherwise, regardless of clinical activity in the operating room. If the resident is in the OR after hours, and is called to attend a C-section or insert an epidural, the resident should attend the OB unit after appropriately notifying their Peds staff person and ensuring appropriate handover. If, however, the Peds faculty member believes that the learning experience in the OR is such that the resident should not leave, then the Peds faculty member should call the OB faculty member to explain and discuss. Either faculty member’s need for a “second pair of hands” may play into the decision. The guiding principles are:*  
  · Patient care  
  · The educational needs of the resident  
  · Faculty to faculty communication such that the resident will not get “caught in the middle” and each faculty member will know where the resident is.
St. Joseph’s Hospital
Resident Call Responsibilities

APS/OB/Pager Coverage Day Call

- 08:00 – 17:00h
- Will check in with the staff anesthesiologist covering OB/APS
- The day call anesthesia resident will renew "Stat Packs" in L & D case rooms at the start of their shift.
- The resident will participate in the booked elective caesarian sections that morning. If there are no booked C/S that day, the resident will round on APS patients with either the APS nurse or the staff anesthesiologist on the OB/APS service.
- Any in patient consults will be seen with a priority being placed on the patients going to the OR that afternoon or evening and reviewed with the staff anesthesiologist on the OB/APS service.
- The day call resident will be responsible for labour epidurals during their shift under the supervision (as necessary) by the OB/APS staff anesthesiologist
- Will respond to “Code Blue” pages as necessary
- At noon the resident will check in with the 1st on call anesthesiologist in the OR as “pink slip” cases will be starting. The resident can participate in these on-call cases until the end of their day call shift. The resident is responsible to communicate with the OB/APS staff that they are going to the OR and continue to cover L&D calls as necessary.
- Handover to the night call resident will include any unfinished consults from the day, any pertinent information about L&D patients and APS patients that may need to be followed up on during the evening hours.
- Exceptions: PGY4 residents doing Thoracic Anesthesia or Regional Anesthesia are expected to do their subspecialty rotation cases during the daytime hours and are exempt from covering L&D and inpatient consults. They are expected to still respond to “Code Blue” situations.

Night Call; (Weekend & Holiday Day Call)

- 17:00 – 08:00h ; (08:00 – 17:00h, 17:00h – 08:00h)
- The day call person is responsible for renewal of the “Stat Packs” in L&D
- Will participate in urgent/emergent cases in the OR as they occur.
- The resident will provide labour epidurals during their shift and participate in C/S under the direction and supervision of the 1st call staff anesthesiologist
- In patient consults are to be seen as requested by other hospital services. However, consults do not need to be done after 23:00h, unless the patient is going to the OR that night or is booked as the 8am case the next day. Any consults that were not seen during the call shift are to be handed over to the resident coming on call at 08:00h
- The program also does not support the wakening of residents by other services to inform them of consults that are not urgent. Notification can be provided the following day after 0700 hours.
- Will be 1st call for the APS patients.
McMaster Anesthesia Resident Emergency Call Coverage Policy

The following guidelines were developed to streamline the maintenance of resident on-call coverage in the event of illness or necessary absence of the resident who is on call. These guidelines have been approved by the Residency Training Committee, Department of Anesthesiology, McMaster University.

PREAMBLE
It is the opinion of the Residency Training Committee that residents who are suddenly too ill to work (as determined by themselves and fellow physicians) or must deal with a personal emergency (family illness, etc.) should be relieved of their clinical duties. While the decision to work is often a judgment call, residents should consider whether their presence represents more of a hazard than a benefit to the hospital environment. Every effort will be made to respect the confidential nature of a resident’s absence.

It is the responsibility of the resident to notify the CTU Director, the Administrative Resident, the Chief Resident and the Program Assistant if they will be absent from call or other clinical duties at any time and for any reason.

Guidelines
If a resident cannot complete their call duties at the JHCC because of illness/absence, this shift may remain uncovered, unless the JHCC administrative resident can facilitate a switch within the group of residents specifically assigned to the JHCC for that rotation.

If a resident cannot complete their call duties at any of MUMC, HGH, or SJH because of illness/absence, the following protocol to seek resident call coverage will be followed. In the following order, attempts will be made to find residents to cover call shifts which previously-assigned residents are no longer able to work:

Step 1:
- The resident, if able, will survey the residents based at that site, in search of a volunteer for the call shift requiring coverage
- If the resident is unable to complete this task (too ill, for example), the responsibility falls to the admin resident
- If the admin resident is unable to complete this task (ill, absent), the responsibility falls to the chief resident.
- If Step 1 does not result in resolution, then proceed to Step 2.

Step 2:
- The resident will survey all residents in the program, in search of a volunteer for the call shift requiring coverage
- If the resident is unable to complete this task (too ill, for example), the responsibility falls to the admin resident
- If the admin resident is unable to complete this task (ill, absent), the responsibility falls to the chief resident.
- If Step 2 does not result in resolution, then proceed to Step 3
Step 3:
- If no volunteers can be recruited, the Chief resident will be informed. The Chief Resident will liaise with the program assistant to compile a list of all residents potentially available for call coverage
  - Ineligible residents:
    - residents w/ pre-existing approved vacation/PL/off-call requests
    - pre-call and post-call residents
    - PGY2 residents who have not done call at HGH, if HGH is the site in question
    - PGY3s ICU or CCU
  - Eligible residents
    - Eligible PGY2s
      - SJH: all PGY2s are eligible
      - MUMC: all PGY2s are eligible
      - HGH: only PGY2s that have done solo call at HGH are eligible
    - Eligible PGY3s (Subspeciality Medicine rotations, PICU, NICU, research)
    - PGY4s and PGY5s

Step 4:
- The names of all eligible residents will be placed in a hat. A draw will be conducted by the Chief Resident in the presence of the program assistant, program director or one of the CTU directors (to serve as a witness). The resident whose name is drawn will be responsible for the call in question.

For weekends only, in the event that no eligible residents exist, detailed by the ineligibility criteria described above, the admin resident and chief resident will re-assign the resident covering JHCC weekend call to the HGH, MUMC or SJH call that needs to be covered. In the event that no eligible residents can be found during the week, or on the weekend even after seeking JH resident availability, the Program Director will inform the Department Chief that no resident coverage will be provided for the call in question. This is supported in whole by the Program Director and Residency Training Committee.

If a resident picks up an extra on-call night or weekend call (voluntarily or as part of the randomized draw process), the two residents involved should arrange a mutually agreeable “pay back” of equivalent call, either in that block or a later block. The payback could involve the use of “fly in” as long as the resident covering call is eligible to do call at that site. Some planning may be required to coordinate a pay-back and it may involve the coordination of admin residents.

If no payback can be arranged by the two residents, the residents should approach the program coordinator. The coordinator and program director will assess and if no switch can be accommodated, a lieu day will be granted to the resident who covered the sick call. Examples would include the instance where a resident is sick in their final weeks of residency or just prior to a leave, where the ability to arrange a pay back is temporally constrained.
These guidelines apply only to the case of documented sick leave/unanticipated leave of absence that occurs AFTER the release of the final call schedule TWO weeks prior to the commencement of the block in question.

Drafted by Resident Call Committee on Nov 20, 2013

Revised Sept 2014
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<thead>
<tr>
<th>Date</th>
<th>Day of Week</th>
<th>Group</th>
<th>Faculty</th>
<th>Topic</th>
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<tr>
<td>07/06/2016</td>
<td>Wed PM</td>
<td>PGY3</td>
<td>Dr. Onorato plus PGY 4 or 5</td>
<td>Introduction to ICU Medicine Year</td>
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<td>Wed 3PM</td>
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<td>Orientation with Dr. Raymer</td>
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<td>PGY1</td>
<td>Dr. Sharda</td>
<td>States of General Anesthesia</td>
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<td>Thurs PM</td>
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<td>PGY1</td>
<td>Greg Peachey</td>
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<td>Fri PM</td>
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<td>Greg Peachey/ Daniel Cordovani</td>
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<td>Wed PM</td>
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<td>ICU Ventilation/Resp Care of ICU Pts</td>
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<td>Fri PM 2nd half class</td>
<td>PGY1</td>
<td>Dr. Vraets plus PGY 4 or 5</td>
<td>Difficult Airway Simulations</td>
<td>CSBL</td>
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<td>Thurs AM</td>
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<td>Safe Central Line Insertion</td>
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<td>Fri AM 1st half class</td>
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<td>Julie Lajoie plus PGY 4 or 5</td>
<td>Simulations ACLS</td>
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<td>Wed PM</td>
<td>PGY3</td>
<td>Dr. Yousef plus PGY 4 or 5</td>
<td>Management of ACS, Dysrhythmias and Cardiac Arrest in the ICU</td>
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<td>Fred Baxter plus PGY 4 or 5</td>
<td>Fluid and Electrolyte Management in ICU</td>
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<td>Thurs AM</td>
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<td>Joanna Rieber</td>
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<td>Wed PM</td>
<td>PGY3</td>
<td>Laura Stover plus PGY 4 or 5</td>
<td>Cardiogenic Shock, Vasopressors an PA Catheters</td>
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<td>PGY4</td>
<td>Dr. Shichor</td>
<td>Introduction to Pediatric Anesthesia</td>
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<td>Thurs PM</td>
<td>PGY1,2</td>
<td>Dr. Reddy</td>
<td>Pediatric Anesthesia Cases</td>
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<td>Dr. Ling plus PGY 4 or 5</td>
<td>Neuro Critical Care</td>
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<td>Wed</td>
<td>PGY 3 &amp; 4</td>
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<td>08/31/2016</td>
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<td>09/08/2016</td>
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<td>PM (1300-1600) Respiratory Anatomy</td>
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<td>10/06/2016</td>
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<td>10/13/2016</td>
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<td>PM (1300-1600) Cardiac Anatomy</td>
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<td>PM (1300-1600) Cardiac Physiology</td>
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<td>10/27/2016</td>
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<td>11/03/2016</td>
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**NOTE:**
- MAD DAY and 1/2 day retreat on Dec 7
- Christmas Holidays
- Full day retreat August 31st
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<td>Local Anesthetics-make sure Andrea gives the correct session (LA is the correct session). A. Dower</td>
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<td>LMCC part 2 Learning session- PGY2's will teach the PGY1's.- one resident to teach, others in OR, C. Vandecappelle</td>
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<td>TOPIC/PERSON RESPONSIBLE FOR OBJECTIVES ( )</td>
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<td>09/07/2016</td>
<td>Critical appraisal</td>
<td>Dr. Paul</td>
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<td>9/14/2016</td>
<td>Residents Stay in Clinical</td>
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<td>09/21/2016</td>
<td>Pacemakers and arrhythmias</td>
<td>Dr. Raymer</td>
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<td>Procedural Sedation</td>
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<td>Toxidromes II</td>
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<td>H. Whittingham</td>
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<td>Communication Techniques (Jesse Guscott)</td>
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<td>A. Wong</td>
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<td>Steve Puchalski</td>
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<td>Kathleen Mech/K. Raymer</td>
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<td>Dr. Skrinskas</td>
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<td>T. O’Hare</td>
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<td>Ligori</td>
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8/25/2016 full retreat for residents (PM) on the 24th. No AHD on the Thursday

Turn left before the the cafeteria.

December

12/08/2016 MAD DAY and 1/2 day retreat on Dec 7. No AHD on the Thursday

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National Curriculum for Canadian Anesthesia Residency

First Edition
April 2010

Edited by Dr. Mark Levine MD, FRCPC, Dr. Patti Murphy BScN, MD, FRCPC

Original Contributors:
This is not an official document of the Royal College of Physicians and Surgeons of Canada. This is a draft of a document being developed by ACUDA Education. Please refer to the RCPSC Objectives of Training for current guidelines regarding anesthesia training in Canada.

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Note: As a convention in this document, plain text denotes skills and knowledge that apply to the specialty training at the graduate level of a non-sub specialized Anesthesiology Resident.

*Italicized items denote knowledge and skills that apply to specialty training of the Subspecialty Fellow.*
1 Airway Evaluation and Management

See Ear, Nose and Throat 7

The competent Anesthesiologist shall demonstrate advanced knowledge and proficiency in all the objectives related to airway evaluation and management listed below.

1.1 Basic Science
a) Structure and function of upper and lower airways:
   i. Nose, mouth, teeth, tongue
   ii. Nasopharynx, oropharynx, pharynx
   iii. Epiglottis, larynx, glottis, vocal cords, valleculae
   iv. Cartilages
   v. Sensory and motor innervation
   vi. Conducting and respiratory airways: trachea, bronchi, bronchioles, alveoli

b) Physiology and pathophysiology of ventilation and respiration
   i. Control of breathing
   ii. Central nervous system
   iii. Diaphragm and accessory muscles

1.2 Airway Obstruction
a) Etiologies of airway obstruction

b) Complications
   i. Hypercarbia/acidosis
   ii. Hypoxia
   iii. Aspiration

1.3 Basic Airway Management
The competent Anesthesiologist must demonstrate knowledge and expertise in basic airway management for the patient with upper airway obstruction.

a) Acute Airway Obstruction

The competent Anesthesiologist must demonstrate proficiency in immediate recognition and management of the patient with an acutely obstructed airway

   i. Basic Life Support (BLS) protocols:
   ii. Assessing patient responsiveness
   iii. Obtaining assistance
   iv. Patient positioning
   v. Recovery position
   vi. Chin lift, head tilt, jaw thrust
   vii. Indications for and use of pharmacologic agents e.g. in management of laryngospasm
   viii. Rescue breathing
   ix. Cardiopulmonary resuscitation

b) Bag-Valve-Mark Ventilation
The competent Anesthesiologist must demonstrate knowledge and expertise in patient ventilation using bag-valve-mask devices, including:

i. Selection of appropriately-sized masks
ii. Assembly, use, and trouble-shooting of self-inflating ventilation devices
iii. Two-person mask ventilation techniques
iv. Role of PEEP valve
v. Role of reservoir bag

c) Basic Airway Adjuncts

The competent Anesthesiologist must demonstrate understanding of the use of basic adjuncts to overcome acute airway obstruction including appropriate sizing and insertion techniques:

i. Oropharyngeal airway
ii. Nasopharyngeal airway

1.4 Oxygen Delivery Systems

The competent Anesthesiologist must demonstrate an understanding of systems designed for delivery of oxygen to the patient, including:

i. Oxygen sources
ii. Wall oxygen systems and specifications
iii. High pressure oxygen supply
iv. Diameter Index Safety System (DISS)
v. Quick-connect systems
vi. Flowmeters
vii. Cylinder sizes, pressures, capacities
viii. Regulators and flowmeters
ix. Nasal Cannulae
x. Flow rates and delivered oxygen
xi. Capnography
xii. Face masks
xiii. Types: Simple, Venturi, Non-rebreathing
xiv. Flow rates and delivered oxygen

1.5 Universal Precautions

The competent Anesthesiologist must be able to demonstrate knowledge and understanding of the role of universal precautions in patient care, including airway management using face shields, barrier masks, gloves

See Infectious Disease 14

1.6 Airway Evaluation

The competent Anesthesiologist must demonstrate advanced knowledge and expertise in assessment of patient airways, particularly those features predisposing to difficulty in airway management.

a) Elicit a satisfactory patient history, including:

i. Review of old records
ii. History of prior encounters with anesthesia
iii. Dental/soft tissue damage

b) Physical Examination

i. Mallampati score
ii. Thyromental distance
iii. Upper lip bite test
iv. Range of motion of neck
v. Neck circumference
vi. Mandible, mouth opening
vii. Other predictors of airway difficulty
   • Dentition
   • Tongue
   • Gender
   • Age
   • Body habitus/obesity
   • Facial hair
   • Medical conditions, tumours, trauma, pregnancy

c) Investigations

The competent Anesthesiologist must demonstrate appropriate use and understanding of diagnostic testing and imaging where results may impact the planning of a patient’s pre-operative and post-operative airway and ventilatory management:

i. Pulmonary function testing (vitalometry)
ii. Blood gas testing
iii. Flow-volume loops

1.7 Communication

The competent Anesthesiologist must demonstrate appropriate communication skills regarding the patient airway evaluation and planning

a) Clear communication of pre-operative findings/concerns/plans to the patient
b) Accurate written documentation of pre-operative assessment and patient discussion for colleagues
c) Accurate written documentation of intra-operative airway findings
d) After identification of the patient with a difficult airway the anesthesiologist must:
   i. Write a “Difficult Airway Letter”
   ii. Communicate this finding with the patient and family, other physicians including family physician
   iii. Recommend wearing of a Medicalert Bracelet.

1.8 Endotracheal Intubation

The competent Anesthesiologist must demonstrate knowledge and expertise in airway management using endotracheal intubation

a) Indications for Intubation
   i. Airway obstruction unrelieved by basic manoeuvres
   ii. Oxygenation and Ventilation
   iii. Etiologies of hypoxia, hypercarbia
   iv. Definition of respiratory failure
   v. Objective criteria for intubation
   vi. Ventilatory Support
   vii. Mechanical ventilation strategies
   viii. Role of CPAP and PEEP
   ix. Airway protection
   x. Trauma/burns
   xi. Obtunded patient
   xii. Tracheobronchial toilet/suctioning
   xiii. Anesthesia and Surgery
   xiv. Muscle relaxant cases
   xv. Surgery around head and neck
   xvi. Airway procedures
xvii. Bronchoscopy, biopsies, therapeutic procedures

b) Route of Intubation
   i. Orotracheal intubation
   ii. Nasotracheal intubation
       • Surgical and anatomic indications
       • Considerations
       • Contraindications
       • Blind nasal intubation
   iii. Transtracheal intubation
       • In situ via tracheotomy stoma
       • Considerations of fresh tracheotomy versus mature stoma
   iv. Urgent non-elective endobronchial intubation
   v. Indications for one-lung ventilation
       • Pulmonary hemorrhage
       • Foreign body
   vi. Technique/considerations using standard endotracheal tube

c) Intubation

The competent Anesthesiologist must demonstrate knowledge and expertise in managing normal and difficult airways using direct laryngoscopy and intubation, with appropriate use of adjuncts where necessary:

i. Preparation
   • Equipment choice
   • Appropriate laryngoscope blade size
   • Appropriate endotracheal tube size
   • Equipment check
   • Monitors
   • Suction
   • Alternative airway devices, airways

ii. Direct laryngoscopy
   • Curved blades
   • Straight blades
   • Levering blades
   • Other specialized blades

iii. Indirect Laryngoscopy Techniques
   The competent Anesthesiologist must demonstrate knowledge and expertise in managing normal and difficult airways using alternative to direct laryngoscopy:
       • Fibreoptic laryngoscopes
       • Rigid fiberoptic laryngoscopes
       • Shikani, Bullard, etc.
       • Flexible fiberoptic laryngoscopes
       • Video laryngoscopes
       • Glidescope, McGrath laryngoscope, etc.

iv. Adjuncts to facilitate endotracheal tube placement
   • Gum elastic bougie
   • Stylets
   • Malleable
   • Lighted (eg. Trachlight, Tubestat)
   • Manoeuvres to facilitate visualization
   • Optimal patient positioning
d) Management of Extubation

The Anesthesiologist must demonstrate an understanding of the methods of and considerations for airway management at the extubation phase, including:

i. Airway toilet, suctioning
ii. Awake extubation criteria
iii. Deep extubation technique
iv. Post-extubation stridor
v. Extubation of the patient with a difficult airway

e) Supraglottic Devices

The competent Anesthesiologist must demonstrate knowledge and proficiency in airway management using supraglottic devices.

i. Indications and contraindications of different supraglottic devices
ii. Elective use as alternative to endotracheal intubation
iii. Laryngeal mask airway (LMA)
iv. LMA – ProSeal
v. LMA – Classic
vi. Emerging alternatives
vii. Conduit for endotracheal intubation
viii. Use of specific types of LMA as a conduit for endotracheal intubation
ix. Emergent use in difficult airway algorithms
x. CVCI (Cannot Ventilate, Cannot Intubate) situation

f) Complications of Airway Management

The competent Anesthesiologist must demonstrate an understanding of and an ability to recognize and treat the complications of airway management, including:

i. Errors of endotracheal tube placement
ii. Endobronchial intubation
iii. Overinsertion
iv. Patient repositioning, neck flexion
v. Esophageal intubation
vi. Airway trauma
vii. Dental trauma
viii. Soft tissue trauma
ix. Post-extubation stridor
x. Nasal trauma for nasal intubation
xi. Aspiration
xii. Prevention
xiii. Fasting guidelines
xiv. Anti-reflux pre-treatment strategies
The competent Anesthesiologist must demonstrate advanced knowledge and skills for the recognition and management of predicted and unexpected difficult airways. He/she must demonstrate knowledge of a range of safe options for securing difficult airways. He/she also must demonstrate appropriate communication, management and technical skills in doing so.

a) General Considerations

The competent Anesthesiologist must demonstrate a sound working knowledge of the difficult airway algorithms and current accepted airway guidelines. He/she must understand and be able to utilize the considerations and recommendations for difficult airway management, including:

i. Predicted versus unpredicted difficult airway
ii. Awake versus asleep strategy
iii. Failed intubation strategy
iv. Cannot ventilate, cannot intubate strategy
v. Calling for assistance
vi. Special considerations in the pediatric and obstetric populations

b) Further classification of difficult airways into descriptive categories:

i. Difficult mask ventilation
ii. Difficult laryngoscopy
iii. Difficult intubation
iv. Difficult ventilation

c) Predicted Difficult Airway

The competent Anesthesiologist must demonstrate knowledge and proficiency in formulating an approach to the recognized difficult airway. He/she must understand and be able to weigh alternative strategies.

Management Plan:

i. Intubation versus alternatives
ii. Supraglottic devices
iii. Regional anesthesia
iv. Awake versus asleep intubation
v. Fibreoptic versus videolaryngoscopic techniques
vi. Other devices
vii. Lighted stylet
viii. Other approaches
   • Retrograde wire or catheter-assisted intubation
   • Patient preparation for awake intubation
   • Psychological, communication of plan/concerns
   • Pharmacological
   • Anti-sialogogue
   • Anxiolytic
   • Strategies for uncooperative patients
   • Airway topicalization techniques
   • Local anesthetic pharmacology
   • Nerve block techniques
   • Aerosolized, spray, contact, injection
d) Unpredicted Difficult Airway

The competent Anesthesiologist must demonstrate an ability to deal with unexpected difficult airways. He/she must understand and be able to apply the guidelines provided in difficult airway algorithms, including the role of supraglottic devices, surgical airways, and patient wake-up options. The Anesthesiologist should understand the principles of anesthesia crisis resource management and the various types of human error when faced with an unanticipated difficult airway.

e) The Surgical Airway

The competent Anesthesiologist must be able to demonstrate a working knowledge of surgical options for emergency airway management. He/she must demonstrate knowledge of the use of at least one cricothyrotomy kit or approach:

i. Mini-tracheostomy
ii. Cricothyrotomy
iii. Jet ventilation
iv. Contraindications to surgical airway techniques

f) Extubation of the Difficult Airway Patient

The competent Anesthesiologist must demonstrate an understanding of the implications for airway management at the extubation of the difficult airway patient. He/she should be able to demonstrate consideration of the following additional concerns:

i. The patient with a wired jaw
ii. The patient with airway edema
iii. Extubation over an introducer
iv. Assessment for readiness for extubation

1.10 Airway Education Resources

The competent Anesthesiologist must demonstrate familiarity with current and emerging airway management options through awareness of and scholarly participation in:

i. Internet airway resources and discussion groups
ii. Continuing medical education options
iii. Dedicated airway textbooks
iv. Patient airway simulators
2 Ambulatory Anesthesia

2.1 Ambulatory Anesthesia Settings

a) The Anesthesiologist must demonstrate an understanding of the various settings and administrative structures required for Ambulatory Anesthesia including:
   i. Hospital based centers
   ii. Hospital affiliated centers
   iii. Freestanding centers e.g. dental offices, cosmetic surgery clinics, endoscopy clinics

b) He/she must demonstrate knowledge with respect to guidelines or standards pertaining to the design and resources required for Ambulatory Anesthesia sites including:
   i. Anesthesia and life support equipment
   ii. Monitors
   iii. Drugs – in particular drugs required to manage emergencies including Malignant Hyperthermia
   iv. Special equipment
      • Difficult airway
      • Regional anesthesia
   v. Site physical design
      • Basic knowledge of O.R. design requirements and standards per Canadian Anesthesiologists Society (CAS)
      • Managing gas supplied in tanks, adequacy of reserve supply, downstream pressure regulation & monitoring
      • O.R. ventilation and waste gas scavenging as per CAS recommendations
      • Equipment maintenance and servicing
      • Awareness that provincial guidelines specify requirements for number and qualifications of ancillary staff
      • Provincial Colleges of Physicians and Surgeons role in accrediting non-hospital facilities
      • Abortion guidelines for non-hospital facilities

2.2 Pre-operative Assessment of Patients

The Anesthesiologist must demonstrate an understanding of the factors related to appropriate patient selection and appropriateness of surgical procedures for ambulatory surgery.

a) Obtain a thorough and pertinent medical history

b) Perform a thorough physical examination

c) Obtain appropriate and pertinent tests and consultations:
   i. Laboratory tests
   ii. Imaging studies
   iii. Electrocardiograms
   iv. Specialist consultations

d) Identify and evaluate any pre-existing comorbid conditions
   i. Provisions for pre-operative screening through record review, interview & examination and directed consultations to reduce late cancellations as well as morbidity & mortality
   ii. ASA Status and appropriateness for ambulatory care
   iii. BMI stratification
   iv. Anesthesia for Pediatric cases in non-hospital facilities
   v. HRT/BCP discontinuation

e) Select eligible patients for ambulatory anesthesia based on:
   i. Type of surgery
   ii. Duration of surgery
   iii. Potential for blood transfusions
   iv. Potential severity of perioperative complications
   v. Post-operative care

f) Special considerations for pediatric patients
   i. Former premature patients
   ii. Comorbid conditions e.g. Obstructive sleep apnea
iii. Patients with upper respiratory tract infections
iv. Airway challenges

2.3 Pre-operative Patient Preparation
The Anesthesiologist must demonstrate knowledge with respect to preparing patients for ambulatory surgery with respect to:

a) NPO status
   i. Ensure appropriate NPO status based on timing of surgery
   ii. Provide a rationale for NPO policies
   iii. Establish an appropriate NPO policy for ambulatory site
b) Pre-existing medication management-order or withhold chronically administered medications as appropriate
c) Pre-operative medications – order anxiolytics, sedatives, analgesics in the per-operative period as appropriate for an ambulatory setting
d) Preparation for discharge planning – provision of clear instructions to patients and families

2.4 Anesthetic Techniques
The Anesthesiologist must demonstrate an approach to anesthetic techniques appropriate for ambulatory surgery:

a) General Anesthesia
   Describe drugs and techniques appropriate for use in an ambulatory care setting
b) Regional Anesthesia.
The Anesthesiologist must demonstrate an understanding of regional anesthetic techniques appropriate for ambulatory surgery and the benefits and drawbacks of such techniques
c) Monitored Anesthesia Care
The Anesthesiologist must demonstrate an understanding of the use of monitored anesthesia care in the ambulatory setting

2.5 Anesthesia Care for Surgical Procedures
The Anesthesiologist must demonstrate knowledge with respect to procedures appropriate for ambulatory surgery.

a) Provide safe and competent anesthesia care for adult and pediatric patients for surgical procedures for:
   i. Otolaryngology
   ii. Vascular surgery
   iii. General surgery
   iv. Orthopaedic surgery
   v. Urologic surgery
   vi. Gynaecologic surgery
   vii. Plastic/cosmetic surgery
   viii. Dental surgery
   ix. Ophthalmology
   x. Diagnostic imaging

2.6 Post Operative Care
The Anesthesiologist must demonstrate an understanding of the requirements for postoperative care in an ambulatory setting including:

a) Post Anesthesia Care Unit
   i. Describe an arrange appropriate monitoring of the patient following completion of surgery
   ii. Identify and manage post-operative complications
   iii. Describe discharge criteria to Post Recovery Care
   iv. Provide appropriate post-operative pain management
   v. Provide appropriate post-operative nausea and vomiting management
b) Post Recovery Care
   i. Describe process for post-operative teaching and instructions
   ii. Assure post-operative follow up plans
   iii. Describe discharge criteria to go home

c) Unplanned Admission

Describe process for unplanned admission to hospital for patients failing to meet discharge criteria or for patients with post-operative complications requiring hospital admission

2.7 Emergency Situations
The Anesthesiologist must demonstrate an ability to recognize and treat potential emergency situations in the ambulatory setting, including disposition of the patient.

a) See Complications
b) Evacuation plans/procedures – particularly in free standing facilities: e.g. fire safety

2.8 Quality Control/Assurance
The Anesthesiologist must demonstrate an ability to identify parameters requiring monitoring for Quality Control/Assurance:

a) Peri-operative complications
b) Unplanned hospital admissions
c) Post-operative nausea and vomiting
d) Post-operative pain control
e) Peri-operative mortality
3 Autonomic Nervous System

3.1 Functional Anatomy and Physiology of the Autonomic Nervous System
The Anesthesiologist must demonstrate an understanding of the anatomy and physiology of the autonomic system including relevant pathophysiology and pharmacology. Describe:

a) functional anatomy and physiology of the sympathetic nervous system
b) functional anatomy and physiology of the parasympathetic nervous system
c) functional anatomy and physiology of the enteric nervous system
d) adrenergic and cholinergic receptors and the physiologic effects of their receptor agonists and antagonists
e) signal transduction, up-regulation and down-regulation of adrenergic receptors

3.2 Function of the Autonomic Nervous System
The Anesthesiologist must demonstrate an understanding of the function of the autonomic system

a) Describe the responses elicited if effector organs by stimulation of sympathetic and parasympathetic nerves
   i. Heart
   ii. Blood vessels
   iii. Bronchial tree
   iv. Gastrointestinal tract
   v. Eye
   vi. Pancreas
   vii. Sweat glands
b) Explain the Harlequin syndrome
c) Explain the function of the autonomic nervous system in visceral pain
   i. Throat
   ii. Lungs
   iii. Heart uterus
   iv. Small and large bowel
   v. Pancreas
   vi. Vagina
   vii. Testicles
   viii. Celiac ganglion block
d) Explain the effect of stellate ganglion block on upper limb blood circulation and sympathetic lumbar ganglion block on lower limb blood circulation
e) Explain the Marey’s law
f) Explain the Bainbridge reflex
g) Explain the Valsalva manoeuvre
h) Explain the Bezold-Jarsich reflex

3.3 Pharmacology of the Autonomic Nervous System
The Anesthesiologist must demonstrate an understanding of the pharmacology of the autonomic system

a) Describe the synthesis, storage, release, inactivation and metabolism of norepinephrine and epinephrine
b) Describe the synthesis, storage, release, and inactivation of acetylcholine
c) Name the more frequently used α and β-agonists, both direct and indirect and explain their clinical effect
d) Explain the effects of α and β-blockers
e) Explain the effects of calcium channel blockers on the blood vessels
f) Explain the effects of α₂-blockers in regard to pain
g) Explain the effects of antihypertensive drugs on the autonomic nervous system, including drugs affecting the renin-angiotensin system
h) Explain the effects of antidepressant drugs on the autonomic nervous system, including MAOIs and tricyclic antidepressants
i) Explain the relation between the antinauseant drugs and the autonomic nervous system
j) Explain the relation between the tocolytics drugs and the autonomic nervous system
k) Describe the effect of anticholinergic and adrenergic drugs on a transplanted heart
l) Describe the effects of epinephrine injection in the presence of volatile anesthetics

3.4 **Autonomic Dysfunction**
The Anesthesiologist must demonstrate an understanding of the pathophysiology of the autonomic nervous system with respect to the following conditions

a) Explain pheochromocytoma effects
b) Explain autonomic dysreflexia
c) Describe assessment of diabetic autonomic neuropathy
d) Describe autonomic changes with aging
e) Explain the oculocardiac reflex
f) Describe the effects of aging on the autonomic nervous system
g) Describe the surgical stress syndrome
4 Cardiovascular Anesthesia

General Objectives:

The competent Anesthesiologist shall demonstrate knowledge and proficiency in all the objectives listed below.

The sub-specialist in Cardiovascular Anesthesia shall demonstrate proficiency in all of the above plus these additional specific objectives. A competent Anesthesiologist shall demonstrate knowledge of the principles of these objectives, but not be expected to perform these objectives.

4.1 Cardiac Anesthesia

The consultant anesthesiologist must demonstrate knowledge with respect to the following:

4.1.1 Basic Science

a) Coronary anatomy and physiology
   i. Describe the normal coronary anatomy and common variants, including being able to describe the vascular supply of the major cardiac chambers and cardiac conduction systems
   ii. Describe the normal structure of coronary arteries and the determinants of arteriolar tone
   iii. Describe the determinants of coronary artery blood flow, myocardial oxygen supply and myocardial oxygen demand, including differences between the right and left ventricles
   iv. Describe the pathogenesis of myocardial ischemia, including the pathology of atherosclerotic heart disease, dynamic stenosis, collateral circulation and coronary steal
   v. Describe the pathogenesis of perioperative ischemia and infarction, including similarities and differences from MI in the ambulatory (non-surgical) setting

b) Cardiac Physiology
   i. Describe the phases of the cardiac cycle and relate these to the electrocardiogram
   ii. Discuss the determinants of cardiac output (heart rate and stroke volume), including those variables which influence stroke volume (preload, afterload, contractility)
   iii. Describe commonly used indices of systolic function, such as dP/dt, EF, and ESPVR; pressure volume loops
   iv. Describe the determinants of normal diastolic function and understand its importance in the normal function of the heart, as well as describe conditions associated with abnormal diastolic function
   v. Describe the differences between the function of the left and right ventricle, and the interaction between the two
   vi. Describe the normal anatomy, structure and function of the four heart valves
   vii. Pericardium anatomy and physiologic consequences of diseases of the pericardium

c) Electrophysiology
   i. Describe the normal anatomy of the cardiac conduction system
   ii. Describe the phases of cellular action potentials, including the major associated ion currents
   iii. Describe the automaticity of the cardiac conduction system, understanding the differences between the SA node, AV node, Bundle of His and Purkinje fibres
   iv. Describe excitation-contraction coupling, and how electrical activation of the myocyte leads to contraction and relaxation

d) Neurohumoral Regulation of the Heart
   i. Describe the sympathetic and parasympathetic innervation of the heart
   ii. Describe the interaction of the SNS and PSNS with cardiac variables, including heart rate, contractility, relaxation as well and venous and arteriolar tone
   iii. Describe the major receptor mechanisms involved with the autonomic innervation of the heart, including Acetyl Choline, α and β receptors, as well as their stimulants and actions
   iv. Describe the major hormonal systems which regulate cardiac function, including the rennin-angiotensin system, natriuretic peptides, vasopressin and catecholamines
   v. Be able to describe major cardiac reflex systems, such as the:
      • Baroreceptor reflex
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- Chemoreceptor reflex
- Bezold-Jarisch reflex
- Vagal manoeuvres
- Cushing’s reflex

e) Vascular Anatomy and Physiology
   i. Describe the anatomy of the pulmonary vasculature
   ii. Describe the regulation of pulmonary artery tone, including autonomic and humoral mechanisms
   iii. Understand the impact of pulmonary vascular resistance on the function of the right ventricle
   iv. Describe the anatomy of the aorta, including major branches
   v. Describe the vascular supply of the major organs and the four limbs
   vi. Be able to describe the autonomic and humoral control of vascular smooth muscle, and how these systems regulate arterial and venous tone

f) Embryology (see also pediatric anesthesia section)
   i. Demonstrate a basic understanding of cardiac embryology
   ii. Be aware of how this relates to major congenital cardiac diseases, such as:
      - Patent ductus arteriosus
      - Coarctation of the aorta
      - Major abnormalities of the great vessels, such as transposition
      - Major valvular abnormalities, such as Ebstein’s anomaly, pulmonary atresia, and Tetralogy of Fallot
      - Hypoplastic heart syndromes
      - ASD
      - VSD
   iii. Describe normal fetal circulation. Understand the differences between adult and fetal circulation
   iv. Describe the normal transition from fetal to adult circulation, especially as it relates to the immediate post-natal period

The consultant Anesthesiologist must demonstrate an ability to apply the aforementioned principles in management with respect to the immediate assessment and management, and pharmacology and perioperative monitoring.

4.1.2 Clinical Assessment
The Anesthesiologist must demonstrate the ability to:

a) Be able to take a focused cardiac history
b) Complete a focused physical examination of the cardiovascular system
c) Be able to interpret relevant laboratory data
d) Interpret the summary reports of advanced cardiac investigations such as:
   i. Vascular studies such as the ankle-brachial index and carotid Doppler studies
   ii. Holter monitors
   iii. Myocardial stress tests
   iv. Myocardial perfusion studies
   v. Left – and – right-sided cardiac catheterization studies
   vi. Static echocardiography reports
e) As they relate to relevant perioperative assessment
f) Compile the above to arrive at relevant anesthetic considerations and risks

4.1.3 Pathophysiology
The Anesthesiologists must demonstrate an understanding of the pre-existing cardiac disease in planning for non-cardiac as well as cardiac surgery for patients with cardiac disease. He/she must demonstrate an ability to manage patients with:

a) Medically optimized pre-existing cardiac disease
   i. Anti-anginals
   ii. Anti-hypertensives
   iii. Anti-dysrhythmics
   iv. Diuretics
b) Thoracic Aortic Disease (atheroma, aneurysms, dissections)
c) Coronary Artery Disease

See Critical Care 6.10, 6.11

i. Acute myocardial ischemia
ii. Myocardial infarction
iii. Complications of myocardial infarction e.g. dysrhythmia, VSD, CHF, MR, LV, aneurysm, pseudoaneurysm
iv. Management in the face of recent thrombolytic and anti-platelet therapy
v. The implications of recent PCI and coronary stent placement
d) Valvular heart disease
   i. AS
   ii. AR
   iii. MS
   iv. MR
   v. PS
   vi. TR
e) Cardiac tamponade
f) Constructive pericarditis
g) Cardiomyopathies
   i. Dilated
   ii. Restrictive
   iii. Obstructive (HOCM with or without SAM, Dynamic left ventricular obstruction in the elderly)
h) Cardiogenic shock
   i. Right sided CHF, pulmonary hypertension
   ii. Left sided CHF from diastolic and/or systolic dysfunction
i) Aberrant conduction (eg: WPW), dysrhythmia, ablation procedures (procedures in the EP lab)
j) Pacemaker and Implantable Cardioverter Defibrillator (AICD) insertion
k) Valve replacement or repair surgery
l) Mitral valve assessment for repair
m) Cardiac tumors
n) Urgent and non-urgent cardiac re-operation
o) Cardiac transplant
p) Heparin induced thrombocytopenia
q) Heparin resistance
r) Sudden acute and sub-acute ventricular and supra-ventricular arrhythmia
s) Adult Congenital Heart Disease
t) Acute Pulmonary emboli and chronic thrombo-embolic pulmonary HTN
u) Endocarditis

4.1.4 Perioperative Management of Cardiac Surgery
a) The Anesthesiologist must demonstrate knowledge of special issues related to cardiac surgery and Anesthesiology
b) The indications for elective and emergent CABG surgery
c) The indications for IABP
d) Know pathophysiology and management of complications after cardiac surgery: e.g. bleeding, graft occlusion, early and late arrhythmia, stroke, tamponade, Neuro-cognitive dysfunction
e) Antifibrinolytics and their role in blood conservation
f) Knowledge of CPB and its physiologic effects and complications
g) Methods of blood conservation in cardiac and non-cardiac surgery including cell savers
h) HIT and new/novel anticoagulants (eg: recombinant Hirudin, Argatroban, bivilirudin)
i) Anesthesia for procedures in the cath lab (eg: A fib ablation, PFO closure, percutaneous valve replacement)
j) Patient-prothesis mismatch (PPM) after valve replacement
k) Protamine reactions
l) Circulatory arrest
m) Cardiovascular ICU care
n) Fast-track Cardiac Anesthesia and Surgery
o) Cardioplegia
p) Left and right ventricular assist devices, Bi-VAD and artificial heart
q) Heart and heart-lung transplantation
r) Temporary pacemaker utilization post cardiac surgery
s) Ischemic preconditioning and volatile anesthetic preconditioning
t) Resource utilization and cost effectiveness techniques in cardiac anesthesiology, surgery and CV intensive care

4.1.5 Pharmacology

a) The Anesthesiologist must demonstrate knowledge with respect to mechanism of action, pharmacokinetics and pharmacodynamics, indications, contraindications, side effects, complications, dose, antidote, interactions, and anesthetic implications of:

i. Sympathomimetics, α- and β-adrenergic antagonists
ii. Phosphodiesterase inhibitors
iii. Calcium sensitizing agents (levosimendan)
iv. Peripheral vasodilators, including the nitrates;
v. Calcium-channel blockers
vi. Diuretics
vii. Other anti-hypertensive agents
viii. Other anti-dysrhythmic drugs, including digitalis
ix. Prostaglandins
x. Nitric Oxide
xi. Anti-fibrinolytic agents
xii. Anti-platelet agents
xiii. Thrombolytics
xiv. Heparin and non-heparin anticoagulants
xv. Protamine
xvi. Drugs for pulmonary hypertension
xvii. Use of epidurals and spinal cord stimulation in myocardial ischemia

b) The anesthesiologist must demonstrate knowledge with respect to effects on the cardiovascular system for the following agents:

i. IV induction agents
ii. Sedatives
iii. Opioids
iv. Volatile anesthetics
v. Nitrous oxide
vi. Local anesthetics
vii. Neuromuscular blocking agents
viii. Anti-cholinesterases and cholinergic agonists
ix. Anti-cholinergic agents
x. NSAIDs and Cox-2 inhibitors

4.1.6 Monitoring
The anesthesiologist must demonstrate and ability to:

a) Interpret a 12-lead ECG for ischemia, infarction and arrhythmia. Recognize the limitations of ECG monitoring, and be aware of the sensitivity/specificity of ECG as ischemia monitor.
b) Describe the common placements of intra-operative ECG monitoring leads. Understand the limitations of 3- and 5-lead systems as compared to 12-lead ECG for diagnosing ischemia and arrhythmia. Be familiar with alternative lead placements and their indications. Be aware of the common artifacts present on intra-operative ECG monitors.
c) Demonstrate principals of non-invasive and invasive BP monitoring and its pitfalls
d) Discuss resonant frequency, damping, etc
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e) Secure large-bore peripheral intravenous, arterial (radial, brachial and femoral) and central venous (internal jugular, subclavian and femoral) access.
f) Be able to set up and insert a PA catheter. Be able to assess right-sided catheterization variables, including CVP, PAP, PCWP and cardiac output. Be able to interpret mixed-venous blood gases, and determine whole-body oxygen delivery and consumption. Understand the indications, limitations and complications of PA catheters in critical care settings.
g) Discuss non-invasive methods of estimating CO and limitations
h) Be facile in the laboratory monitoring of the acid-base, oxygen carrying, coagulation and inflammatory components of the hematologic system.
i) Demonstrate an understanding of Thromboelastogram monitoring
j) TEE
   i. Be able to describe the indications and contraindications of perioperative TEE in the cardiac and non-cardiac surgical settings.
   ii. Understand the sensitivity and specificity of TEE in the early detection of myocardial dysfunction, volume assessment, venous air embolism, valvular dysfunction and anatomical abnormalities.

4.2 Vascular Anesthesia
The consultant anesthesiologist must demonstrate an understanding of the anatomy and physiology relevant to the management of patients presenting for vascular surgery including:

4.2.1 Anatomy, Physiology and Pathophysiology

a) A knowledge of the basic sciences as applicable to anesthesia, including vascular anatomy, and pertinent physiology
b) The anatomy and physiology of spinal blood supply
c) Knowledge of the physiologic consequences of aortic cross clamping
   i. Thoracic
   ii. Abdominal supraceliac
   iii. Abdominal infrarenal
d) The pathology of atherosclerotic disease;
e) The major diseases of the of the aorta:
   i. Aortic aneurysm;
   ii. Aortic dissection;
   iii. Aortic occlusive disease;
   iv. Embolic disease and ischemic limb;
   v. Connective tissue disease;
   vi. Aortitis;
   vii. Aortic injury after blunt trauma

The consultant anesthesiologist must demonstrate an ability to apply the aforementioned knowledge in management with respect to patient assessment and management, and pharmacology and perioperative monitoring.

4.2.2 Clinical Assessment
The anesthesiologist must demonstrate an understanding of:

a) A comprehensive preoperative assessment
b) The presence of coexisting diseases particularly related to Coronary Artery Disease (as per cardiac considerations) the implications of vascular disease on end organs e.g. kidneys, CNS.
c) The clinical skills necessary to gather internal medicine and intensive care including the ability to investigate, diagnose, and manage appropriately factors that influence a patient's medical and surgical care.
d) Recognize that prior to provision of anesthetic care specific medical intervention and modification of risk factors may be required.

4.2.3 Clinical Management of Vascular Surgery
The anesthesiologist must demonstrate an understanding of the following considerations:

a) The differences of clamping at various levels of the aorta
b) Management of patients and the hemodynamic effects of aortic cross clamping
c) Intra-operative support
d) Be able to manage the following cases on the descending aorta
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- thoracic aneurysm repair
- abdominal aneurysm repair
- aortic dissection
- renal protection and supra-celiac clamps
- spinal cord protection during thoracic aortic surgery
- repair of the ruptured aneurysm
- peripheral vascular surgery
- carotid endarterectomy
- amputation
- Post-operative management of adult patients for aortic, peripheral vascular and carotid procedures
- Demonstrate competence in all technical procedures commonly employed in vascular anesthetic procedures, including airway management, cardiovascular resuscitation, patient monitoring and life support, general, and regional anesthetic and analgesic techniques and postoperative care.
- Manage massive transfusions and its inherent complications
- The anesthesiologist must demonstrate knowledge in the use of spinal drainage for thoracic aneurysm repair
  - Indications
  - Contraindications
  - Methodology
  - Monitoring
  - Complications
- Be able to manage diseases of the ascending aorta and aortic arch

4.2.4 Pharmacology
See Cardiac Anesthesia section 4.1.5

4.2.5 Monitoring
The anesthesiologist must demonstrate an understanding of monitoring standards for vascular surgery including:

- Monitoring brain function during Carotid Endarterectomy
- Monitoring spinal cord during thoracic aortic surgery
- ACT
- Invasive monitoring
- Special issues related to vascular anesthesia

4.2.6 Pain Management
The anesthesiologist must demonstrate knowledge of the principles of management of patients with postoperative pain following abdominal and peripheral vascular procedures

- Epidural analgesia
- Risks of neuraxial anesthesia with antiplatelet agents, intraoperative heparinization and other alterations in coagulation status
- Patients with chronic pain due to chronic vascular insufficiency
- Phantom limb pain - advantages and disadvantages of regional versus general anesthesia for CEA
5 Complications of Anesthesia
With respect to complications, the competent Anesthesiologist shall demonstrate the ability to:

- Assess a patient’s potential for complications based on comorbidities and planned procedures
- Obtain informed consent
- Prevent potential complications
- Manage potential complications
- Arrange appropriate patient disposition
- Document complications appropriately
- Disclose relevant information to the patient
- Arrange appropriate debriefing and quality assurance measures

5.1 Complications of Anesthesia in General

a) Awareness under anesthesia
b) Allergy and anaphylaxis
c) Extravasation of drugs and fluids
d) Drug interactions
e) Bacteremia
f) Hyper-/hypotension
g) Tachy-/bradycardia
h) Hyper-/hypocarbia
i) Hypoxemia
j) Hyper-/hypothermia
k) Raised airway pressure
l) Cardiac arrest and ACLS protocols
m) Intraoperative fires/burns

5.2 Complications of Regional Anesthesia
See Regional Anesthesia

5.3 Complications of Medication Administration
The Anesthesiologist must demonstrate an understanding of the complications related to administration of anesthetic and other drugs:

a) Inhalation Anesthetics
   See Volatile Agents 34.6
b) Intravenous Induction Agents and Sedatives
   See Pharmacology 23.6
c) Narcotics/Opioids
   See Pharmacology 23.7
d) Antiemetics and Anticholinergics
   See Pharmacology 23.8
e) Neuromuscular Blocking Agents
   See Neuromuscular Junction 17.2
f) Reversal Agents (CNS and Neuromuscular)
   See Neuromuscular junction 17.4
g) Local Anesthetic Agents
   See Regional 27.5
h) Non-anesthetic drugs commonly used in the OR
   i. Vasoactive drugs
   ii. Electrolyte solutions
   iii. Bronchodilators
   iv. Anticonvulsants
   v. Corticosteroids
   vi. Antibiotics
   vii. Antifibrinolytics
viii. Anticoagulants and their reversal agents

5.4 Allergy
See Immunology 13.4

5.5 Fluid Management
The Anesthesiologist must demonstrate an understanding of the complications related to fluid and blood product administration including:

a) See Critical Care 6.4
b) Blood products See Hematology section 11.6

5.6 Airway – please see Airway sections 2, 3, 8f

5.7 Monitoring
See Monitoring and Equipment 15.13

a) Failure to secure access
b) Arterial/venous trauma including tears, fistula formation
c) Arterial occlusion
d) Pneumo-/hemothorax

5.8 Patient Positioning

a) Complications relating to changing positions
b) Pressure: nerves and eyes, vascular structures, skin
c) Stretching: nerves particularly brachial plexus
d) Management of emergencies in prone position
e) Venous air embolism
f) Inadequate organ perfusion

5.9 Type of surgery

a) Laparoscopic
b) Thoracic
c) Neuro
d) Vascular (e.g. spinal cord ischemia with AAA)
e) Orthopedics (e.g. fat embolism, hypotension from reaction to cement with arthroplasty)

5.10 Ventilation

See Critical Care 6.3

a) Conventional
b) Non-conventional
c) Non-invasive

5.11 Occupational Hazards for Anesthesiologists and other OR personnel
The Anesthesiologist must demonstrate an understanding of the potential risks to themselves and others when dealing with high risk patients and situations in the operating room:

a) Needle stick
b) Infections – needle, airborne, contact
c) Inhalation of agents
d) Violent patient – Assault – physical, verbal
e) Lifting patients – back and other injuries
f) PTSD after adverse events
g) Fatigue
h) Substance abuse
6 Critical Care
The consultant Anesthesiologist must demonstrate an understanding of all the facets of critical care medicine including principles of management of the critically ill patient, acute resuscitation, trauma management and crisis resource management.

6.1 Monitoring

See Monitoring 15.13

6.2 Airway Management
The Anesthesiologist must demonstrate an in depth understanding of airway management in the critically ill patient

See Airway

6.3 Mechanical Ventilation
The Anesthesiologist must demonstrate an understanding of the various models of mechanical ventilation used in critical care, their indications, contraindications and side effects:

a) Indications for and contraindications of non-invasive and invasive positive pressure ventilation
b) Hemodynamic effects of positive pressure ventilation: Heart-lung interaction
c) Modes of ventilation
   i. CMV
   ii. SIMV
   iii. Pressure support ventilation
   iv. Pressure control ventilation
   v. Non-invasive positive pressure ventilation
   vi. High frequency oscillation
d) Ventilator induced lung injury and it’s prevention and ARDS net protocol
e) Managing patient-ventilator dysynchrony
f) Weaning from mechanical ventilation
g) Monitoring ventilatory therapy
   i. Arterial and venous blood gases
   ii. Pulse oximetry
   iii. Ventilator graphics
h) Sedation and paralysis for mechanical ventilation
   i. Pharmacology of common sedative and analgesic agents
   ii. Indications for neuromuscular blockade and pharmacology of neuromuscular blocking agents
   iii. Complications of prolonged mechanical ventilation and neuromuscular blockade +Myopathy of critical illness

6.4 Management of Fluid and Electrolyte and Acid-Base Disorders
The Anesthesiologist must demonstrate an understanding of fluid and electrolyte disturbances encountered in critical care management and their management

a) Normal distribution of total body water and electrolytes
b) Options for fluid replacement
   i. Crystalloids
   ii. Synthetic colloids
   iii. Albumin
c) Management of electrolyte abnormalities
   i. Hyponatremia
   ii. Hypernatremia
   iii. Hypokalemia
   iv. Hyperkalemia
   v. Hypocalcemia
   vi. Hypomagnesemia
   vii. Hypo and hyperphosphatemia
d) Classification of metabolic acidosis
6.5 Nutrition
The Anesthesiologist must demonstrate an understanding, but not in depth knowledge, of the nutritional needs of the critically ill patient and an approach to management thereof:

a) Options for nutritional replacement
   i. Enteral feeding
   ii. TPN
b) Estimation of resting energy expenditure – the Harris – Benedict equation

6.6 Transfusion Therapy
The Anesthesiologist must demonstrate an understanding of transfusion therapy as it applies to the critically ill patient

See Hematology

6.7 Hemodynamic Management of Shock
The Anesthesiologist must demonstrate an understanding of the various forms of shock and the management thereof

a) Pathophysiology of shock
b) Hypovolemic shock
c) Septic shock
d) Cardiogenic shock
e) Obstructive shock
   i. Pulmonary embolism
   ii. Pericardial tamponade
   iii. Tension pneumothorax
   iv. Air embolism
   v. Amniotic fluid embolism
f) Distributive shock
   i. Spinal shock
   ii. Anaphylactic shock
   iii. Systemic inflammatory response system (SIRS)
g) Fluid therapy
h) Pharmacology of and critical indications for vasopressors and inotropic therapy

6.8 Management of Hypertension
The Anesthesiologist must demonstrate an understanding of the causes and management of hypertension in the critically ill patient

a) Pharmacology of antihypertensive agents
b) Diagnosis and management of hypertensive crisis

6.9 Respiratory Failure
The Anesthesiologist must demonstrate an approach to the management of critically ill patients in respiratory failure

a) Differential diagnosis of respiratory failure
b) Acute Respiratory Distress Syndrome (ARDS)
c) Hospital acquired pneumonia
d) Chronic obstructive pulmonary disease
e) Ventilator associated pneumonia
f) Severe community acquired pneumonia
g) Management of acute asthma
h) Pulmonary hypertension
i) Thoracentesis
j) Chest tube insertion and management

6.10 Acute Coronary Syndromes
The Anesthesiologist must demonstrate an understanding of the diagnosis and management of acute coronary syndromes

a) Pharmacologic management of ACS  
b) Percutaneous coronary angioplasty and stenting  
c) Coronary artery bypass grafting  
d) Management of cardiac failure  
   i. Pharmacology  
   ii. Supportive care  
   iii. Intra-aortic balloon pump  
e) Complications of myocardial infarction  
   i. Acute mitral regurgitation  
   ii. Ventricular septal defect  
   iii. Ventricular free wall rupture  
   iv. Ventricular aneurysm  

6.11 Management of Arrhythmias and Cardiac Arrest

The Anesthesiologist must demonstrate an in depth knowledge of the ACLS protocols and an approach to the management of arrhythmias and cardiac arrest

a) ACLS guidelines for the management of:  
   i. Ventricular tachycardia, (including polymorphic VT), and ventricular fibrillation  
   ii. Asystole  
   iii. Atrial flutter and fibrillation  
   iv. Other supraventricular tachycardias  
   v. Symptomatic bradycardia  
   vi. AV block  
   vii. Wolff – Parkinson – White syndrome  
b) Principles of safe cardioversion and defibrillation  
c) Transthoracic and transvenous pacing  
d) Management of the pacemaker dependent patient, patient with ICD  
e) Management of a patient with an ICD  
f) Pharmacology of antiarrhythmic therapy  

6.12 Infectious Disease

The Anesthesiologist must demonstrate an approach to the diagnosis and management of infectious diseases in the critically ill patient

See Infectious Disease 14.2, 14.6  

6.13 Neurocritical Care

The Anesthesiologist must demonstrate an understanding of issues encountered in patients in a neurocritical care unit:

a) Management of severe head trauma and raised intracranial pressure  
b) Management of cerebrovascular accident due to ischemic stroke  
c) Intracranial hemorrhage  
d) Subarachnoid hemorrhage  
e) Status epilepticus  
f) Differential diagnosis and management of decreased level of consciousness and coma  
g) Management of agitation and delirium  
h) Guillain – Barre syndrome  
i) Spinal shock  

6.14 Pulmonary Embolism and Thromboembolic Disease

a) Diagnosis of deep vein thrombosis and pulmonary embolism  
b) Principles of prophylactic and therapeutic anticoagulant therapy  
c) Diagnosis and management of massive pulmonary embolism
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6.15 **Acute and Chronic Renal Failure**

See Renal/ Urologic 29.3

The Anesthesiologist must demonstrate an understanding of the management of the critically ill patient with renal failure:

a) Management of the critically ill patient with chronic renal failure
b) Differential diagnosis and management of acute renal failure
c) Management of rhabdomyolysis
d) Management of hyperkalemia
e) Hepatorenal syndrome
f) Principles of hemodialysis and continuous renal replacement therapy: acute vs. chronic
g) Hemodialysis, use in poisoning

6.16 **Management of Acute and Chronic Hepatic Failure**

See Hepatobiliary 12.3

The Anesthesiologist must demonstrate an understanding of the management of the critically ill patient with hepatic failure

a) Differential diagnosis and management of acute and fulminant hepatic failure
b) Indications for urgent liver transplantation
c) Management of complications of hepatic failure
   i. Cerebral edema
   ii. Hepatic encephalopathy
   iii. Coagulopathy
   iv. Ascites
   v. Spontaneous bacterial peritonitis

6.17 **Gastrointestinal Emergencies**

The Anesthesiologist must demonstrate an understanding of the management of the critically ill patient presenting with gastrointestinal emergencies

a) Differential diagnosis and management of upper and lower gastrointestinal bleeding
b) Differential diagnosis and management of peritonitis
c) Prevention and management of aspiration
d) Disorders of bowel mobility
e) Prevention of stress ulceration
f) Management of acute pancreatitis
g) Intestinal ischemia
h) Acute magacolon
i) Abdominal compartment syndrome

6.18 **Endocrine Emergencies**

The Anesthesiologist must demonstrate an understanding of the management of the critically ill patient presenting with endocrine emergencies

a) Diabetic knowledge
b) Hyperosmolar nonketotic coma
c) Thyroid storm
d) Hypothyriism and myxedema coma
e) Hypercalcemia
f) Adrenal insufficiency
g) Diabetes insipidus
h) Syndrome of inappropriate ADH
6.19 **Management of Poisoning and Drug-Related Complications**
The Anesthesiologist must demonstrate an understanding of the management of the patients after poisonings, drug overdoses and exposure to agents used in bioterrorism

a) Evaluation and supportive care of the patient with suspected poisoning
b) Salicylates
c) Methanol/ethylene glycol/isopropyl alcohol
d) Sedative agents
   i. Barbiturates
   ii. Benzodiazepines
e) Antipsychotic agents
   i. Phenothiazines
   ii. Lithium
f) Antidepressants
   i. Monoamine oxidase inhibitors
   ii. Tricyclic antidepressants
g) Acetaminophen
h) Narcotics
   i) Beta blockers
   j) Calcium channel blockers
k) Digitalis
l) Carbon monoxide
m) Organophosphate poisoning
n) Cyanide

6.20 **Drug Related Syndromes**
The Anesthesiologist must demonstrate an understanding of the diagnosis of management of idiosyncratic drug reactions including

a) Diagnosis and management of serotonin syndrome
b) Diagnosis and management of malignant hyperthermia
c) Diagnosis and management of neuroleptic malignant syndrome

6.21 **Critical care of the Trauma Patient**
The Anesthesiologist must demonstrate an in depth understanding of the management of the trauma patient including:

a) Principles of ATLS
   i. Primary survey
   ii. Secondary survey
   iii. Tertiary survey
b) Supportive care
   i. Management of hypovolemia
   ii. Management of hypothermia
   iii. Management of coagulopathy
   iv. Management of abdominal compartment syndrome
c) Evaluation and management of
   i. Blunt trauma
   ii. penetrating trauma
   iii. Crush injury
   iv. Thoracic trauma
   v. Abdominal trauma
d) Evaluation and management of neurologic trauma
   i. Head injury and raised intracranial pressure
   ii. Spinal cord injury and spinal shock
   iii. Determination of brain death
   iv. Management of the brain dead organ donor
e) Burns
f) Airway management of the trauma patient
6.22 Obstetrical Critical Care

See Obstetrics 18.10

The Anesthesiologist must demonstrate an understanding of obstetrical conditions requiring critical care management

a) Pre-eclampsia/eclampsia
b) HELLP syndrome
c) Respiratory critical care of the pregnant patient
   i. Pneumonia
   ii. ARDS
   iii. Asthma
   iv. Respiratory failure
d) Postpartum hemorrhage
   i. Amniotic fluid embolism
   ii. Abruptio placentae
   iii. Disseminated intravascular coagulation
   iv. Uterine rupture
e) Management of cardiac arrest in pregnancy
f) Thromboembolic disease in pregnancy
g) Postpartum care of the parturient with cardiovascular disease
   i. Acute coronary syndrome
   ii. Valvular heart disease
   iii. Postpartum cardiomyopathy

6.23 Postoperative Care

The Anesthesiologist must demonstrate an understanding of the management of patients requiring critical care admission after major surgical procedures including:

a) Cardiac surgery
b) Thoracic surgery
c) Vascular surgery
   i. Abdominal aortic aneurysm
   ii. Revascularization of the lower limb
   iii. Carotid endarterectomy
d) Solid organ transplant
e) Major abdominal surgery
   i. Hepatic resection
   ii. Pancreatectomy
   iii. Esophagectomy
   iv. Bowel resection
f) Fluid and electrolyte management after major surgery

6.24 Ethical Principles of Critical Care Management

The Anesthesiologist must demonstrate an understanding of ethical concerns related to management of critically ill patients

a) Patient confidentiality and privacy legislation
b) Patient autonomy
c) Principles of informed consent and decision making
d) Next of kin designation
e) End of life decision making
f) Organ procurement for transplantation
g) Management and review of adverse events
h) Communication with families in crisis
i) Cultural aspects of Critical Care

6.25 Principles of Crisis Management and Team Leadership
The Anesthesiologist must demonstrate an understanding of crisis resource management and team leadership in critical situations.

a) Leadership
b) Resource assessment and allocation
c) Situational awareness
d) Communication and collaboration during a crisis
7 Ear, Nose and Throat Surgery

See Airway 1

The competent Anesthesiologist shall demonstrate advanced knowledge and clinical proficiency in all the objectives listed below.

7.1 General ENT Considerations:
He/she must demonstrate knowledge of the general considerations for providing anesthetics for ENT procedures. He/she must be able to communicate closely with the surgeon and operating room personnel regarding perioperative airway management concerns including:

a) Preoperative Patient Concerns
   i. Co-morbid conditions (e.g. smoking, COPD, alcohol, cancer)
   ii. Spectrum of patients, Pediatric to elderly
b) Airway Anatomy – See Airway 1.1
c) Shared and Remote Airway Considerations
   i. Implications of limited physical and visual access during anesthetic
   ii. Specialized endotracheal tubes to facilitate surgical access
   iii. Vigilance against airway disconnections and kinking during surgical manoeuvres
   iv. Occult bleeding into the airway during surgery
   v. Throat packs
   vi. Use of nitrous oxide and muscle relaxants
d) Difficult Airway
   i. Implications of presenting disease process
      • Tumours and mass effects
      • Post surgical or irradiation scarring
      • Congenital deformities
      • Foreign bodies
      • Trauma
      • Infections, abscesses
   ii. Considerations for appropriate endotracheal tube type, size and placement
      • Microlaryngoscopy tubes
      • Laser tubes
      • Nasal versus oral intubation
      • Oral and nasal RAE tubes
   iii. Control of ventilation and oxygenation
      • Awake airway control
      • Intravenous versus inhalation induction
      • Other options – surgery under local anesthetic
   iv. Emergence and extubation strategies
      • Re-examination of airway for bleeding/clots
      • Deep extubation versus awake extubation
      • Consideration of throat packs, nasal packing

7.2 Endoscopy and Airway Infections
He/she must demonstrate understanding of the anesthetic concerns and goals for endoscopy, with proficient evaluation and management of the patient. He/she must also be able to manage patients presenting with acute infections that threaten airway patency, including epiglottitis and abscesses.

a) Considerations of presenting complaints
   i. Hoarseness, stridor, hemoptysis
   ii. Foreign body aspiration
   iii. Airway trauma
   iv. Papillomatosis
   v. Tumours
vi. Stenosis  
vii. Vocal cord problems  

b) Procedural considerations  
i. Biopsies, bleeding, obstruction  
ii. Lasers  
iii. Positioning  
iv. Intubation and ventilation challenges  
   • Awake intubation, inhalation versus intravenous inductions  
v. Jet ventilation  
vi. Rigid versus flexible endoscope  

7.3 Nasal Cavity Search  
He/she must demonstrate an understanding of the considerations for nasal cavity surgery, and demonstrate expertise in managing these cases  
a) Considerations of presenting complaints  
i. Nasal obstruction, polyps, infections  
ii. Associated problems, e.g. Asthma, allergies, cystic fibrosis  
iii. Epistaxis – trauma, coagulopathy, hemodynamic stability  
b) Procedural considerations  
i. Use of vasoconstrictors  
   • Cocaine, alternatives to cocaine e.g. phenylephrine, oxymetazoline  
ii. Throat packs  
iii. Occult blood loss  
iv. Patient immobility vs. Short case lengths  
v. Post-op nasal packing, bleeding, positioning  

7.4 Laser Surgery of the Upper Airway  
He/she must be able to demonstrate advanced knowledge and practical skills in dealing with laser surgery cases  
a) Basic laser science  
i. Types of surgical lasers and indications  
   • Short wavelength lasers  
   • Infrared lasers  
b) Safety considerations  
i. Protection of patient and personnel  
   • Eye protection  
   • Skin protection  
ii. Airway fires  
   • Prevention strategies  
      ○ Surgeon techniques  
      ○ Gas mix  
      ○ ETT modifications  
iii. Fire management protocol  

7.5 Tonsillectomy and Adenoidectomy  
He/she must possess a sound understanding of the concerns for and management of tonsil and adenoid surgery, particularly in the pediatric patient  
a) Indications and pre-operative evaluation  
i. Chronic/recurrent upper respiratory tract infection  
ii. Pediatric obstructive sleep apnea  
   • Adenotonsillar hypertrophy  
iii. Bleeding dyscrasias  
iv. Loose teeth  
b) Procedural considerations  
i. Induction and maintenance technique  
ii. ETT, NTT, LMA
iii. Deep extubation vs. awake extubation
iv. Airway toilet
v. Re-operation for bleeding after adenotonsillectomy
   • Chronology of bleeding
   • Coagulopathy
   • Full stomach
   • Airway difficulty
   • Hemodynamic stability, blood loss
vi. Role of NSAIDs
vii. Postoperative nausea and vomiting and the use of antiemetic agents

7.6 **Major Head and Neck Cancer Surgery**

He/she must demonstrate an understanding of the anesthetic considerations of major head and neck surgery, with appropriate expertise to manage these cases

a) Patient condition/comorbidities/optimization
   i. Smoking, COPD, alcohol
   ii. Elderly, malnutrition
   iii. Cardiovascular disease
   iv. Prior irradiation, chemotherapy

b) Airway patency or compromise
   i. Tumour mass effects
   ii. Indirect nasopharyngoscopy
   iii. Stridor, hoarseness, airway bleeding
   iv. Edema, inflammation, fibrosis

c) Intra-operative management
   i. Consideration for awake tracheotomy
   ii. Monitoring
      • Invasive monitoring
      • Post-operative monitoring
      • Nerve identification by surgeon
      • Avoidance of muscle relaxation
   iii. Case length
      • Temperature control
      • Blood loss considerations
   iv. Hemodynamic instability
      • Surgical stimulation of carotid sinus, stellate ganglion
   v. Free flap considerations
      • Avoidance of vasoconstrictors
      • Temperature control

7.7 **Tracheostomy**

He/she must demonstrate an understanding of the pathological processes necessitating tracheotomy, and provide expert anesthetic management of the patient with or undergoing tracheotomy

a) Indications for:
   i. Emergent tracheotomy for airway obstruction
      • Epiglottitis
      • Upper airway tumours
   ii. Elective tracheostomy
      • For pulmonary toilet
         o Prolonged orotracheal intubation
      • During major head and neck cancer surgery
      • Chronic ventilatory failure

b) Anesthetic options for emergency tracheostomy
   i. Awake tracheostomy under local anesthetic
ii. General anesthetic
   - Awake fibreoptic intubation
iii. Management of loss of tracheostomy with fresh stoma

c) Trans-tracheal intubation
   i. Patient with pre-existing tracheal stoma

7.8 Surgery for Obstructive Sleep Apnea
He/she must demonstrate knowledge of the pathophysiological changes resulting from obstructive sleep apnea and their implications for perioperative anesthetic management for all types of surgical procedures. He/she must be able to provide expert clinical care for the patient with sleep apnea presenting for corrective surgery, with recognition of the following considerations:

a) Diagnosis of obstructive sleep apnea
   i. Presumptive indicators in patient history and physical exam
   ii. Definitive indicators and severity classification from formal sleep studies

b) Physiological derangements
   i. Cardiopulmonary
      - Ischemic changes, arrhythmias, pulmonary and systemic hypertension
   ii. Behavioural
      - Somnolence, cognition
   iii. Sensitivity to respiratory depressants

c) Management of the obstructive sleep apnea patient
   i. Intraoperative
      - Intubation, extubation, and airway management considerations
   ii. Post-operative considerations
      - Ongoing need for CPAP or BiPAP mask

7.9 Ear Surgery
He/she must demonstrate an understanding of the considerations for various surgeries on the external and internal ear structures. He/she must demonstrate expertise in the care of patients presenting for ear surgery.

a) Anesthetic considerations
   i. Variety of procedures
      - Myringotomy
      - Myringoplasty, tympanoplasty
      - Mastoidectomy
   ii. Identification/preservation of facial nerve
      - Monitoring
   iii. Nitrous oxide, muscle relaxants
   iv. Positioning
   v. Post-operative nausea and vomiting
8 Endocrinology

8.1 Pancreatic disorders: diabetes mellitus
The Anesthesiologist must demonstrate knowledge with respect to the types of Diabetes Mellitus, the treatment regimens and anticipated complications. He/she must demonstrate an approach to:

a) The evaluation of the diabetic patient, including the associated complications, and an approach to a treatment plan to obtain adequate metabolic control in the perioperative period
b) He/she must demonstrate an ability to establish a perioperative preparation protocol in relation to the type and severity of diabetes mellitus and the anticipated surgical procedures
c) He/she must be able to describe the implications of tight perioperative glucose level control on patient outcome

Acute problems:

The Anesthesiologist must demonstrate knowledge regarding the pathophysiology and management of acute emergencies related to DM including ketoacidosis and hyperosmolar coma.

8.2 Thyroid Dysfunction: Hypo and Hyperthyroidism
The Anesthesiologist must demonstrate knowledge regarding the pathophysiology and clinical manifestations of hyper and hypothyroidism and the effects on anesthetic management

He/she must demonstrate an approach to evaluation and management of the patient with thyroid dysfunction including effects of therapy.

Acute problems:

He/she must be able to describe the pathophysiology of thyroid storm and myxedema coma, their clinical manifestations and the treatment modalities

8.3 Parathyroid Dysfunction: Hypo and Hyperparathyroidism
The Anesthesiologist must demonstrate knowledge with respect to:

a) The evaluation of parathyroid gland function with respect to calcium metabolism and the treatment modalities used to ensure normocalcemia
b) The anesthetic considerations of patients with parathyroid dysfunction

He/she must be able to describe the pathophysiology of hypo and hyper-calcemic states, their clinical manifestations and the treatment of these conditions.

8.4 Adrenal Dysfunction
The Anesthesiologist must demonstrate an understanding of the physiology of the adrenal cortex and medulla and the implications of acute and chronic adrenal dysfunction in the perioperative period as manifested by:

a) Pheochromocytoma: pathophysiology, clinical manifestations, preoperative preparation and perioperative management
b) Cushing syndrome: Etiology, pathophysiology, clinical manifestations and perioperative management
c) Adrenal insufficiency: Etiology of primary and secondary Addison’s disease. Preoperative evaluation and management of patients with suppression of the pituitary axis due to long term steroid use
d) Acute adrenal crisis: Diagnosis and Management

He/she must demonstrate an understanding of the management of the patient receiving corticosteroid therapy presenting for anesthesia and surgery.

8.5 Posterior Pituitary Dysfunction: SIADH and Diabetes Insipidus
The anesthesiologist must demonstrate knowledge of the normal pituitary function and evaluation of the patient with Posterior pituitary dysfunction including the pathophysiology, differential diagnosis, treatment, and anesthetic considerations of SIADH and diabetes insipidus.

8.6 **Anterior Pituitary Dysfunction: Panhypopituitarism and Acromegaly**

The Anesthesiologist must demonstrate knowledge of the pathophysiology, clinical manifestations and treatment of acute and chronic panhypopituitarism. He/she must demonstrate an understanding of the pathophysiology, clinical presentation and treatment of the acromegalic patient. He/she must describe the anesthetic considerations for patients with acromegaly.

8.7 **Carcinoid Syndrome**

The Anesthesiologist must be able to list the clinical manifestations of carcinoid syndrome and the anesthetic considerations arising from them.
9 Ethics

In Anesthesiology, as in most areas of medical education, ethics falls into two separate areas. First there is the intellectual knowledge of the theories, principles, and concepts of ethics and the understanding of how they can be used to recognize and deal with the ethical issues that arise daily in practice. Second, there is a set of behaviours that are expected in physicians. In exhibiting these behaviours and linked qualities physicians are described as behaving professionally and they are said to be professional. Competencies arising from these two areas – ethical analysis and ethical behaviour – need to be considered, taught and, most importantly, evaluated separately. Ethical competencies can be usefully considered in all of the CanMEDS roles, not just in Professionalism although many are best considered there. The consultant anesthesiologist must demonstrate an understanding of ethical principles as they apply to the clinical practice:

a) Know the major ethical theories, perspectives and principals
   i. Theories; Deontological, Teleological
   ii. Perspectives: duty, virtue, principles, utilitarian/consequentialist, feminist, communitarian
   iii. Principles
   iv. Georgetown four: beneficence, Non-maleficence, Respect for Persons, (Autonomy,) Justice
   v. Know that there are others: truth-telling, promise-keeping, not killing

b) Recognize that there are ethical components in decisions doctors need to make every day; ethics is not just found in the “hard choices”

c) Demands for inappropriate care/ineffective therapy
   i. Understand the concept of “futility”; when it may apply, its hazards
   ii. Who decides goals of care?

d) End of Life Care

e) With-holding v withdrawing care (no ethical difference)

f) The concept of brain death and its diagnosis
   i. Organ donation
   ii. DCD: donation after Cardiac Death

g) Understand the ethical basis and use of the principle of informed choice
   i. Consent/Refusal
   ii. Jehovah’s Witnesses

h) Know how to assess Capacity, know the regulations and principles governing Substitute Decision Makers (for relevant Province)

i) Understand the effect of difference in value systems
   i. Religious, cultural, ethnic
   ii. Have ways to deal with difference

j) Recognize and respect Diversity
   i. Gender, religious, cultural, ethnic, sexual, age, disability (mental & physical)

k) Respect privacy & confidentiality and know the difference
   i. Occasions when confidentiality is commonly at risk
   ii. Occasions when confidentiality is legitimately breached
   iii. Statutory reporting, harm to self & others

l) Truth Telling
   i. Disclosure of diagnosis/Breaking bad news
   ii. Disclosure of error

m) The patient with a DNR order coming to the OR
10 Geriatrics
The competent Anesthesiologist must demonstrate knowledge of the physiologic, pharmacologic and pathologic changes accompanying the aging process. He/she must demonstrate knowledge of the impact that these changes have on the safe anesthetic management of the elderly patient.

Goals & Objective

10.1 Physiology and Pathophysiology in the Geriatric Patient
The Anesthesiologist must demonstrate an understanding of the following issues related to the geriatric population compared to non-geriatric adults, regarding

- Anatomic changes
- Physiologic changes
- Anesthetic considerations

a) Central Nervous System
b) Autonomic Nervous System
c) Cardiovascular System
d) Respiratory System
e) Gastrointestinal System
f) Renal System
g) Hepatic System
h) Musculoskeletal
i) Thermoregulation
j) Hematologic System

Preoperative Evaluation/Assessment of the Geriatric Patient

10.2 Perioperative management
The Anesthesiologist must demonstrate an ability to evaluate and prepare the geriatric patient for anesthesia.

a) Comorbidities and the Geriatric Patient
   i. Elicit appropriate history and perform physical examination of the elderly patient to identify existing comorbid conditions
   ii. Obtain appropriate investigations and consultation for optimizing elderly patient prior to surgery
   iii. Demonstrate knowledge of pre-existing comorbidities of body systems and the impact they have in the safe anesthesia management of the elderly patient
b) Preoperative Testing
   i. Demonstrate appropriate rationale, selection and use of ancillary testing based on planned surgical procedure and patient health status
   ii. Demonstrate appropriate knowledge in interpretation of diagnostic tests

10.3 Pharmacology and the Geriatric Patient

10.3.1 Pharmacodynamics
The competent Anesthesiologist will be able to demonstrate a knowledge of differences in pharmacokinetics in the elderly patient based upon differences in:

a) Absorption
b) Distribution
c) Metabolism
d) Excretion
10.3.2 Pharmacokinetics

The competent Anesthesiologist will be able to, specifically, describe changes in the pharmacodynamics, pharmacokinetics, rationale for selection and appropriate use of agents routinely used in anesthesia practice including, but not limited to:

a) Intravenous induction agents  
b) Muscle relaxants  
c) Opioids  
d) Benzodiazepines  
e) Volatile agents including nitrous oxide  
f) Local anesthetics

10.4 Anesthesia and the Geriatric Patient

The Anesthesiologist must demonstrate an ability to provide perioperative care for geriatric patients by being able to discuss evidence related to choice of anesthesia technique and post operative outcome in this patient population

a) General Anesthesia in the Geriatric Patient
   i. Discuss the physiologic effects of general anesthesia in the elderly patient  
   ii. Discuss indications, contraindications and risks associated with the use of general anesthesia specific to the elderly  
   iii. Provide safe, competent general anesthesia for all major and minor surgical procedures

b) Regional Anesthesia in the Geriatric Patient

   See Regional

   Describe the alterations in anatomy, physiology, pharmacology and complications specific to the geriatric patient of the following techniques:

   i. Epidural Anesthesia  
   ii. Spinal Anesthesia  
   iii. Head and neck blocks  
   iv. Upper extremity blocks  
   v. Lower extremity blocks

10.5 Perioperative Complications in the Geriatric Patient

The Anesthesiologist must demonstrate an understanding of the potential complications related to anesthetizing geriatric patients. Discuss the:

- risk factors contributing
- strategies to minimize
- investigation and management

Of the following conditions:

a) Post operative cognitive dysfunction/Post operative delirium  
b) Cardiovascular complications  
c) Respiratory complications  
d) Hepatic complications  
e) Renal complications

10.6 Post Operative Pain Management in the Geriatric Patient

The Anesthesiologist must demonstrate an ability to provide effective pain management in geriatric patients
a) Discuss the importance of post operative pain management in this patient population
b) Discuss risk, benefits and complications of various routes, agents and modalities for delivery of agents for post operative pain management

10.7 Post Operative Recovery and the Geriatric Patient

The Anesthesiologist must demonstrate an ability to anticipate and deal with postoperative recovery of management to geriatric patients.

a) Discuss age-related impediments to recovery of preoperative function and independence
b) Advocate on behalf of patients with respect to postoperative recovery of function and independence
11 Hematology
The anesthesiologist must demonstrate knowledge of the following:

11.1 Physiology of oxygen transport:

i. physiology of oxygen delivery and oxygen consumption
ii. physiologic adaptive responses to (euvoletic) anemia
iii. impaired oxygen delivery
iv. clinical and laboratory indicators of shock
v. understand the concepts of VO2 for tissue metabolic processes, DO2, oxygen, extraction ratio, DO2 crit (critical threshold of oxygen delivery)
vi. be able to calculate arterial oxygen content

The competent anesthesiologist will demonstrate knowledge of the pathophysiology, clinical presentation, laboratory investigation, and perioperative management of patients with the following conditions:

*In collaboration with a haematologist. In emergency situations, there may not be sufficient time for this collaboration to occur, in which case the consultant anesthesiologist will be expected to manage such patients independently.

11.2 Hemoglobinopathies

a) Methemoglobin, including precipitation by some pharmacologic agents (nitric oxide, nitroglycerine, nitroprusside), and pharmacology of methylene blue.
b) Sulfhemaglobin
c) Carboxyhemoglobin
d) Anemias
   i. Acute blood loss: predict increased risk of acute blood loss, clinical signs of acute blood loss, perioperative management, strategies to minimize blood loss
   ii. Management of the patient who refuses transfusions of blood products
   iii. Chronic blood loss/anemia secondary to deficiency of iron, B12, folic acid
   iv. Anemia of chronic disease, anemia of chronic renal failure, aplastic anemia, anemia associated with liver failure
   v. Hemolytic anemias including
      • Congenital spheroeytosis *
      • G6PD deficiency *
      • Immune haemolytic anemias (eg. Drug-induced, hypersplenism)*
      • Sickle cell disease *, including prevention, end organ complications and pain management
      • Mechanical etiologies (eg. Mechanical heart valve) *
      • Thalassemias *
e) Polycythemia
   i. primary polycythemias
   ii. secondary to hypoxemia

11.3 Physiology of Normal Hemostasis

a) role of vasculature
b) platelets (adhesion, activation, aggregation, and various factors involved with platelet function)
c) protein coagulation factors
d) physiologic mechanisms to limit the coagulation: Antithrombin, Tissue Factor Pathway Inhibitor, Protein C and Protein S, and the fibrinolytic system
e) alterations seen in the normal postoperative period (and the effect on postoperative DVT), normal pregnancy, the newborn, trauma, sepsis, shock and cancer
f) laboratory to assess the coagulation system
g) laboratory monitoring of the various pharmacological agents
h) minimum acceptable levels for laboratory testing to allow for normal surgical hemostasis, provision of spinal and epidural anesthesia (platelet count, factor levels, INR, fibrinogen level).
11.4 **Pharmacology: Anticoagulants/Antifibrinolytics**

a) pharmacodynamics (mechanism of action)
b) pharmacokinetics (dose, clinical duration of action, etc.)
c) clinical pharmacology (indications, side effects, complications and contraindications).
d) understanding of the impact on INR, PTT, TT, fibrinogen level, fibrin degradation products.
e) Perioperative use of
   i. Protamine
   ii. vitamin K
   iii. desmopressin (DDAVP)
   iv. recombinant activated Factor VII (rFVIIa).
f) Perioperative management of anticoagulant or antiplatelet agents;
   i. Coumadin
   ii. heparin (both unfractioned and low molecular weight)
   iii. agents used as alternatives to patients who have a history of heparin induced thrombocytopenia
   iv. platelet inhibitors such as cyclooxygenase inhibitors (e.g. ASA, NSAIDS)
   v. ADP inhibitors (e.g. Clopidogrel, ticlid)
   vi. glycoprotein IIb IIIA inhibitors (e.g. Abciximab)
   vii. phosphodiesterase inhibitors (e.g. Persantine)
   viii. anti-fibrinolytic agents (e.g. aminocaproic acid, tranexamic acid, aprotinin).

The competent anesthesiologist will demonstrate knowledge of the pathophysiology, clinical presentation, laboratory investigation, and perioperative management of patients with the following conditions:

*In collaboration with a haematologist. In emergency situations, there may not be sufficient time for this collaboration to occur, in which case the consultant anesthesiologist will be expected to manage such patients independently.

11.5 **Disorders of Coagulation**

a) Congenital “bleeders”
   i. Hemophilia A*
   ii. Hemophilia B*
   iii. Von Willebrand’s disease *

b) Congenital “clotters”
   i. Protein C deficiency *
   ii. Protein S deficiency *
   iii. Antithrombin deficiency *
   iv. Other thrombophilias *

c) Acquired “bleeders”
   i. Effects of anticoagulant drugs or antiplatelet drugs
   ii. Dilutional thrombocytopenia or dilution of procoagulants
   iii. DIC
   iv. Liver disease
   v. Massive blood transfusion (see transfusion medicine)
   vi. Hypothermia
   vii. Thrombocytopenia due to PIH, drug-induced, ITP, etc
   viii. Effects of extracorporeal circulation
   ix. Sepsis

d) Acquired “clotters”
   i. Heparin-induced thrombocytopenia *
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ii. TTP *
iii. Antiphospholipid Antibody Syndrome *

e) Hematologic Emergencies

i. New diagnosis of acute leukemia (blast crisis) especially acute promyelocytic leukemia
ii. TTP
iii. hyperviscosity syndrome
iv. acute thrombosis
v. acquired hemophilia

11.6 Blood Products
Regarding the following blood products:

- RBC
- Frozen Plasma (FP)
- Prothrombin Complex Concentration (PCC) (Octaplex)
- Platelets
- Cryoprecipitate

The competent anesthesiologist will understand the following:

a) Indications
b) Physiology
c) Risks
d) Benefits
e) Management of complications,
   i. febrile reactions
   ii. allergic reactions
   iii. volume overload
   iv. transfusion-related acute lung injury (TRALI)
   v. acute and delayed haemolytic reactions
   vi. sepsis
   vii. coagulopathy
   viii. electrolyte disturbances
   ix. hypothermia
   x. transfusion-associated graft vs. host disease (TA-GVHD)
   xi. immune-related effects
   xii. transfusion-transmitted diseases (hepatitis B and C, HIV etc)
   xiii. effect of age of stored RBC’s
   xiv. Effect on 2-3 DPG
f) administration of the following blood products, including:
   i. informed consent
   ii. identification and verification of both the patient and the blood product
   iii. preparation and administration of the blood product (including the safe use of diluents, filters and filter size, blood administration sets, iv cannula size, and blood warmers including rapid infusion devices)
   iv. documentation

11.7 Blood banking
The consultant anesthesiologist is expected to have a working knowledge of blood bank procedures

a) Clerical procedures
b) Serologic procedures
   i. uncrossmatched (emergency release) RBC’s
   ii. type-specific uncrossmatched RBC’s
   iii. computer assisted and serological crossmatches
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iv. type and screen
v. frozen plasma
vi. platelets
vii. cryoprecipitate
viii. antibody investigation.

11.8 **Reduction of use of Homologous Blood Products:**
The consultant anesthesiologist is expected to have working knowledge of:

a) methods used to reduce blood loss
   i. patient position
   ii. controlled hypotension (including the physiology, indications, contraindications, and technique, including the pharmacologic agent(s) used)
   iii. regional anesthesia
   iv. pharmacologic agents (eg antifibrinolytic agents, role of recombinant activated Factor VII (rFVIIa).

b) alternatives to blood products and their risks and benefits

c) Use of crystalloids

d) Use of colloids
   i. physiologic effects of colloids in comparison to crystalloids
   ii. understand the crystalloid/colloid controversy
   iii. compare starch vs. albumen

e) Management the patient (preoperative discussion, intraoperative and postoperative management) who refuses blood products for religious or other reasons

f) Calculate “allowable blood loss”

g) Demonstrate working knowledge of
   i. preoperative autologous donation (PAD)
   ii. directed donation
   iii. haemoglobin-based oxygen carriers, and perfluorocarbon emulsions
   iv. erythropoietin therapy
   v. Acute normovolemic hemodilution
   vi. perioperative RBC salvage and autotransfusion (including indications, contraindications, complications and technique).
12 Hepatobiliary
The Anesthesiologist must demonstrate knowledge of the anatomy and physiology of the hepatic system

12.1 Anatomy and Physiology of the Liver and Biliary Tract

a) Functional anatomy
b) Blood supply/control of hepatic blood flow
c) Physiologic functions of the liver
   i. Glucose homeostasis
   ii. Fat metabolism
   iii. Protein synthesis: drug binding/coagulation/ester linkages hydrolysis
   iv. Drug and hormone metabolism
   v. Bilirubin formation and excretion
d) Effect of anesthesia on hepatic function

12.2 Liver function tests: listing and interpretation
The Anesthesiologist must demonstrate knowledge of the pharmacology relevant to the hepatic system

a) Pharmacokinetics and pharmacodynamics
b) Knowledge of mechanisms of hepatic drug elimination:
   i. Changes in hepatic blood flow
   ii. Ability to biotransform (intrinsic clearance)
   iii. Changes in binding of drugs; biotransformation
   iv. Bile excretion
c) Knowledge of altered response to drugs in cirrhotic patient
d) Knowledge of possible hepatotoxic drugs

12.3 Pathophysiology

The Anesthesiologist must demonstrate knowledge of:

a) Postoperative hepatic dysfunction:
   i. Differential diagnosis
   ii. Approach to determine etiology
b) Pre-, intra-, and post-hepatic dysfunction.
c) Halothane hepatitis
d) Viral Hepatitis
   i. Types
   ii. Transmission
   iii. Course
   iv. Prevention
   v. Hazards to healthcare providers
e) Other forms of hepatitis and the implications thereof:
   i. Alcoholic
   ii. Other drugs/toxins
   iii. Infection – non – viral hepatitis
   iv. Autoimmune
f) Liver failure/ End stage liver disease
   i. Etiologies
ii. Child’s classification for preoperative prediction of surgical risk
iii. Complications (systemic review)
iv. Anesthetic management
g) Anesthetic management for acute or chronic alcoholism
h) Anesthetic management for a patient with a previous liver transplant

12.4 **Anesthesia for Hepatobiliary Procedures**
The competent Anesthesiologist must demonstrate knowledge and understanding of anesthesia and the hepatic system. He/she must demonstrate knowledge of the pathology that can alter normal hepatobiliary physiology and the non-physiologic insults to which patients might be subjected during hepatobiliary procedures. This will help the anesthesiologist optimize preoperative preparation, intra-operative anesthetic management and post-anesthetic care of these patients.

The competent Anesthesiologist must be able to demonstrate understanding of the considerations of, and to independently provide anesthetic care for patients presenting for the following procedures:

a) Cholecystectomy: open and laparoscopic
b) Endoscopic biliary tract procedures
c) Pancreatic resection
d) Biliary duct reconstruction
e) Whipples’ procedure
f) Liver resections
g) Liver donation
h) T.I.P.S. procedure
i) Liver transplant
13 Immunology and Rheumatology

13.1 Physiology
The consultant anesthesiologist is expected to understand basic physiology of the immune system, including the following:

a) Cellular immunity, roles of T-lymphocytes (helper T-lymphocytes, suppressor T-lymphocytes, cytotoxic T-lymphocytes
b) Cell-mediated immunity, its role in rejection of transplanted organs
c) Autoimmune diseases
d) Humoral immunity, role of B-lymphocytes, plasma cells, types of antibodies, antigens, allergens and IgE antibodies
e) The complement system, the two pathways of activation (classic or immunologic pathway and alternative or non-immunologic pathway), their roles in antigen-antibody activation, autoimmune diseases, and bacterial infections, and the production of C2a and C5a
f) The four types of hypersensitivity (allergic) responses (type I to type IV reactions

13.2 Immunological Diseases
The specialist anesthesiologist shall be able, in collaboration with the appropriate consultant (time permitting), demonstrating an ability to manage the patient with the following disorders presenting for surgical or obstetric management:

a) Hereditary angioedema in C1 esterase inhibitor protein deficiency
b) Congenital and acquired immunodeficiency states
   i. HIV/ AIDS
c) Selective IgA deficiency and anaphylaxis associated with blood transfusions
d) Cold autoimmune diseases: (eg. cryoglobulinemia, cold Hemaglutinin disease, paroxysmal cold hemoglobinuria)
e) Amyloidosis

13.3 Autoimmune disease
The specialist anesthesiologist shall be able, in collaboration with the appropriate consultant (time permitting), to manage the patient with the following autoimmune disorders presenting for surgical or obstetric management. The consultant anesthesiologist shall be well-versed on the anesthetic considerations of the individual autoimmune diseases

a) Organ-specific autoimmune diseases
   i. Type 1 diabetes mellitus
   ii. Myasthenia gravis
   iii. Grave’s disease
   iv. Addison’s disease
   v. Autoimmune haemolytic anemia
b) Systemic autoimmune diseases
   i. Rheumatoid arthritis
   ii. Rheumatic fever
   iii. Ankylosing spondylitis
   iv. Systemic lupus erythematosus
   v. Scleroderma
   vi. IgA deficiency
   vii. Sarcoidosis

13.4 Pre-existing Allergies
For the following conditions, the specialist anesthesiologist shall demonstrate an understanding of:

• Pathophysiology
• Clinical manifestations
• Investigation
• Management
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a) Protamine allergy
b) Latex allergy
c) Metabisulfite allergy
d) Volatile agent allergic hepatitis
e) Transfusion reaction
f) Intravenous contrast media allergy
g) Food allergies associated with drug or medical substance allergies
   i. Eggs/ propofol
   ii. Banana/ kiwi /latex
   iii. Fish/ protamine
   iv. Shellfish/ iodine prep
h) Drug reactions, distinguished from non-allergic adverse drug side effect (drug toxicity from a drug level above a therapeutic range, drug-drug interaction, idiosyncratic non-allergic drug effect (eg. genetic deficiency of an enzyme)
   i. Anaphylaxis
   ii. Drug-induced release of histamine (anaphylactoid)
   iii. Activation of the complement system

13.5 **Transplantation: (covered in Transplantation section)**
See Transplantation 33

13.6 **Systemic Inflammatory Response Syndrome (SIRS)**
The consultant anesthesiologist shall have an understanding of the SIRS and its role in multi-organ failure in the critically-ill patient. The consultant anesthesiologist shall be able to assess such patients presenting for surgical core.

13.7 **Rheumatology/Connective Tissue Disorders**
The Anesthesiologist must demonstrate knowledge of the pathophysiology, clinical presentation, natural history, treatment modalities and multisystemic implications of the connective tissue disorders. He/she must demonstrate an understanding of the anesthetic considerations of the following diseases:

a) Epidermolysis bullosa
b) Scleroderma
c) Systemic lupus erythematosus
d) Rheumatoid arthritis
e) Ankylosing spondylitis
f) Marfan syndrome
14 Infectious Diseases

14.1 Prevention of Infection
The anesthesiologist must be able to describe the measures necessary for the prevention of infections including:

a) Mechanism of transmission of selected infectious diseases; tuberculosis, MRSA, C difficile, viral hepatitis
b) Isolation measures
   i. Universal precautions
   ii. Droplet precautions
   iii. Airborne precautions
c) Effect of tracheal intubation on the development of infectious complications
d) Aseptic technique
e) Management of needle stick injuries

14.2 Infectious Syndromes
The anesthesiologist must demonstrate knowledge regarding:

a) Infections syndromes leading to uni or multi-systemic decompensation, including the differential diagnosis and treatment modalities
   a) Participate in the treatment of a patient in septic shock
   b) Infection in the immunocompromised host
   c) Pathophysiology of sepsis and multiorgan failure
   d) Infection in solid organ and marrow transplant patients
   e) Community acquired infection
      i. Community acquired pneumonia
      ii. Meningitis and encephalitis
      iii. Genitor-urinary sepsis
      iv. Intra-abdominal sepsis
         • Perforated viscus
         • Cholecystitis and ascending cholangitis
         • Pancreatitis
         • Spontaneous bacterial peritonitis
      v. Soft tissue infection – severe cellulitis and necrotizing fasciitis
      vi. Head and neck infection
          • Epiglottitis
          • Ludwig’s angina
      vii. Bacterial endocarditis
   f) Prevention and management of nosocomial infection
      i. Line-related bloodstream infection
      ii. Clostridia difficile colitis
      iii. Hospital acquired pneumonia
   a) Clostridial myonecrosis
   b) Tetanus
   c) Toxic shock syndrome
   d) Infections with group A streptococci
   e) Herpes zoster (see pain management objectives)

14.3 Patients with Immunodeficiency Syndromes
The anesthesiologist must demonstrate knowledge of the problems related to, and anesthetic considerations of immunodeficiency related to:

i. AIDS
ii. Chemotherapy
iii. Transplantation

14.4 Antibiotic Prophylaxis
The anesthesiologist must demonstrate an understanding of the rationale behind surgical antibiotic prophylaxis for wound infection. He/she must demonstrate knowledge of the indications and considerations for the prevention of endocarditis and be able to administer the appropriate doses of the antibiotics indicated.

14.5 Upper Respiratory Tract Infections
The anesthesiologist must demonstrate knowledge of the issues related to the management of patients with current or recent upper respiratory tract infections.

14.6 Pharmacology

a) Pharmacology, spectrum, and complications of antibacterial, antiviral and antifungal therapy
b) Major anti-infectious agents
   i. Indications
   ii. Complications related to their use (toxicity, superinfection)
   iii. Microbiological techniques used to make adjustment to therapy (dosage, culture)
c) Explain the role of the different treatment modalities for the management of a patient with septic shock (support treatment, antibiotics, surgery, protein C, activated, etc.)
15 Monitoring and Equipment

The competent Anesthesiologist shall demonstrate an understanding of the principles of monitoring as they apply to perioperative care including knowledge of the CAS guidelines for perioperative monitoring:

15.1 Monitoring
The competent Anesthesiologist shall demonstrate an understanding of the principles of monitoring as they apply to perioperative care including knowledge of the CAS guidelines for perioperative monitoring

15.1.1 Pressure Measurement
The Anesthesiologist must demonstrate an understanding of principles of measurement

a) Principles of Measurement
   i. Know the definitions of the various units (joules, kilopascals) commonly used in Anesthesia
   ii. Describe how most anesthesia monitors measure force (Newton’s 2nd Law)

b) Static Pressure Measurement
   i. Know the principle of measuring static columns of fluid (CVP)
   ii. Know the definition of 1 atmosphere of pressure

c) Dynamic Pressure Management
   i. Be knowledgeable about how modern pressure transducers work
   ii. Be able to describe the effects of compliance in these systems
   iii. Be able to describe the characteristics of the pressure versus time waveform in clinical practice

d) Signal-Processed Pressure Monitor
   i. Non-invasive blood pressure monitor
   ii. Be able to describe how a NIBP cuff works (how systolic, MAP and diastolic pressure are determined)
   iii. Describe the different false readings associated with NIBP

15.1.2 Flow Measurement
The Anesthesiologist must demonstrate an understanding of the principles behind flow measurement

a) Principles of Flow
   i. Be able to describe the differences between flow and velocity
   ii. Be able to describe the relationship between pressure and flow
   iii. Describe the different forces that can act on fluids (gravity, pressure gradient, and viscous force/friction)
   iv. Be knowledgeable about the Bernoulli equation and its relevance in anesthesia
   v. Be knowledgeable about the relevance of the Reynold’s number in anesthesia

b) Mass/Volume Flow Meters
   i. Know how cardiac output is measured using thermodilution and the potential errors associated with it

c) Velocity/Flow Measurements
   i. Know how pilot tubes are used in anesthetic monitors
   ii. Know how a venturi tube works and its relationship to the Bernoulli equation

d) Balance-of-Pressure Flow Meters
   i. Describe how the Thorpe and Bourdon flowmeters work and their applications in everyday anesthetic practice

15.1.3 Sound Measurement
The Anesthesiologist must demonstrate an understanding of principles of sound measurement and its’ application to monitoring:

a) Principles of Sound
   i. Describe how Doppler ultrasound works
   ii. Describe what sound waves are and how they travel

b) Passive – Stethoscope
   i. Describe how different clinical conditions create different sounds heard using the stethoscope
   ii. Describe the basic components of a stethoscope

c) Active – Echo, Doppler
   i. Be knowledgeable about the principles and physics of TEE
   ii. Be knowledgeable about the principles and physics of Doppler
iii. Be able to describe the principles and features of ultrasound and its use in vascular access and nerve localization

15.1.4 Electricity
The Anesthesiologist must demonstrate an understanding of principles of the use of electricity in monitoring and the principles of electrical safety. He/she must:

a) Know the differences between AC and DC current  
b) Understand micro and macroshock  
c) Understand the principles behind electrical isolation in the operating room  
d) Passive electrical examination  
   i. EKG – describe how the EKG senses electrical impulses and the problems processing these signals  
   ii. EEG – know that the signal strength is 1/10th of that in an EKG  
   iii. BIS (and other monitors of depth of anesthesia)  
      • Know how a BIS monitor works  
      • Know how to interpret the BIS index  
      • Know how the various BIS levels correlate clinically  

e) Active Electrical Examination  
   i. Somatosensory Evoked Potentials (SSEPs)  
      • Know how SSEPs are measured  
      • Know the clinical uses of SSEPs in the OR  
      • Know how different anesthetic agents affect measurement of SSEPs  
   ii. Motor Evoked Potentials (MEPs)  
      • Know the uses and limitations of MEPs  
      • Know how different anesthetic agents effect measurement of MEPs  

15.1.5 Measurement Utilizing Light
The Anesthesiologist must demonstrate and understanding of principles of light transmission and its’ utility in various forms of monitoring:

a) Principles of light  
   i. Know the difference between sound and electromagnetic waves (ie. Different speeds, different propagation waves)  
   ii. Know the definition of the Beer-Lambert Law and how it relates to various anesthetic monitors  
   iii. Know how the different Light Monitors work – Capnometer (mainstream and sidestream), Agent Analyzer Capnometer  
      • Describe how the capnometer works  
      • Know the different wavelengths of light measured  
      • Describe the different phases in a CO2 waveform and identify clinical correlations in various waveforms  

b) Pulse Oximeters function  
   i. Describe the four different species of haemoglobin measured  
   ii. Know how fractional haemoglobin saturation is determined  
   iii. Know how the Beer-Lambert equation relates to the pulseoximeter  

c) Raman Scattering  
   i. Know how Raman scattering works  
   ii. Describe the difference between Raman scattering and absorption based gas analysis  

15.1.6 Temperature Measurement
The Anesthesiologist must demonstrate an understanding of principles of temperature measurement:

a) Principles of Temperature  
   i. Know the definition of specific heat and a calorie  

b) Temperature Monitors  
   i. Know the three techniques for measuring temperature  
   ii. Know the three electrical techniques for measuring temperature  
      • Resistance Thermometer  
      • Thermistor  
      • Thermocouple
15.1.7 Neuro muscular Monitors
The Anesthesiologist must demonstrate an understanding of principles of monitoring of the cardiovascular system

a) Describe how a peripheral nerve stimulator works
b) Describe the different patterns of nerve stimulation
   i. Single twitch
   ii. TOF
   iii. Titanic
   iv. PTC
   v. DBS

15.1.8 Cardiovascular Monitors
The Anesthesiologist must demonstrate an in depth understanding of monitoring of the cardiovascular system

a) Electrocardiography
b) Monitoring arterial blood pressure
   i. Non-invasive blood pressure monitoring
   ii. Invasive arterial blood pressure monitoring
      • Sites of cannulation
      • Indications, contraindications
      • Complications
      • Insertion technique
      • Function of the catheter – transducer system and sources of error
c) Monitoring central venous pressure
   i. Principles of sterile technique and prevention of line – related blood stream infections
   ii. Complications and principles of safe insertion technique
   iii. Sites of cannulation
   iv. Ultrasound guided insertion technique
   v. Physiology of central venous pressure monitoring and sources of error
   vi. Waveform analysis
d) Pulmonary artery catheter insertion and monitoring
   i. Indications and contraindications
   ii. Insertion technique
   iii. Sources of error and principles of trouble shooting
   iv. Principles of monitoring cardiac output, pulmonary artery pressure, pulmonary artery occlusion pressure and calculation of work indices and vascular resistance
   v. Waveform analysis
   vi. Estimation of fluid responsiveness: Systolic pressure variation and transthoracic thermodilution
   vii. continuous mixed venous oximetry
e) Echocardiography
   Indications for, strengths and limitations of transthoracic and transesophageal echocardiography

15.2 Equipment

15.2.1 Inhaled Anesthetic Delivery Systems
The Anesthesiologist must demonstrate an understanding of principles behind the functionality of vaporizers and gas delivery systems

a) Gas delivery systems
   i. storage and delivery of anesthetic gases via pipelines and cylinders
   ii. anesthesia breathing circuits
b) Gas laws
   i. Boyle’s law, Charles’ Law, Henry’s law, Graham’s law of diffusion, Dalton’s law of partial pressures
   ii. Partial pressure
   iii. Blood / gas solubility
Anesthetic Machine
The Anesthesiologist must demonstrate an in depth understanding of the anesthetic machines:

i. Be knowledgeable about the safety features of the anesthetic machine
ii. Be able to describe the CSA/ASA standards for anesthetic machines
iii. Pipeline and Cylinder gas supply
iv. Pressure failure mechanisms
v. Flow meter and proportioning systems
vi. Breathing circuits
   • Bain
   • Circle
vii. Vaporizers
viii. CO2 absorption
ix. Anesthesia ventilators
x. Scavenger systems
xi. Low-flow anesthesia
xii. Perform a complete pre-use check of the machine

Equipment Cleaning and Sterilization
The Anesthesiologist must demonstrate an understanding of the methods of cleaning and sterilizing equipment and the advantages and limitations of these methods

Lasers
The Anesthesiologist must demonstrate an understanding of principles of the physics of laser use

a) Describe the three ways that laser light is different than ordinary light
   i. Monochromatic
   ii. Coherent
   iii. Collimated
b) Describe the essential components in a laser
c) Be knowledgeable about the different lasers available in the OR
   i. CO2
   ii. Argon
   iii. Krypton
   iv. Holmium
   v. Nd:YAG
d) Know the potential hazards of lasers in the OR and how to protect against them
e) Know the Airway Fire Protocol

Ultrasound Machines
The Anesthesiologist must demonstrate an understanding of principles of ultrasound technology

a) Ultrasound Principles
   i. Describe the principles of US
   ii. Describe how M-mode and Two-dimensional Echocardiography work
b) TEE
   i. Know the design and the basic waveforms seen with a TEE
   ii. List the indications, limitations and complications of use
c) Regional Ultrasound
   i. Know the basic structures seen with ultrasound and identify nerves
16 Neurology/ Neurosurgical Anesthesiology

The competent Anesthesiologist shall demonstrate proficiency in all of the objectives listed below

16.1 Basic Science

The Anesthesiologist must demonstrate knowledge and an understanding of the anatomic, physiologic, and pharmacologic principles that are unique to the neurosurgical patient. He/she must demonstrate knowledge of:

a) Anatomy
   i. Basic anatomy of the central nervous system, including the spinal cord and meninges
   iii. Anatomy of the Circle of Willis
   iv. Vascular supply to the spinal cord
   v. Cellular anatomy of the blood brain barrier

b) Physiology
   i. Cerebral blood flow
   ii. Determinants of Cerebral Perfusion Pressure
   iii. Cerebral metabolic rate for oxygen
   iv. Cerebral pressure autoregulation
   v. Carbon dioxide reactivity
   vi. Response to hypoxia
   vii. Flow metabolism coupling
   viii. Production, flow and re-absorption of cerebral spinal fluid
   ix. Effects of hypo and hyperthermia

c) Pharmacology
   i. Direct and indirect effects of intravenous and inhaled anesthetic agents on cerebral physiology
   ii. Basic principles of neuroprotection and neuroresuscitation
   iii. Mechanism of action of osmotic diuretics
   iv. Prevention and treatment of vasospasm
   v. Controlled hypo- and hypertension
   vi. Anesthetic consideration of anticonvulsants

16.2 Neurological diseases

The consultant Anesthesiologist must demonstrate the ability to independently provide anesthesia care for:

a) Patients with increased intracranial pressure at risk of hemiation
   i. Supratentorial tumors
   ii. Posterior fossa tumors

b) Patients with traumatic neurological diseases
   i. Spinal cord injury
      • Cervical; unstable cervical spine
      • Thoracic: autonomic hyperreflexia
      • Lumbar
   ii. Traumatic Brain Injury

c) Patients with cerebrovascular diseases
   i. Carotid stenosis
   ii. Stroke
      • Embolic
      • Hemorrhagic
   iii. Intracranial aneurysms
   iv. Arteriovenous malformations
   v. Cerebral hyperperfusion

d) Patients with common neurological disorders
   i. Parkinson’s disease
   ii. Multiple Sclerosis

e) Patients with common non-traumatic disorders of the spine
   i. Cervical or lumbar disc herniation
   ii. Spinal stenosis
   iii. Spondylopathies, including Ankylosing spondylitis

f) Patients with neuroendocrine disorders
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i. Hypopituitarism
ii. Hyperpituitarism
iii. Diabetes Insipidus
iv. Syndrome of inappropriate ADH secretion
v. Cerebral salt wasting syndrome
g) Patients with congenital neurological diseases
   i. Cerebral Palsy
   ii. Meningomyelocoele
   iii. Chiari Malformations
   iv. Dandy-Walker complex
   v. Craniosynostosis
   vi. Tethered spinal cord

16.3 Anesthesia for Neurosurgical Procedures

16.3.1 Surgical procedures

The Anesthesiologist must be able to demonstrate understanding of the implications of, and provide anesthetic care for neurosurgical patients presenting with the following conditions:

a) Intracranial Masses
   i. Supratentorial tumour resection
   ii. Posterior fossa tumour resection
   iii. Pituitary tumour resection
b) Traumatic Brain Injury
   i. Evacuation of subdural hematoma, acute vs. chronic
   ii. Evacuation of epidural hematoma
   iii. Evacuation of intracranial hemorrhage
   iv. Decompressive craniectomy
c) Intra and Extracranial Vascular disease
   i. Intracranial aneurysm clipping
   ii. Intracranial Arteriovenous malformation resection
   iii. Carotid endarterectomy
d) Hydrocephalus
   i. Ventriculoperitoneal or atrial shunt placement
   ii. External ventricular drain placement
e) Epilepsy
   i. Epilepsy surgery
   ii. awake craniotomy
f) Interventional Neuroradiology
   i. Intracranial aneurysm coiling
   ii. Arteriovenous malformation embolization
   iii. Carotid artery stenting
g) Surgery of the Spine
   i. Laminctomy/Dissectomy/Decompression
   ii. Spinal instrumentation/fusion
   iii. Spinal cord tumour resection
h) Pediatric Neurosurgery
   i. Surgery for meningomyelocoele
   ii. Cranietomy for craniosynostosis
   iii. Untethering of spinal cord

16.3.2 Perioperative Management

a. Management of neurosurgical anesthesia emergencies
   i. Acute increase in intracranial pressure
   ii. Venous air embolism
iii. Intraoperative aneurysm rupture  
iv. Seizure  
v. Postoperative failure to awaken

b) Management of fluid therapy in the neurosurgical patient  
c) Patients requiring intraoperative neurological monitoring  
   i. Electroencephalography, including bispectral analysis  
   ii. Somatosensory Evoked Potentials  
   iii. Motor evoked potentials  
   iv. Wake up test
17 Neuromuscular Junction

The Anesthesiologist shall demonstrate an in depth understanding of the neuromuscular junction and its' relevance in anesthesia:

17.1 Neuromuscular Junction physiology

The competent anesthesiologist must demonstrate an ability to:

a) Describe a synapse: the motor neuron and the muscle fiber
b) Describe the nerve action potential
c) Describe the formation of neurotransmitter at the motor nerve ending
   i. Acetylcholine synthesis
   ii. Storage
   iii. Release
   iv. Recycling
d) Explain acetylcholinesterase action
e) Describe a postjunctional receptor
f) Explain how a postjunctional receptor works
g) Explain the effects of the prejunctional receptor on nerve transmission
h) Explain the quantal theory at the neuromuscular junction
i) Describe the action potential across nerve membrane, including sodium and calcium channels

17.2 Pharmacology of Muscle Relaxants

The competent Anesthesiologist must demonstrate an ability to:

a) Explain the action of neuromuscular relaxants, nondepolarizing and depolarizing, on prejunctional and postjunctional receptors
b) Explain a desensitization block
c) Explain how certain drugs can affect neuromuscular relaxants effects
   i. Volatile agents
   ii. Antibiotics
   iii. Calcium
   iv. Local anesthetics
   v. Antiepileptics
   vi. Diuretics
   vii. Channel blocks and other effects
d) Pharmacology of succinylcholine
   i. Pharmacokinetics and pharmacodynamics
   ii. Indications
   iii. Contraindications
   iv. Butyrylcholinesterase activity and reversal of succinylcholine
   v. Drug interactions and adverse effects
e) Pharmacology of non-depolarizing neuromuscular blocking agents
   i. Pharmacokinetics and pharmacodynamics
   ii. Potency
   iii. Metabolism and elimination
   iv. Clinical management and dosage
   v. Drug interactions and adverse effects
   vi. Indications
   vii. Contraindications

17.3 Prejunctional, Immature and Extrajunctional Receptors

a) Describe the “fade” phenomenon with neuromuscular relaxants through a prejunctional effect and the effect of different neuromuscular relaxants on that phenomenon
b) Explain how immature and extrajunctional receptors form, and the effects of depolarizing neuromuscular relaxants on such receptors
c) Describe the Myopathy following long term administration of neuromuscular relaxants during critical illness
17.4 **Neuromuscular Reversal**
The competent Anesthesiologist must demonstrate an in depth understanding of the reversal of neuromuscular blockade.

a) Explain how antagonists of neuromuscular block works  
   i. Neostigmine  
   ii. Pyridostigmine  
   iii. Edrophonium  
   iv. Suggamadex ®

b) Explain the role of anticholinergic drugs in neuromuscular reversal  
   i. Atropine  
   ii. Glycopyrrolate

c) Describe the effects of neuromuscular relaxants on the autonomic nervous system  
d) Explain the influence of neuromuscular diseases on neuromuscular relaxants effects  
e) Explain the influence of age, obesity on neuromuscular relaxants effects  
f) Describe the determinants of speed and adequacy of reversal of neuromuscular blockers  
g) Describe the side effects of anticholinesterase agents

17.5 **Monitoring Neuromuscular Blockade**
The Anesthesiologist must demonstrate an understanding of monitoring of blockade of the neuromuscular junction.

a) Peripheral nerve stimulation – patterns used  
b) Assessment of complete/adequate reversal  
c) Clinical indications of reversal

17.6 **Pathology**
Pathophysiology, clinical presentation, classification, and perioperative management of patients with the following conditions:

a) Myesthenia Gravis  
b) Eaton-Lambert syndrome
18 Obstetrical Anesthesia

General Issues

The Anesthesiologist must demonstrate the ability to function as part of a team with obstetricians, nursing staff, nurse midwives, neonatologists and pediatricians to provide optimal medical, obstetric, and anesthetic care for parturients and their fetuses/neonates.

18.1 Maternal Physiology
The Anesthesiologist must demonstrate an understanding of:

a) Maternal physiology: time course and changes during gestation
   i. Cardiovascular adaptations to pregnancy
   ii. Pulmonary, respiratory, and airway changes
   iii. Gastrointestinal, hematologic, and renal changes
   iv. Central nervous system changes
b) MAC and local anesthetic adjustments during pregnancy
c) Approach to CPR in parturient, awareness of need for delivery of baby

18.2 Fetal and Placental Physiology
The Anesthesiologist must demonstrate an understanding of:

a) Placental development, structure and inability to auto regulate placental flow
b) Placental gas exchange, nutrient transport, drug transfer
c) Antenatal fetal evaluation (growth, fluid, position, biophysical profile)
d) Fetal circulation
e) Fetal and neonatal effects of maternally administered anesthetic drugs
f) Fetal adaptations to hypoxia
g) Fetal heart rate patterns during labour and their response to hypoxia or asphyxia
h) Impact on fetus of drop in maternal cardiac output
i) Interpret fetal heart rate patterns during labour

18.3 Neonatal Physiology
The Anesthesiologist must demonstrate an understanding of:

a) Intrapartum fetal resuscitation
b) Neonatal physiologic adaptations to extrauterine life
c) Resuscitation of the newborn – NRP protocol
d) Predict the likelihood of need for resuscitation
e) Recognize the neonate needing resuscitation
f) Initiate resuscitation of a neonate

18.4 Obstetric Management of Labour
The Anesthesiologist must demonstrate an understanding of:

a) Physiology of labour and the smooth muscle of the uterus
b) The stages of labour and typical duration
c) Effect of uterine contractions on placental exchange and fetal oxygenation
d) Indications for analgesia during labour
e) Effect of analgesia on labour and delivery
f) Effect on labour of maternal hydration, position, hyperventilation, hypotension
g) Recognition and management of uterine hypertonus or hyperstimulation
h) Commonly used drugs in obstetrics including indications contraindications, classification, and therapeutic uses and side effects of:
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1. Oxytocin, carbitocin
2. Ergotamine
3. Prostaglandins, hemabate
4. Magnesium sulphate
5. Uterine relaxants
6. Magnesium sulphate
7. Nitroglycerine

18.5 **Labour Analgesia and Anesthesia**

18.5.1 Anatomy and physiology of labour pain

The Anesthesiologist must be able to

a) Describe the pain pathways for stages of labour
b) Describe the anatomy of spinal and epidural space

18.5.2 Labour analgesia

See Regional anesthesia 24.1, 24.5

For the following analgesic options, discuss:
- Indications
- Contraindications
- Mechanism of action
- Pharmacokinetics/ pharmacodynamics
- Maternal Side effects
- Fetal effects
- Effects on Uterine blood flow
- Complications
- Management of complications

a) Non-pharmacologic options
b) Opioids – IV, IM, SC, IV PCA
c) Inhaled N2O
d) Neuraxial opioids (Intrathecal and epidural)
e) Spinal-single shot
f) Combined spinal/ epidural
g) Continuous spinal catheter technique
h) Epidural Local anesthetics
i) Pudendal and paracervical blocks

18.6 **Anesthesia for Obstetrical surgery**

For the following anesthetic options, discuss:
- Indications
- Contraindications
- Mechanism of action
- Pharmacokinetics/ pharmacodynamics
- Maternal Side effects
- Fetal effects
- Effects on Uterine blood flow
- Complications
Management of complications

18.6.1 Regional Anesthesia for Cesarean Section
a) Spinal
b) Epidural
c) Conversion of labour analgesia epidural for anesthesia
d) Combined spinal- epidural

18.6.2 General Anesthesia for Cesarean Section
a) Indications for general endotracheal (GETA) anesthesia
b) Risks for morbidity and mortality associated with GA in parturient
c) Ventilatory requirements of parturients
d) Drug choices and doses for induction and maintenance for caesarean or operative delivery
e) Impact on the fetus of the induction to delivery and uterine incision to delivery time intervals
f) Appropriate pre-op assessment of the parturient for GA
g) Physiologic changes of pregnancy impacting on GA management
h) Demonstrate:
   i. Develop and execute a plan for general endotracheal anesthesia based on the physiologic and physical changes of pregnancy
   ii. Perform a rapid sequence induction
   iii. Recognize and outline management of a difficult airway based on physical examination
   iv. Outline a failed intubation plan
   v. Outline a plan for postoperative management of patient following GA
   vi. Recognize pulmonary aspiration of gastric contents and outline a plan for the PACU and postoperative care of a patient who has aspirated
a) Inherent maternal anesthetic risk of urgent or emergent delivery
b) Surgical and anesthetic management of bleeding during delivery, including drug therapy, surgical manoeuvres, transfusion therapy

18.6.3 Anesthesia for other obstetric surgery
a) Retained placenta
b) Double set-up
c) Postpartum tubal ligation
d) Insertion/ removal of suture for cervical incompetence

18.6.4 Post Operative Pain Control
The Anesthesiologist must demonstrate an understanding of:

a) The various components of multimodal analgesic techniques used after caesarean or vaginal delivery. These include the use of:
   i. Neuraxial opioids
   ii. Parenteral opioids
   iii. Non-steroidal anti-inflammatory drugs
   iv. Adjunctive drugs
   v. Local anesthetics
b) Transfer of drugs into breast milk and the effects on the neonate
He/she must demonstrate an ability to:

c) Recognize and manage inadequate postpartum analgesia
d) Provide appropriate post operative pain management
e) Recognize and treat side effects of postoperative pain modalities used

18.7 **Obstetrical Complications and Their Management**

The Anesthesiologist must demonstrate an understanding of:

a) The management of maternal ante- or postpartum hemorrhage
   i. Uterine rupture
   ii. Abruptio or atony
   iii. Placenta previa or accreta
   iv. Retained placenta

b) The treatment for maternal embolic events
   i. Amniotic fluid
   ii. Air
   iii. Thrombus

c) Management of fetal emergencies – prolapsed vasa previa

d) Management of intra-uterine fetal death

18.8 **Medical Diseases During Pregnancy and Their Peri-Operative Management**

For the following diseases, the Anesthesiologist must demonstrate an understanding of:

- How the disease impacts on pregnancy
- How pregnancy impacts on the disease
- The obstetric implications and management of the disease

a) Hypertensive Disorders of Pregnancy
   i. Classification of hypertensive disorders during pregnancy
   ii. Epidemiology of preeclampsia – risk factors
   iii. Pathophysiology of preeclampsia as a multisystem disease
   iv. Medical/obstetric management of preeclampsia
      - Term vs. preterm fetus
      - Mild vs. severe diseases
      - Assessment of fetal well being
      - Seizure prophylaxis and management; magnesium sulphate effects
      - Antihypertensive therapy
      - Management of oliguria
      - Indications for invasive monitoring
   v. Anesthetic selection for and management of the preeclamptic parturient
      - Labour and vaginal delivery
      - Abdominal delivery – non-urgent
      - Abdominal delivery – urgent

b) Morbid Obesity
   i. The anesthetic considerations for morbidly obese parturient
   ii. The use of regional anesthesia in morbidly obese patients
   iii. The management of general anesthesia in obese patients

c) Respiratory Disease Knowledge
   i. Asthma
   ii. ARDS

d) Cardiac Disease Knowledge
   i. Understand when invasive monitors are needed for delivery and postpartum care
   ii. Understand the pathophysiology and management of parturients with:
      - Congenital heart disease
         - Left to right shunt
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- Right to left shunts (Tetrology of Fallot)
- Pulmonary hypertension (Eisenmenger’s Syndrome)
- Coarctation of aorta

iii. IHSS
iv. Ischemic Heart Disease
v. Valvular Heart Disease
  - Aortic stenosis
  - Aortic insufficiency
  - Mitral stenosis
  - Mitral regurgitation
vi. Peripartum Cardiomyopathy
e) Endocrine Disease
  i. Knowledge of diabetes mellitus
  ii. Knowledge of thyroid disease
    - Hyperthyroidism
    - Hypothyroidism
  iii. Understand the impact of these conditions on the pregnancy and *vice versa.*
iv. Pheochromocytoma
v. Ability to manage glucose control in the parturient during caesarean or vaginal delivery

f) Hematologic and Coagulation Disorders
  i. Knowledge of anemias
  ii. Knowledge of coagulation disorders
  iii. Knowledge of the guidelines concerning regional anesthesia and anticoagulation

g) Miscellaneous Disorders
  i. Renal disease
  ii. Liver disease
  iii. Musculoskeletal disorders
iv. Scoliosis
v. Rheumatoid arthritis
vi. Spina bifida cystica
vii. Autoimmune disorders
viii. Prior back surgery including Harrington rod placement

18.9 Anesthetic Management of Non-Obstetric Surgery During Pregnancy

a) Considerations for elective surgery during pregnancy
b) Discuss potential teratogenicity of medications
c) Considerations for trauma or emergency surgery during pregnancy
d) Understand when fetal monitoring is needed during maternal surgery
e) Physiology of pregnancy as it might impact cardiovascular, respiratory and transfusion decisions during surgery
f) Ability to discuss risks of elective surgery with patients and colleagues

18.10 Ethical Issues

a) Awareness of potential for maternal-fetal conflicts of interest
  i. General anesthesia for stat caesarean delivery in face of perceived fetal jeopardy
b) Respect for all moral and religious points of view
  i. Jehovah Witness patient
c) Awareness of fetal development and current limits of viability
d) Recognize own ethical attitudes versus patient’s moral concerns
e) Willingness to arrange for non-prejudicial transfer of care, if necessary
f) Recognize need for timely consultation on difficult moral and legal issues

18.11 Morbidity and Mortality

a) Discuss major causes of morbidity and mortality in pregnant patients
b) Discuss anesthesia related morbidity and mortality in pregnant patients
18.12 **Ultrasound**

a) Understand the physics of ultrasound used in medical practice  
b) Understand the relevant ultrasound anatomy of the neuraxis  
c) Perform ultrasound examination of the neuraxis for regional techniques  
d) Perform regional techniques under ultrasound guidance
19 Ophthalmology
The competent Anesthesiologist shall demonstrate the knowledge with respect to relevant anatomy and physiology of the eye.

19.1 Anatomy and Physiology
He/she will demonstrate an ability to:

a) Describe the anatomy of the eye including chambers, relevant blood supply and innervation
   i. Describe the oculo-cardiac reflex including determinants that predispose patients, and intraoperative management of the OCR
b) Describe the determinants of IOP and factors that influence it
c) Describe the pathophysiology of glaucoma

19.2 Anesthetic Considerations
The Anesthesiologist must demonstrate an ability to independently provide anesthesia for patients undergoing ophthalmic surgery with respect to:

a) Preoperative Evaluation
   i. Identify the common medical conditions associated with patients having ocular surgery
b) Pharmacologic Interventions
   i. Describe the drugs commonly used in ophthalmologic patients including mydriatics, miotics, and topical and systemic drugs used to decrease IOP
   ii. Describe the systemic effects of the aforementioned medications
   iii. Describe the ocular effects of systemic medications
c) Effects of Anesthesia on IOP or Retinal Perfusion
   i. Describe the perioperative factors that will increase or decrease IOP and influence retinal perfusion
d) Anesthetic Technique
   i. IV sedation
   • Identify the drugs used to provide sedation and the side effects and complications associated with those drugs
   ii. Topical anesthesia
   • Describe the local anesthetics commonly used to provide topical anesthesia to the eye
   iii. Regional anesthesia
   • Describe retrobulbar and peri-bulbar blocks. Know the indications and contra-indications for these blocks
   • Describe the complications including globe perforation, optic nerve damage, hemorrhage and total spinal associated with these blocks and the management thereof
   iv. General anesthesia
   • Know the issues surrounding limited access to the airway, the importance of smooth induction and emergence
   • Know the significance of Ketamine, nitrous oxide, and succinylcholine on the eye
e) Post Operative Nausea and Vomiting Prophylaxis
   i. Appreciate the importance of PONV prophylaxis in eye surgery

19.3 Specific Eye Surgery
The Anesthesiologist must demonstrate an understanding of the concerns for specific surgical procedures and an ability to provide anesthetic management for:

a) Open eye injury / ruptured globe
b) Strabismus repair
c) Retinal detachment surgery
d) Retinal surgery for vitreous hemorrhage
   i. Know the significance of the intravitreous gas bubble
e) Cataract surgery
f) Oculoplastics
   i. Blephoraplasty
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ii. DCR
iii. Ptosis repair
iv. Orbital reconstruction

g) Corneal transplant
h) Removal of foreign body
i) Conjunctival – pterygium
j) Laser surgery
k) Enucleation of the eye
20 Orthopedic Surgery
The Anesthesiologist must demonstrate an understanding of the issues related to providing anesthetic care for patients undergoing orthopedic surgery with respect to:

20.1 General considerations:

a) Preoperative Assessment  
b) Co-morbid medical conditions  
c) Associated chronic pain  
d) Use of anti-coagulants  
e) Local, Regional or General  
f) Positioning  
g) Tourniquet  
h) Cement – Methyl methacrylate  
i) Fat embolism, PE  
j) DVT prophylaxis  
k) Infection  
l) Compartment syndrome  
m) Blood loss – transfusion sparing techniques, cell save, etc  
n) Multi-modal analgesia

20.2 Limb Fractures
The Anesthesiologist must demonstrate an ability to independently provide anesthetic care for patients with fractures taking into account the following concerns:

a) Urgent vs. emergent  
b) Open vs. closed fractures  
c) Compound vs. simple  
d) Neurovascular compromise  
e) Compartment syndrome  
f) Hemorrhage

20.3 Joint Replacements
The Anesthesiologist must demonstrate an ability to independently provide anesthetic care for patients presenting for joint replacement taking into account the following concerns:

a) Age, Co-morbidities  
   i. RA  
   ii. OA  
   iii. AS  
b) Chronic pain  
c) Positioning  
   i. Beach chair  
   ii. Lateral  
d) Tourniquet  
e) Cement  
f) Blood loss  
g) Post op pain, regional techniques  
h) Rehabilitation, mobilization, physiotherapy  
i) Anti-coagulation

20.4 Tendon/Ligament Reconstruction
The Anesthesiologist must demonstrate an ability to independently provide anesthetic care for patients presenting for tendon/ligament reconstruction

20.5 Spine
20.5.1 Principles of anesthesia for spinal decompression/stabilization surgery
The Anesthesiologist must demonstrate an understanding of the concerns related to spinal surgery with respect to:

a) Spinal cord anatomy and physiology
b) Stable vs. Unstable
c) Emergency vs. Elective
d) Instrumentation
e) Spinal shock
f) Spinal cord compromise
   i. Protection
   ii. Precautions
   iii. Awake positioning
g) Spinal cord monitoring
   i. SSEP
   ii. Wake up tests
h) Post operative neurological assessment
i) Considerations of dural tear
j) Prolonged OR
k) Post-operative respiratory function
l) Implications of surgery on different levels of the spine:
   i. C-spine
      • Unstable vs. stable c-spine
      • Anterior and posterior approach
      • Airway management, Shared airway
      • Lack of access
      • Awake positioning
   ii. T-spine
      • One lung ventilation
      • Blood loss
      • Embolism
      • Autonomic hyper-reflexia
   iii. L-spine
      • Implications of prone position
      • Disc/laminectomy
      • Spine decompression +/- fusion
      • Implications of bone graft/coral graft

20.5.2 Scoliosis Surgery
The Anesthesiologist must demonstrate an ability to independently provide anesthetic care for patients presenting for scoliosis surgery with respect to:

a) Pre-op assessment
   i. Pediatric vs. adult
   ii. Co-morbidities (MS, CP etc)

b) Respiratory function
c) Cardiovascular function
d) Anesthetic management
e) Prone positioning
f) Blood loss
g) VAE

20.5.3 Spinal Cord Tumours
The Anesthesiologist must demonstrate an understanding of the concerns related to spinal cord tumours with respect to:

a) Blood loss
b) Neurological compromise
c) Primary vs. metastases – radiation, chemotherapy etc.
20.6 **Pelvic Surgery**
The Anesthesiologist must demonstrate an understanding of the concerns related to pelvic surgery with respect to:

a) Urgent vs. Emergent  
b) Major trauma and associated injuries  
c) Blood loss  
d) Prolonged procedure

20.7 **Ambulatory Orthopedics**
The Anesthesiologist must demonstrate an understanding of the concerns related to ambulatory surgery with respect to:

a) Arthroscopic surgery  
b) Pain management  
   i. Regional anesthetic techniques  
   ii. Ambulatory plexus techniques

20.8 **Pediatric Orthopedics**
The Anesthesiologist must demonstrate an understanding of the concerns related to pediatric patients with respect to:

a) Considerations of pediatric patients  
b) Emergent vs. elective  
c) Co-morbid conditions  
d) Congenital conditions  
e) Prolonged surgery  
f) Temperature regulation
21 Pain Management

21.1 Acute Pain
The competent Anesthesiologist shall demonstrate an understanding of the anatomy and physiology and an approach to management of acute pain.

The sub specialist in Acute Pain Management shall demonstrate proficiency in all of the above plus these additional specific objectives. A competent Anesthesiologist shall demonstrate knowledge of the principles of these objectives, but not be expected to perform these objectives.

21.1.1 Anatomy and Physiology of Pain
The Anesthesiologist must demonstrate an understanding of the anatomy and physiology of acute pain:

a) Pain Pathways
   i. Describe the structure of nerve fibers that contribute to pain
   ii. Describe the gross anatomic pathways at the peripheral, spinal, brainstem, thalamic and cortical levels that are involved in the perception of pain

b) Pain Transduction
   i. List and describe the function of the major neuromodulators involved in the perception of pain at each anatomic level
   ii. Explain the mechanisms involved in central and peripheral sensitization
   iii. Describe the role and mechanism of mediators of inflammation in the pain process
   iv. Describe the role and mechanism of gene expression in the pain process

c) Neuroendocrine Stress Response
   i. Describe the systems affected by the stress response, and the overall impact on each of those systems
   ii. Describe the extent to which the stress response is modified by analgesia, the theoretical effect of such modification on surgical outcomes, and the extent to which the modification of stress response has been shown to affect outcomes

d) Neuropsychological
   i. Describe the affective and functional aspects of the pain experience and incorporate them into an analgesic plan

21.1.2 Assessment of Pain
The Anesthesiologist must demonstrate a knowledge of the methods used for assessment of acute pain:

a) Objective vs. Subjective
   i. Explain the relevance of objective assessment relative to patient self-reports, and create useful assessment plans based on these principles

b) Characterization of Pain
   i. Assess the relative contributions of somatic, inflammatory, functional and neuropathic processes in a given patient’s pain problem

c) Pain Rating Scales
   i. Describe the VAS, numeric, verbal and FACES rating scales, including their relative advantages and disadvantages, and apply them in clinical practice

21.1.3 Analgesic Interventions
The Anesthesiologist must demonstrate knowledge of the various approaches to acute pain management and ability to provide effective management of acute pain:

a) Multimodal and Regional Analgesia
   i. Describe the multimodal approach to analgesia, including its benefits and limitations
   ii. Advocate with other disciplines to create effective policies for multimodal therapies
   iii. Describe the relative merits of different co-analgesics and select an appropriate co-analgesic regimen to improve analgesia and minimize risk or side effects
   iv. Identify common impediments to analgesia and modify therapy appropriately
   v. Discuss the advantages, disadvantages, indications, contraindications and complications of the regional techniques listed in the above section as they apply to acute pain management
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b) Systemic Pharmacological Interventions

c) General Analgesic Pharmacology
   i. Effectively describe and utilize the pharmacokinetics and analgesic therapies taking into account the characteristics of specific agents and routes of administration
   ii. Discuss the use of intrathecal/epidural administration of opioids and adjuncts
   iii. Identify patients with special pharmacokinetic and pharmacodynamics characteristics and modify therapy appropriately

d) PCA
   i. Describe the pharmacokinetic rationale behind PCA
   ii. List and manage the potential risks for PCA
   iii. Devise appropriate management protocols for PCA
   iv. Prescribe PCA appropriately
   v. Utilize different routes for PCA-IV, SC, Epidural, oral
   vi. Describe the agents which may be used for PCA

21.1.4 Analgesic Agents
The Anesthesiologist must demonstrate an understanding and ability to use the various groups of analgesics available for management of acute pain. He/she must be able to describe the various analgesics according to the properties of each agent including:

- Describe the indications, contraindications, advantages and disadvantages of the agents including issues specific to all routes of administration
- List the systemic effects of each agent
- Identify and minimize the complications and side effects
- Contrast the pharmacokinetic and dynamic characteristics of different agents
- Select the appropriate dose, and route of administration for each agent

a) Opioids
   i. Describe the mechanism of action of opioids
   ii. Describe the types of opioid receptors with reference to their functions and distribution in the body
   iii. Develop protocols and policies to govern the administration of opioids in the perioperative setting

b) NSAIDs
   i. Describe the mechanism of action of NSAIDs
   ii. Develop protocols and policies to govern the administration of NSAIDs in the perioperative setting
   iii. NSAIDs vs Cox-2

c) Acetaminophen
   i. Describe the mechanism of action of acetaminophen
   ii. Develop protocols and policies to govern the administration of acetaminophen in the perioperative setting

d) Topical Analgesics
   i. Identify appropriate situations and agents for topical analgesia
   ii. Discuss the relative advantages and disadvantages of this route with specific reference to the agent and the situation
   iii. Prescribe topical opioids appropriately
   iv. Describe the indications, contraindications and rationale for the use of other topical analgesics
   v. Describe the use of topical agents to a patient

e) NMDA Antagonists
   i. Contrast the pharmacokinetic and pharmacodynamics characteristics of NMDA antagonists
   ii. Describe the mechanism of action of NMDA antagonists
   iii. Develop protocols and policies to govern the administration of NMDA antagonists in the perioperative setting

f) Anticonvulsants
   i. Describe the indications, contraindications, advantages and disadvantages of anticonvulsants in acute pain management
   ii. Describe the analgesic mechanism of action and anticonvulsants
   iii. Develop protocols and policies to govern the administration of anticonvulsants in the perioperative setting

g) Alpha-Agonists
   i. Describe the mechanism of action of alpha-agonists
   ii. Develop protocols and policies to govern the administration of Alpha-agonists in the perioperative setting
   iii. Select the appropriate agent, dose, and route of administration for acute pain management in the spectrum of patients and procedures

h) Antidepressants
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i. Describe the mechanisms of action of Antidepressants with respect to acute pain management
ii. Develop protocols and policies to govern the administration of antidepressants in the perioperative setting

iii. Select the appropriate agent, doses, and route of administration for acute pain management in the spectrum of patients and procedures relevant to his/her level of training

i) Tramadol
   i. Identify and minimize related complications and side effects
   ii. Describe the mechanism of action of Tramadol

j) Cannabinoids
   i. Describe the indications, contraindications, advantages and disadvantages of Cannabinoids including issues specific to all relevant routes of administration
   ii. Describe the types of cannabinoids available (THC/synthetic THC analogue/THC/CBD & marijuana
   iii. List the systemic effects of cannabinoids including variations specific to particular routes of administration
   iv. Identify and minimize related complications and side effects
   v. Describe the mechanism of action of cannabinoids with respect to analgesia
   vi. Develop protocols and policies to govern the administration of cannabinoids in the perioperative setting

21.1.5 Non-Pharmacologic Interventions
The Anesthesiologist must demonstrate an understanding and ability to use/prescribe non-pharmacologic interventions for the management of acute pain

a) Recognize the importance of non-pharmacologic factors in analgesia
b) Support allied health professional in provision of non-pharmacologic interventions
c) TENS
   i. Explains the theoretical mechanism of TENS in analgesia
   ii. Discuss the efficacy of TENS in acute pain management
   iii. Coordinate access to TENS as a non-pharmacologic adjunct in appropriate situations

21.1.6 Outcomes of Acute Pain Management
The Anesthesiologist must demonstrate an understanding of the outcomes relevant to the various modalities of analgesia used for management of acute pain

a) Outcomes
   i. Discuss the extent to which analgesia may contribute to patient outcomes, and the mechanisms for such contribution
   ii. Design analgesia plans that optimize recovery for patients
   iii. Advocate with other disciplines to implement appropriate multimodal recovery plans

b) Addiction, Tolerance and Substance Abuse
   i. Identify and distinguish between tolerance, dependence and addiction
   ii. Identify the special physiological, psychological, pharmacokinetic and pharmacodynamics issues in the tolerant or abusing patient
   iii. Recognize addictive behaviour and warning signs of substance abuse
   iv. Educate allied health and other medical professional to the risks and appropriate management of tolerance and addiction in relation to acute analgesic therapy
   v. Describe the biopsychosocial aspects of substance abuse and its interaction with analgesic therapy
   vi. Generate an appropriate acute pain plan in cooperation with the patient setting realistic analgesic and functional goals
   vii. Recognize and treat opioid withdrawal

21.2 Chronic Pain
The competent Anesthesiologist shall demonstrate an understanding of the anatomy and physiology and an approach to management of chronic pain

The sub-specialist in Chronic Pain Management shall demonstrate proficiency in all of the above plus these additional specific objectives. A competent Anesthesiologist shall demonstrate knowledge of the principles of these objectives, but not be expected to perform these objectives.

21.2.1 Anatomy and Physiology of Pain
The Anesthesiologist must demonstrate an understanding of the anatomy and physiology of the development and management of chronic pain

a) Pain Pathways
   i. Describe the structure of nerve fibers that contribute to pain
   ii. Describe the gross anatomic pathways at the peripheral, spinal, brainstem, thalamic and cortical levels that are involved in the perception of pain

b) Pain Transduction
   i. List and describe the function of the major neuromodulators involved in the perception of pain at each anatomic level
   ii. Explain the mechanisms involved in central and peripheral, spinal, brainstem, thalamic and cortical levels that are involved in the perception of pain

c) Neuroendocrine Stress Response
   i. Describe the systems affected by the stress response, and the overall impact on each of those systems
   ii. Describe the specific changes within each of the affected systems that lead to the overall functional impact on those systems
   iii. Describe the extent to which the stress response is modified by analgesia, the theoretical effect such modification on surgical outcomes, and the extent to which the modification of stress response has been shown to affect outcomes

21.2.2 Assessment of Pain
The Anesthesiologist must demonstrate knowledge of the methods used for assessment of chronic pain:

a) Objective vs. Subjective
   i. Delineate between nociceptive (somatic and visceral) and neuropathic
   ii. Explain the relevance of objective assessment relative to patient self-reports, and create useful assessment plans based on these principles
   iii. Assess the relative contributions of somatic, inflammatory, functional and neuropathic processes in a given patient’s pain problem
   iv. Perform a comprehensive assessment of the patient in pain, including functional and psychosocial impacts
   v. Interpret the results of multidimensional pain indices, and compare the clinical utility of different instruments

b) Pain Rating Scales
   i. Describe the VAS, numeric, verbal and FACES rating scales, including their relative advantages and disadvantages, and apply them in clinical practice

21.2.3 Analgesia, Outcomes, and Goals of Therapy

a) Rehabilitative and Functional Outcomes
   i. Describe the affective and functional aspects of the pain experience and incorporate them into an analgesic plan
   ii. Generate an appropriate plan in cooperation with the patient setting realistic analgesic and functional goals
   iii. Coordinate a multidisciplinary pain management plan, making appropriate use of allied health professionals and resources
   iv. Contribute to policies and protocols designed to facilitate a multi-disciplinary approach to pain management

b) Tolerance, Addiction and Substance Abuse
   i. Identify and distinguish between tolerance, dependence and addiction
   ii. Identify the special physiological, psychological, pharmacokinetic and pharmacodynamics issues in the tolerant or abusing patient
   iii. Recognize addictive behaviour and warning signs of substance abuse
   iv. Educate allied health and other medical professional to the risks and appropriate management of tolerance and addiction in relation to chronic analgesic therapy
   v. Describe the biopsychosocial aspects of substance abuse and its interaction with chronic analgesic therapy
   vi. Generate an appropriate comprehensive long-term plan in cooperation with the patient setting realistic analgesic and functional goals

21.2.4 Analgesic Interventions
The Anesthesiologist must demonstrate knowledge of the various approaches to chronic pain management and ability to provide effective management of chronic pain
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a) Multimodal and Regional Analgesia
   i. Describe the multimodal approach to analgesia, including its benefits and limitations
   ii. Advocate with other disciplines to create effective policies for multimodal therapies
   iii. Describe the relative merits of different co-analgesics
   iv. Select an appropriate co-analgesic regimen to improve analgesia and minimize risk or side effects in a spectrum of patients
   v. Identify common impediments to analgesia and modify therapy appropriately
   vi. Discuss the advantages, disadvantages, indications, contraindications and complications of the regional techniques as they apply to chronic pain management
   vii. Identify and manage complications and adverse effects of regional analgesic techniques in an ambulatory chronic pain population

b) Pharmacologic Interventions
   i. General Analgesic Pharmacology
      • Effectively describe and utilize the pharmacokinetics of analgesic therapies taking into account the characteristics of specific agents and the relative advantages and disadvantages of multiple routes of administration
      • Predict the differences in effect expected with oral, rectal, transcutaneous, IM, IV, and SC administration of analgesic agents and modify therapy to utilize these routes appropriately
      • Identify patients with special pharmacokinetic and dynamic characteristics and modify therapy appropriately
      • Collaborate with hospital pharmacists and allied health professionals to implement policies that take into account the relative advantages and disadvantages of different routes of administration
   ii. PCA
      • Describe the pharmacokinetic rationale behind PCA
      • List and manage the potential risks of PCA
      • Devise appropriate management protocols for PCA
      • Prescribe PCA appropriately
      • Diagnose and address common complications
      • Utilize different routes for PCA-IV, SC, Epidural, oral
      • Utilize different agents or combinations for PCA, and provide a rationale based on advantages and disadvantages

21.2.5 Analgesic agents

The Anesthesiologist must demonstrate an understanding and ability to use the various groups of analgesics available for management of acute pain. He/she must be able to describe the various analgesics according to the properties of each agent including:

• Describe the indications, contraindications, advantages and disadvantages of the agents including issues specific to all routes of administration
• List the systemic effects of each agent
• Identify and minimize the complications and side effects
• Contrast the pharmacokinetic and dynamic characteristics of different agents
• Select the appropriate dose, and route of administration for each agent

a) Topical Analgesics
   i. Identify appropriate situations and agents for topical analgesia
   ii. Discuss the relative advantages and disadvantages of this route with specific reference to the agent and the situation
   iii. Prescribe topical opioids appropriately
   iv. Describe the indications, contraindications and rationale for the use of other topical analgesics
   v. Describe the use of topical agents to a patient

b) Opioids
   i. Describe the mechanism of action of opioids
   ii. Describe the types of opioid receptors with reference to their functions and distribution in the body
   iii. Develop protocols and policies to govern the administration of opioids in the perioperative setting
iv. Intrathecal/epidural route
v. Mechanisms to avoid/reverse opioid tolerance (opioid rotation; use of antagonists etc)
vi. Detoxification protocols (slow vs. rapid detox)
vii. Discuss opioid conversions – equipotency; iv:po conversions
viii. Methadone
c) NSAIDs
   i. Describe the mechanism of action of NSAIDs
   ii. Develop protocols and policies to govern the administration of NSAIDs in the chronic pain setting
   iii. NSAIDs vs. Cox-2
d) Acetaminophen
   i. Describe the mechanism of action of Acetaminophen
   ii. Develop protocols and policies to govern the administration of acetaminophen in the chronic pain setting
e) NMDA Antagonists
   i. Describe the mechanism of action of NMDA antagonists
   ii. Describe the role of excitatory amino acids in pain and sensitization
   iii. Develop protocols and policies to govern the administration of NMDA antagonists in the chronic pain setting
   iv. Methadone in chronic pain – titration protocol; mechanism of action; conversion; ways of administering: methadone license
f) Anticonvulsants
   i. Describe the analgesic mechanism of action of anticonvulsants
   ii. Develop protocols and policies to govern the administration of anticonvulsants in the perioperative setting
   iii. Iv lidocaine therapy
g) Alpha-agonists
   i. Describe the mechanism of action of Alpha-agonists
   ii. Develop protocols and policies to govern the administration of Alpha-agonists in the chronic pain setting
h) Antidepressants
   i. Describe the mechanisms of action antidepressants with respect to analgesia
   ii. Develop protocols and policies to govern the administration of antidepressants in the chronic pain setting
i) Tramadol
   i. Identify and minimize related complications and side effects
   ii. Describe the mechanism of action of Tramadol
j) Cannabinoids
   i. Describe the indications, contraindications, advantages and disadvantages of cannabinoids including issues specific to all relevant routes of administration
   ii. List the systemic effects of cannabinoids including variations specific to particular routes of administration
   iii. Identify and minimize related complications and side effects
   iv. Describe the mechanism of action of cannabinoids with respect to analgesia
   v. Develop protocols and policies to govern the administration of cannabinoids in the perioperative setting

21.2.6 Non-Pharmacologic Interventions
The Anesthesiologist must demonstrate an understanding and ability to use/prescribe non-pharmacologic interventions for the management of acute pain.

- Recognize the importance of non-pharmacologic factors in analgesia
- Support allied health professional in provision of non-pharmacologic interventions TENS and acupuncture
- Explain the theoretical mechanism of TENS in analgesia
- Discuss the efficacy of TENS in chronic pain management
- Coordinate access to TENS as a non-pharmacologic adjunct in appropriate situations

a) Other Non-Pharmacologic Interventions
   i. Use of Biofeedback
   ii. Chiropractic interventions
   iii. Massage
   iv. Physiotherapy – ultrasound/interferential/TENS etc

b) Spinal Cord and Peripheral Nerve Stimulation
   i. Identify clinical situations in which stimulation may be of benefit
   ii. Describe the purported mechanism of action of stimulation
   iii. Coordinate access to stimulation for appropriate patients
   iv. Discuss the relative advantages, disadvantages, indications and contraindications of stimulation for chronic pain
   v. Identify complications of implanted stimulators
vi. Insert peripheral and spinal stimulators
vii. Order initial and titrate follow up settings for optimum patient comfort
viii. Manage complications of implanted stimulators, utilizing consultants as appropriate
ix. Intrathecal pumps/spinal & epidural catheters
x. Beneficial situations
xi. Mechanism of action
xii. Advantages/disadvantages/indications/contraindications
xiii. Complications & their management
xiv. Insert pumps
xv. Common drugs – opioids/baclofen/LA/clonidine/ketamine
xvi. How to titrate/wean po/iv drugs in this situation
22 Pediatric Anesthesia

22.1 Basic Science
The Anesthetist must demonstrate knowledge and an understanding of the anatomic, physiologic, psychological and pharmacological features which are unique to the pediatric population including the maturation process which takes place in all systems

22.1.1 Anatomy/Physiology
He/she must demonstrate knowledge of:

a) The Respiratory System
   i. Anatomic features of the neonatal, infant, pediatric and adolescent airway
   ii. The physiology of the respiratory system and its’ maturation over time with respect to
      ● Control of respiration
      ● Compliance
      ● Lung volumes
      ● Oxygen consumption/metabolic rate
      ● Normal values for different stages of development
      ● Pediatric basic and advanced life support
b) The Cardiovascular System
   i. The anatomy and physiology relevant to the transitional circulation
   ii. Maturation of the myocardium and the autonomic nervous system
   iii. Normal values for different stages of development
   iv. Pediatric basic and advanced life support
c) The Central Nervous System
   i. Anatomy – size, fontanelles
   ii. Physiology – Intracranial pressure and volume, cerebral blood flow, autoregulation
d) The Genitourinary System
   i. Renal maturation
   ii. Fluid and electrolyte management
   iii. Fluid distribution
   iv. Maintenance requirements
   v. Hydration
e) The Gastrointestinal/Hepatic System
   i. Feeding, fasting guidelines
   ii. Glucose control
   iii. Maturation of hepatic function
f) Thermoregulation
   i. Body surface area
   ii. Ability to thermoregulate
   iii. Heat loss
g) Psychological Issues
   i. Anxiety and understanding and coping mechanism in different age groups and premedication
   ii. Separation, effects of hospitalization
   iii. Parental anxiety
   iv. Consent in the pediatric population

22.1.2 Pharmacology
The anesthesiologist must demonstrate an understanding of the variations in drug handling in infants and children as a result of differences in

a) Pharmacokinetics/pharmacodynamics
   i. Absorption
   ii. Volume of distribution
   iii. Protein binding
   iv. Pharmacokinetics/Pharmacodynamics
   v. Metabolism
vi. Clearance  

vii. Excretion  

viii. Toxicity  

22.2 **Pain Management**  
He/she must demonstrate knowledge of options for perioperative analgesia including systemic analgesia, local infiltration, regional nerve blocks and neuraxial analgesia and the indications, contraindications, advantages and disadvantages of each modality in the pediatric population.

He/she must demonstrate competence in ordering continuous opioid infusions, PCA and epidural orders.

He/she must demonstrate competence in performing single shot caudal blocks

Equipment – specific to age group  

22.3 **Coexisting Diseases in Pediatric Patients**  
The consultant Anesthesiologist must demonstrate the ability to independently provide anesthetic care for:

In addition to the requirements for a consultant anesthesiologist the subspecialty pediatric anesthesiologist must demonstrate the ability to independently provide anesthetic care for:

a) Full term infants, former preterm infants, children and adolescents presenting for common surgical procedures .  
   i. *The anesthetic management of very premature infants*  

b) Children with cardiovascular diseases  
   i. ASD, VSD, PDA  
   ii. Postoperative repaired simple lesions  
   iii. Cardiomyopathies  
   iv. Heart transplant recipients  
   v. *Complex congenital heart disease*  
   vi. *Transposition of great vessels*  
   vii. *Truncus Arteriosis*  
   viii. *Hypoplastic left heart syndrome*  
   ix. *Pulmonary hypertension*  
   x. Postoperative: Norwood, Bicaval-pulmonary anastomosis, Fontan operation  
   xi. *Obstructive lesions*  

c) Pediatric patients with respiratory diseases  
   i. Upper respiratory tract infections  
   ii. Asthma, including management of status asthmaticus  
   iii. Cystic Fibrosis  
   iv. Chronic Lung Disease  
   v. Stridor

d) Patients with diseases of the gastrointestinal tract  
   i. Hepatobiliary disease  
   ii. Gastroesophageal reflux  
   iii. Feeding disorders

e) Patients with Neuromuscular diseases  
   i. Hydrocephalus  
   ii. Spina bifida  
   iii. Cerebral palsy  
   iv. Seizure disorders, including management of status epilepticus  
   v. Duchenne’s Muscular Dystrophy  
   vi. Myotonic Dystrophy  
   vii. Developmental delay

f) Patients with Infectious diseases  
   i. Septic shock  
   ii. Communicable diseases  
      * HIV  
      * Hepatitis  
      * TB
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g) Patients with Endocrine/metabolic diseases
   i. Diabetes
   ii. Thyroid diseases
   iii. Mucopolysaccharidoses
   iv. Obesity
   v. Mitochondrial diseases

h) Patients with Hematologic diseases/malignancies
   i. Anemias including Sickle cell disease, Thalasemia
   ii. Bleeding disorders: hemophilia, Von Willebrand’s disease
   iii. Others: ITP, leukemia
   iv. Malignancies
   v. Mediastinal masses

i) Psychological
   i. Perioperative anxiety in pediatric patients presenting for multiple types of surgery

j) Children with more common syndromes
   i. Down’s syndrome
   ii. Mental retardation
   iii. Malignant hyperthermia syndrome
   iv. Pierre Robin Syndrome, Crouzon’s, Goldenhaar, Treacher Collins etc
   v. Epidermolysis Bullosa

22.4 Anesthesia for Surgical Procedures

The Anesthesiologist must be able to demonstrate understanding of the implications of, and to independently provide anesthetic care for children presenting for:

In addition to the requirements for the consultant anesthesiologist the subspecialty pediatric anesthesiologist must be able to demonstrate understanding of the implications of, and to independently provide anesthetic care for children presenting for:

a) Neonatal/Infant Surgery
   i. Pyloromyotomy
   ii. Inguinal hernia repair
   iii. Laparotomy
   iv. Tracheo-esophageal fistula repair
   v. Omphalocoele
   vi. Gastrochisis
   vii. Necrotizing enterocolitis
   viii. Congenital diaphragmatic hernia

b) General Surgery
   i. Emergency surgery and the implications thereof:
      • Full stomach
      • Evaluation and Resuscitation
      • Fluid and electrolytes
      • Trauma surgery
      • Laparoscopic surgery
      • Antireflux surgery
      • Cholecystectomy/splenectomy
      • Liver transplant surgery
      • Lung transplantation
      • Thoracic surgery including the need for lung isolation

c) Otolaryngology
   i. Tonsillectomy and adenoidectomy (bleeding tonsil)
   ii. Myringotomy
   iii. Mastoidectomy
   iv. Thyroidectomy
   v. Tympanoplasty
   vi. Removal of foreign body from the airway/esophagus
   vii. Epiglottitis
   viii. Neonatal airway surgery
   ix. Laryngeal/tracheal reconstruction
   x. Airway papillomas
xi. Laryngoscopy (diagnostic/therapeutic)

xii. Bronchoscopy (rigid/flexible)

xiii. Tracheostomy

d) Orthopedic Surgery

i. Fracture reduction

ii. Hip reconstruction

iii. Soft tissue surgery

iv. Spinal surgery

e) Plastic Surgery

i. Cleft lip/palate repair

ii. Burn debridement/skin graft

iii. Correction of congenital limb deformities

iv. Craniofacial reconstructive surgery

f) Neurosurgery

i. V-P shunt insertion, revision

ii. Tumour resection

iii. Drainage of extra/subdural hematoma

iv. Raised ICP

v. Myelomingocele repair

g) Urology

i. Circumcision, Hypospadias repair

ii. Ureteric reimplantation

iii. Cystoscopy

iv. Nephrectomy

v. Insertion Peritoneal Dialysis catheter

vi. Renal transplant

vii. Bladder extrophy repair

h) Ophthalmology

i. Strabismus repair

ii. Cataract surgery

iii. Glaucoma

iv. Eyelid surgery

v. Laser for retinopathy of prematurity

i) Cardiac Surgery

i. Pacemaker insertion

ii. Cardiac catheterization

iii. Coarctation repair

iv. PDA ligation

v. Cardiopulmonary bypass for complete repair/palliative treatment of Congenital Heart lesions

j) Dental Surgery

i. Dental extractions/restorations

ii. Orthognathic surgery

k) Remote Locations

i. MRI/CT

ii. Interventional radiology procedures

iii. Medical procedures: e.g Bone marrow aspiration/biopsy, LP, gastroscopy, colonoscopy, joint injections

iv. Cardiac catheterization

l) Perioperative/PACU issues

The Anesthesiologist must be able to demonstrate the ability to evaluate and manage common problems which may arise perioearatively:

i. Criteria for day surgery, especially for exprematures

ii. Un-cooperative patient

iii. Delirium

iv. Post extubation stridor

v. Pain

vi. Nausea and vomiting

vii. Laryngospasm

viii. Anaphylaxis
23 Pharmacology
The competed Anesthesiologist shall demonstrate an understanding of the terminology and principles relevant to the pharmacology of all agents

23.1 Terminology: Definitions and Distinctions

a) Hyperactivity
b) Hypersensitivity
c) Tolerance
d) Tachyphylaxis
e) Synergism
f) Antagonism
g) Potency of drugs
h) Efficacy of drugs

23.2 Transfer of Drugs Between Compartments
The Anesthesiologist must demonstrate an ability to:

a) Describe the following processes:
   i. Passive diffusion
   ii. Active transport
   iii. Facilitated diffusion
b) Explain the impact of the pKa of drugs and of the acidic or basic state on their transfer between compartments
c) Explain the different aspects of binding of drugs to proteins, and describe the impact of various factors affecting the binding, such as age, sex, liver and kidney function and placental membranes

23.3 Transit of Drugs

a) Intake

The Anesthesiologist must demonstrate an ability to explain the specific properties of the following routes of administration:

   i. Oral
   ii. Sublingual
   iii. Transcutaneous
   iv. Intramuscular
   v. Subcutaneous
   vi. Neuraxial
   vii. Inhalational
   viii. Intravenous

b) Distribution

The Anesthesiologist must demonstrate an ability to describe the various properties, processes and structures involved in the distribution of drugs and their impact on drug action:

   i. Water and lipid solubility
   ii. Ionisation
   iii. Binding to proteins and tissues
   iv. Placental transfer
   v. Blood brain barrier
   vi. Perfusion gradients

c) Elimination
The Anesthesiologist must demonstrate an ability to:

i. Define clearance, extraction ratio, intrinsic clearance
ii. Describe the components of clearance of drugs by the kidney and liver. Explain the impact of changes of blood flow in both organs and of the variability of intrinsic clearance by the liver
iii. Explain the impact of alterations of liver function and blood flow on the extraction process
iv. Describe the main pathways of drug metabolism: biotransformation (phase 1 reactions) and conjugation (phase II)
v. Describe the impact of various factors affecting biotransformation
   • Individual variability
   • Age
   • Sex
   • Exposure to other substances (induction and inhibition)
   • Liver and kidney disease

23.4 Pharmacokinetic Principles
The Anesthesiologist must demonstrate an ability to:

a) Define the term pharmacokinetics
b) Explain the evolution from perfusion models to compartmental pharmacokinetics
c) Define: rate constant, half-times, (elimination half-time, context sensitive half-time), half life, volumes of distribution
d) Explain the distinction between zero and first order kinetics, and between one, two and three compartments pharmacokinetic models
e) Explain the impact of changes in liver and renal function on kinetics
f) Describe the links between the kinetics of drugs and their transit

23.5 Pharmacodynamic Principles

a) Define pharmacodynamics
b) Describe the information provided by the following elements of dose-response curves
   i. Potency
   ii. slope of curves
   iii. Efficacy
   iv. variability
c) Explain the time lag between end of injection s or infusions and drug effect
d) Describe the impact of factors affecting this time lag:
   i. organ perfusion
   ii. partition coefficients
   iii. rate of transit
   iv. drug receptor affinity
   v. delay between receptor exposure and drug effect
e) Describe the elements governing drug-receptor interaction
   i. Law of mass action
   ii. Affinity for receptors
   iii. Spare receptors
   iv. Ion channels
   v. G proteins
   vi. Second messenger
f) Define biophase and explain the interrelationship between kinetics, dynamics and effect
g) Explain the differences between agonists, partial agonists and antagonists
h) Drug interactions
   i. Explain the overall benefits and pitfalls of the drug interaction processes in anesthesia
   ii. Describe mechanisms which create interactions
      • physico-chemical properties of drugs
      • interference with transit of drugs
      • competition of binding sites
      • enzyme induction and inhibition
23.6 Anesthetic Drugs

For each of the following drugs, the anesthetiologist must have an in-depth knowledge of the following:

- Mechanism of action
- Pharmacokinetics and dynamics
- Dose range
- Clinical effects/ complications
- Indications
- Contraindications
- Drug interactions

23.6.1 Intravenous Induction Agents, Sedatives

a) Propofol
b) Pentothal
c) Ketamine
d) Etomidate
e) Midazolam

23.6.2 Narcotics/Opioids and adjuncts

See Pain 23.1.3, 21.1.4

a) Fentanyl
b) Remifentanil
c) Sufentanil
d) Alfentanil
e) Morphine
f) Hydromorphone
g) Meperidine

23.6.3 Muscle relaxants

See Neuromuscular Junction 17.2

23.6.4 Reversal agents

See Neuromuscular Junction 17.4

23.6.5 Antiemetics

See Post Anesthesia Care Unit 25.3

23.6.6 Volatiles

See Volatiles 34

23.6.7 Vasopressors and inotropes

See Autonomic Nervous System 3.4, Cardiovascular 4.1.5

23.6.8 Miscellaneous

a) Intravenous lidocaine
b) Naloxone

c) Flumazenil
24 Plastic Surgery

24.1 Thermal Injuries
The competent Anesthesiologist must demonstrate an understanding of the pathophysiology of burns and the relevance to anesthetic management

a) Burns
   i. Describe the types of burns including thermal, chemical and electrical burns
   ii. Describe the initial assessment and resuscitation of the burn patient
   iii. Describe the anesthetic considerations of the burn patient presenting for plastic procedures
       • Skin flaps
       • Split thickness skin grafts
       • Dressing changes
   iv. Describe the use of hyperbaric oxygen in the treatment of burns and carbon monoxide poisoning

b) Cold Injuries
   i. Describe the anesthetic considerations of the patient presenting with frostbite
   ii. Describe the use of hyperbaric oxygen in the treatment of frostbite

24.2 Anesthesia for Limb Reimplantation
The Anesthesiologist must demonstrate an understanding of the concerns related to limb reimplantation with respect to:

a) The general and regional anesthetic options for limb reimplantation
b) Maneuvres used to increase digital blood flow

24.3 Anesthesia for Free Flap and Pedicle Flap Surgery
The Anesthesiologist must demonstrate an understanding of:

a) General and regional anesthetic options for free flap and pedical flap surgery
b) The factors that influence flap perfusion including fluids/temperature/vasoactive substances

c) Common co-morbidities of patients presenting for flap surgery
   i. Cancer
   ii. Infection
   iii. Paraplegia
   iv. Quadriplegia
d) The indications for hyperbaric oxygen therapy for flap preservation
e) The post operative complications of surgery
   i. Flap necrosis
   ii. Infection/sepsis

24.4 Cosmetic Surgery
The Anesthesiologist must demonstrate an understanding of the anesthetic implications of the following surgeries

a) Liposuction
b) Breast augmentation, reduction mammoplasty, and amstopexy
c) Abdominoplasty
d) Facelift, neck lift, brow lift, and blepharoplasty
e) Rhinoplasty
f) Facial laser resurfacing

24.5 Minor Hand Procedures
The Anesthesiologist must demonstrate an understanding of the anesthetic concerns for patients undergoing hand surgery including:

a) The anesthetic options for minor hand procedures  
b) The advantages/disadvantages and complications of the various anesthetic techniques  
   i. Local infiltration  
   ii. IV block  
   iii. Peripheral nerve block  
   iv. General anesthesia

24.6 Craniofacial

24.6.1 Adult Craniofacial
The Anesthesiologist must demonstrate an understanding of the anesthetic concerns for adult patients undergoing craniofacial surgery including:

a) Facial reconstructive surgery  
b) Maxillo-facial trauma

24.6.2 Pediatric Craniofacial
The Anesthesiologist must demonstrate the ability to describe the anesthetic implications of the following pediatric craniofacial surgeries:

a) Cleft lip/palate surgery  
b) Ear reconstruction
25 Post-Anesthetic Care Unit (PACU)

The consultant Anesthesiologist must demonstrate an understanding of the structure and function of the Post Anesthetic Care Unit and an ability to identify, prevent and treat common problems arising in the PACU.

25.1 Physical and Staffing Requirements

The Anesthesiologist must demonstrate an understanding of the physical and staffing requirements of the PACU including:

a) Space
b) Personnel
c) Equipment
d) Monitoring
e) Medications, IV fluids

25.2 Patient Management

The Anesthesiologist must demonstrate an understanding of the considerations for patients entering the PACU.

The Anesthesiologist must demonstrate an approach to management of patients in the PACU including:

a) Fluid and electrolyte management
   i. Goals of resuscitation
   ii. Accurate measures of preload
   iii. Fluid responsiveness
b) Pain management: indications/contraindications of multimodal approach including local anesthetics, regional and neuroaxial blocks, opioids, NSAIDS and adjuncts including acetaminophen, gabapentin, Ketamine and tricyclic antidepressants
c) Antiemetics
d) Monitoring guidelines
e) Discharge criteria

25.3 Complications

The Anesthesiologist must demonstrate an ability to identify and manage common problems in the PACU including:

a) Respiratory complications
   i. COPD
   ii. Aspiration
   iii. Negative pressure pulmonary edema
b) Hypoxemia and hypoventilation
   i. Assessment of Ventilation
   ii. Recognition and Diagnosis
   iii. Oxygen Delivery Systems including BIPAP and CPAP
c) Recognition and treatment of upper airway obstruction, stridor, Aspiration, obstructive sleep apnea
d) Hypotension and Hypertension
   i. Diagnosis and Management
   ii. Shock
e) Cardiac complications
   i. Myocardial ischemia/chest pain
   ii. Brady-/tachycardia
   iii. Dysrhythmias
   iv. Cardiogenic shock
   v. Pulmonary edema
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f) Anaphylaxis

g) Inadequate analgesia
   i. Blocks and Neuraxial Anesthesia
   ii. Opiates
   iii. Non-opiates
   iv. Challenges in Pain Management

h) Oliguria/Polyuria
   i. Assessment of Volume Status
   ii. Differential diagnosis

i) Post-Operative Mental Status Changes
   i. Delirium
   ii. Differential diagnosis
   iii. Delayed Emergence
   iv. Decreased level of consciousness, Acute CVA

j) Fluid and Electrolyte Abnormalities
   i. Acid base
   ii. TURP Syndrome, Hysteroscopy syndrome
   iii. Hypo- and Hyper-calcemia, kalemia, natremia, magnesemia, glycemia

k) Nausea and Vomiting
   i. Risk factors
   ii. Pharmacology

l) Hyperthermia, Hypothermia & Shivering
   i. Postoperative fever
   ii. Malignant Hyperthermia
   iii. Hypothermia

m) Neurological
   i. Residual Neuromuscular Blockade
   ii. Prolonged regional blocks and peripheral nerve blocks
   iii. Peripheral Neuropathies
26 Preoperative Consultation

The competent Anesthesiologist must demonstrate an ability to assess, evaluate, optimize and manage patients in the preoperative period with the following considerations regarding systemic illness

26.1 Cardiovascular

a) Hypertension
   i. Identify significant hypertension and predict the impact on intraoperative risk on long-term health
   ii. Recommend appropriate timing of surgery relative to severity of hypertension and urgency of surgical indication.
   iii. Prescribe appropriate therapy to correct preoperative hypertension
   iv. Liaise with primary care provider to facilitate long-term management
b) Pulmonary Hypertension
   i. Identify patients with pulmonary hypertension by history, physical exam and laboratory/imaging findings
   ii. Identify the impact of the proposed anesthesia and surgery on the underlying disease
   iii. Coordinate further investigations and consultations necessary to safely and expeditiously perform the necessary surgery
c) Cardiomyopathy
   i. Identify right and left ventricular dysfunction by use of history, physical and laboratory findings/imaging
   ii. Identify appropriate preoperative management of ventricular dysfunction
   iii. Utilize consultants appropriate to optimize ventricular dysfunction
d) Valvular Disease
   i. Utilize history and physical examination to identify cardiac murmurs
   ii. Identify patients that require a preoperative echocardiogram to evaluate the severity of stenotic and regurgitant lesions of aortic, mitral, pulmonic and tricuspid valves
   iii. Identify risk factors for bacterial endocarditis
   iv. Prescribe appropriate prophylaxis for endocarditis
e) Congenital Heart Disease
   i. Obtain and utilize history, physical and laboratory findings to identify and grade the severity of congenital lesions, pulmonary hypertension, right-to-felt and left-to-right shunts, partially corrected lesions
   ii. Describe the physiology and design appropriate management plans for R-L, L-R and bidirectional shunts
   iii. Prescribe appropriate prophylaxis for endocarditis
f) Pacemakers/Implantable Cardioverter/Defibrillator
   i. Identify indications for preoperative pacemaker/ICD insertion or intraoperative pacing
   ii. Coordinate consultation for perioperative pacing
   iii. Identify the type of pacemaker/ICD and verify function
   iv. Coordinate appropriate perioperative assessment and programming of a pacemaker/ICD
g) Arrhythmia
   i. Identify the presence, type and severity of abnormal rhythms, using history, physical and EKG
   ii. Identify rhythm abnormalities requiring preoperative therapeutic or prophylactic therapy
   iii. Prescribe appropriate therapeutic or suppressive therapy
   iv. Utilize consultants effectively to coordinate appropriate pharmacologic or electrophysiologic therapy
h) Conduction Abnormalities
   i. Identify the presence, severity and type of abnormalities of conduction
   ii. Identify and manage reversible contributors to abnormal conduction
i) Peripheral Vascular Disease
   i. Identify the presence, severity and physiologic impact of peripheral vascular disease
   ii. Predict the impact of carotid disease on intraoperative risk
   iii. Identify the important preoperative variables that affect outcome in major vascular surgery, and provide a plan to optimize them
j) Patient with heart transplantation
k) Cardiac tamponade and constrictive pericarditis
l) Superior vena cava syndrome
m) Cardiac Risk Assessment
   i. Utilize history, physical examination and laboratory/imaging findings to identify patients with active cardiac conditions that require further evaluation and treatment prior to noncardiac surgery
   ii. Identify patients with clinical risk factors who would benefit from further preoperative testing, balancing the potential risks and the urgency of the surgical indication
n) Cardiac Risk Reduction
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i. Utilize pharmacologic therapy to reduce perioperative cardiac risk
ii. Describe the risks and benefits of beta-blockers, alpha-2 agonists, statins, and anti-platelet therapy for the reduction of perioperative cardiac risk
iii. Identify indications for preoperative surgical or interventional management for cardiac risk reduction
iv. Utilize appropriate consultation to coordinate preoperative cardiac risk reduction
v. Identify patients with Percutaneous Coronary Intervention (PCI) and develop a plan for the perioperative management of antiplatelet medications and timing of surgery based on the type of PCI and urgency of surgery

o) Cardiovascular Testing
i. Interpret and use the results of the following to assess risk and appropriately modify perioperative management
   - ECG
ii. Use the results of the following to assess risk and appropriately modify perioperative management
   - Echocardiography
   - Stress testing, dobutamine stress echocardiography
   - Perfusion imaging
   - Coronary angiography
   - Venticulography

26.2 Respiratory

a) Airway Assessment
i. Predict difficulty with laryngoscopy and intubation by use of history and physical findings
ii. Predict difficulty with manual ventilation by use of history and physical findings
iii. Use investigations including xray, computed tomography and pulmonary function studies to identify and/or quantify airway management concerns
iv. Identify, grade the severity and list the implications of special airway situations including
   - Airway obstruction – intra and extrathoracic
   - Madiastinal mass
   - Bronchopleural fistula
   - Tracheo-esophageal fistula
   - Tracheal stenosis
   - Anatomic/structural abnormalities congenital and acquired
   - Difficult airway and congnivity impairment
   - Patient scheduled for tracheotomy
v. Prescribe appropriate preoperative therapy to facilitate difficult airway management
vi. Coordinate the availability of special equipment, support and logistical preparation for special airway situations
vii. Provide pertinent information to prepare the patient with awake intubation or possibility of dental damage
viii. Be able to manage side effects and complications of intubation e.g. Dental damage

b) Respiratory Risk Assessment
i. Identify, grade the severity and estimate the impact on risk of perioperative complications of COPD, Asthma
ii. Restrictive defect
iii. Bullous lung disease/Bronchopleural fistula CO2 retention
iv. Obstructive +/- central sleep apnea
v. Recurrent aspiration
vi. ARDS
vii. CF/bronchiectasis
viii. Infection (pneumonia, upper respiratory tract infection, empyema)
ix. Pneumothorax/Chest tube

c) Reduction of Respiratory Risk

Identify patients with contagious pulmonary infection, coordinate special precautions for perioperative period

i. Identify and coordinate the availability of special intraoperative interventions to manage patients with any of the above problems
ii. Provide appropriate preoperative therapy to reduce the severity of the above problems
iii. Smoking cessation
iv. Utilize consultants effectively to assist in assessing perioperative respiratory problems and reducing risk
v. Recommend appropriate timing for surgical intervention balancing the inherent risk of the procedure, the incremental risk imposed by the respiratory problem, and the negative consequences of delay
vi. Identify patients that would benefit from postoperative monitoring in an enhanced or intensive care unit
d) **Assessment for Lung Resection**

i. Estimate the impact of the proposed procedure on perioperative outcome using history, physical and laboratory information

ii. Estimate the extent of resection that an individual patient is expected to tolerate utilizing PFTs, ABG, and VO2 max testing

e) **Pulmonary Testing**

i. Order appropriate lung function testing to assist with perioperative decision making

ii. Interpret and use the results of the following to assess risk and appropriately modify perioperative management

- Flow and volume studies
- Diffusion measurement
- Arterial blood gases
- XRays of chest, neck, airway
- CT of airway/lungs

iii. Use the results of the following to assess risk and appropriately modify perioperative management

- Sleep studies
- Exercise studies
- Ventilation/perfusion scan
- CT chest

26.3 **Neurological**

a) **Intracranial Mass**

i. Assess the implications for perioperative outcome and anesthetic management of intracranial mass lesions based on location, size, and proposed procedure. Manage reversible contributions to increase ICP Identify and assess the severity of increased intracranial pressure

b) **Seizure Disorder**

i. Utilize consultation appropriately to identify, diagnose and treat seizure disorders

ii. Utilize the information from that consultation to anticipate appropriate modifications to perioperative management

iii. Coordinate the availability of required special resources

iv. Predict the impact of and appropriately manage anticonvulsant therapy

c) **Cognitive Impairment**

i. Assess the ability of the patient to participate in informed consent and cooperate with perioperative interventions

ii. Obtain appropriate surrogate consent in the event of incapacity

iii. Assess the need for, impediments to, and optimal methods to reduce perioperative anxiety, including sedation

Coordinate the availability of required special perioperative resources, including environmental and management modifications to enhance cooperation, pain management. Discuss the effects of general anesthesia on cognitive disorders.

d) **Neurovascular**

i. Categorize and grade the severity of intracranial hemorrhage

ii. Estimate the risk of bleeding and/or vasospasm perioperatively

iii. Assess the implications for perioperative outcome and anesthetic management of intracranial vascular lesions based on location, size, and proposed procedure

e) **Peripheral Neuropathy**

i. Identify common causes of perioperative neuropathy

ii. Utilize appropriate consultation to diagnose peripheral neuropathy

iii. Discuss the relevance of peripheral neuropathy to choice of anesthetic

f) **Spinal Cord**

i. Assess the severity and anesthetic implications of spinal cord impingement and threats to spinal cord perfusion

ii. Assess the physiologic effects and anesthetic implications of pre-existing spinal cord injury. Assess the risk and anesthetic implication of autonomic hyperreflexia

iii. Movement disorders

iv. Identify movement disorders significant for anesthetic management

v. Utilize appropriate consultation to diagnose and stabilize movement disorders preoperatively

vi. Identify anesthetic implications of movement disorders, including drug interactions

vii. Identify anesthetic implications of pharmacotherapy for movement disorders and its withdrawal

g) **Myopathies**

i. Utilize appropriate consultation to assess the severity and systemic effects of muscular dystrophies
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ii. Identify risk factors for intra- and postoperative complications in patients with muscular dystrophies

h) Neuromuscular
  i. Identify the anesthetic considerations for myasthenia gravis and develop a perioperative plan including the use of anticholinesterase medication
  ii. Identify patients at risk for Eaton-Lambert syndrome

i) Psychiatric
  i. Identify patients taking antidepressant medication and be aware of the anesthetic considerations and potential drug interactions especially with monoamine oxidase inhibitors/SSRIs
  ii. Assess patient suitability for ECT and identify patient at increased risk for morbidity from ECT

j) Neurologic Investigations

Interpret and use the results of the following to assess risk and appropriately modify perioperative management

- CT head, spine
- Xray c-spine
- MRI Transcranial Doppler Imaging, Carotid Doppler, Angiography
- EEG
- EMG

26.4 Gastrointestinal

a) Identify risk factors for preoperative reflux and provide appropriate prophylaxis
b) Use information from consultants to characterize, grade the severity and assess the physiologic and anesthetic implications of hepatic dysfunction
c) Identify the presence and type of infectious hepatitis and assess the infectious risk
d) Identify the physiologic effects, comorbidities, metastatic spread, and anesthetic implications of GI malignancies, Carcinoid syndrome, paraneoplastic syndrome, thrombosis
e) Assess the anesthetic implications of chemotherapy used and coordinate laboratory/investigation for their systemic effects
f) Use the results of the following to assess risk and appropriately modify perioperative management
   - Abdominal imaging
   - Liver function testing

26.5 Musculoskeletal

a) Grade the severity, mechanical and anesthetic implications and other system involvement of:
   - Rheumatoid arthritis
   - Osteoarthritis
   - Ankylosing spondylitis
   - Osteogenesis imperfecta
   - Osteoporosis bone metastasis, dermatomyosites
b) Assess the anesthetic implications of pharmacology for the above and recommend appropriate perioperative management
c) Interpret and use the results of the following to assess risk and appropriately modify perioperative management
   - CT C-spine
   - Xray C T and L-spine

26.6 Dermatologic

a) Grade the severity, mechanical and anesthetic implications and other system involvement of:
   - Bullous diseases
   - Psoriasis
   - Scleroderma
   - Assess the anesthetic implications of burn injury

Assess the anesthetic implications of pharmacotherapy for the above and recommend appropriate perioperative management
26.7 **Hematologic**

a) Identify the presence abnormalities of hemostasis on preoperative history
b) Specify hematologic disease (von Willebrand, hemophilia etc.)
c) Interpret results of screening tests for hemostasis
d) Utilize laboratory testing to characterize hypercoagulable disorders including:
   i. Protein C, S, antithrombin III deficiencies
   ii. Homocysteinuria
   iii. Heparin induced thrombocytopenia
   iv. DIC V Leiden Factor
e) Utilize appropriate consultation to characterize the type and severity of other abnormalities of hemostasis, and provide preoperative optimization
f) Identify indications for thromboprophylaxis
g) Modify pre-existing anticoagulant/antiplatelet therapy to balance risks of intraoperative bleeding and thrombotic complications
h) Identify, diagnose and treat preoperative anemia using history physical and laboratory information:
i) Utilize consultation appropriately to evaluate and treat uncommon causes of anemia bone marrow transplantation, patent with hematologic cancer hemoglobin disorders (thalassemia, IgA deficit, sickle cell disease, porphyria, etc.)
j) Identify and utilize consultation to characterize and treat thrombocytopenia
k) Quantify expected blood loss and coordinate a plan to reduce the likelihood of allogeneic transfusion
l) Explain to patients the indications, risks and benefits of methods of optimizing preoperative haemoglobin and preoperative autologous donation
m) Interpret and use the results of the following to assess risk and appropriately modify perioperative management
   i. CBC
   ii. Anemia investigations excluding bone marrow
   iii. Hemoglobin electrophoresis
n) Use the results of the following to assess risk and appropriately modify perioperative management
   i. Bone marrow biopsy
   ii. Platelet function testing
   iii. Coagulation testing and factor levels
   iv. Thromboelastography

26.8 **Endocrine/Metabolic**

See Endocrinology 8

26.9 **Transplanted Organ**

See Transplantation 33
27 Regional Anesthesia

The competent Anesthesiologist shall demonstrate an understanding of the anatomy and physiology and an approach regional anesthesia

The subspecialist in regional anesthesia shall demonstrate proficiency in all of the above plus these additional specific objectives. A competent Anesthesiologist shall demonstrate knowledge of the principles of these objectives, but not be expected to perform these objectives

27.1 Pharmacology

The competent Anesthesiologist shall be able to demonstrate a knowledge of the pharmacology of the local anesthetic with respect to:

a) Mechanism of Action
   i. Explain the effects of sodium channel blockade on the action potential
   ii. Explain how local anesthetic blocks the sodium channel
   iii. Explain the mechanism of factors facilitating and hindering local anesthetic effect at the sodium channel

b) Toxicity
   i. Identify the manifestations of systemic toxicity
   ii. Know the different forms of LA toxicity – cardiac toxicity, direct neurotoxicity; methaemoglobinemia; allergy
   iii. Identify and provide appropriate management of local anesthetic toxicity
   iv. Describe the mechanisms of LA neurologic and cardiac toxicity
   v. Know factors influencing the development CNS & CVS toxicity (eg. speed of injection; site of injection; maximal doses; LA potency; hypercarbia; use of vasoconstrictors; cardiac/liver disease)

c) Kinetics
   i. Describe drug, patient and technical factors contributing to speed of onset of local anesthetics
   ii. Describe the drug, patient and technical factors contributing to recover from LA
   iii. Describe the determinants of serum LA concentration, its measurement, and the role of protein binding

d) Structure Activity Relationships
   i. Describe the molecular structure of LA, and the resultant effects on kinetics and dynamics
   ii. Describe the differences between amide & ester local anesthetics with examples of each. Understand the physicochemical properties of potency; protein binding; pKa & pH
   iii. Know the relationship between LA & differential blockade

e) Adjuvants

The Anesthesiologist must be able to explain the rationale for & against adding different adjuvants to LA’s for 1) peripheral 2) neuraxial blocks and be able to describe the mechanism; dose; clinical effects; adverse effects of:

a) Epinephrine
   i. List the clinical indications for and advantages of inclusion of epinephrine in local anesthetic for spinal epidural, regional and local infiltration
   ii. Describe the dose and effect of epinephrine on blockade characteristics when added to local anesthetic in spinal, epidural, regional and local infiltration
   iii. Describe the potential detrimental effects of inclusion of epinephrine in local anesthetic in spinal, epidural, regional and local infiltration
   iv. Describe the mechanisms of the above effects

b) Bicarbonate
   i. Give the arguments for an against the addition of bicarbonate to local anesthetics
   ii. Describe the mechanism of action of potentiation of local anesthetic blockade by bicarbonate

c) Opioids
   i. Discuss the rationale for and against, and clinical effects and adverse effects of opioids to local anesthetics for peripheral regional blockade
   ii. Describe the mechanisms, doses, clinical effects and adverse effects of opioids in neuraxial blockade

d) Alpha-agonists
   i. Discuss the rationale for and against and clinical utility of addition of alpha-agonists to local anesthetics for peripheral regional blockade
   ii. Describe the mechanisms, doses, clinical effects and adverse effects of alpha-agonists in neuraxial blockade

e) NMDA Antagonists
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i. Discuss the rationale for and against and clinical utility of addition of NMDA antagonists to local anesthetics for peripheral regional blockadge

ii. Describe the mechanisms, doses, clinical effects and adverse effects of NMDA antagonists in neuraxial blockade

27.2 Physiology
The consultant Anesthesiologist must be able to describe the following physiologic principles relevant to regional anesthesia

a) Nerve Conduction
   i. Describe the structural classification of nerve types and the relevance to local anesthetic action
   ii. Explain the generation of nerve action potential, refractory period and recovery
   iii. Describe the structure of nerves

b) Effects of Neuraxial Block
   i. Describe the cardiorespiratory effects of neuraxial blockade
   ii. Describe the differences and similarities between spinal and epidural blockade with respect to mechanism of action, effects of adjuvants and cardiorespiratory physiology
   iii. Describe the effects of neuraxial blockade on coagulation
   iv. Describe the effects of neuraxial blockade on the neurohumoral stress response
   v. Describe the effects of neuraxial blockade on postoperative respiratory effects of surgery
   vi. Describe the effects of neuraxial blockade on intraoperative blood loss (controlled hypotension)
   vii. Know factors influencing spread of spinal/epidural anesthesia

c) The Neuroendocrine Stress Response
   i. Describe the systems affected by the stress response, and the overall impact on each of those systems
   ii. Describe the specific changes within each of the affected systems that leads to the overall functional impact on those systems
   iii. Describe the extent to which the stress response is modified by anesthesia, the theoretical effect of such modification on surgical outcomes, and the extent to which the modification of stress response has been shown to affect outcomes

27.3 Technology
The Anesthesiologist must demonstrate an understanding of the technology available for identification of nerves for the performance of plexus and peripheral nerve blocks

a) Nerve Stimulation
   i. Describe the rationale for the use of stimulations for locating nerves
   ii. Discuss the advantages, disadvantages and limitations of nerve stimulation as a means of locating nerves
   iii. List and explain the characteristics of the ideal nerve stimulator
   iv. Describe the response characteristics of different nerve fibers to stimulation
   v. Use stimulation to safely and effectively perform regional blocks
   vi. Different types of needles – insulated vs. non-insulated needles

b) Ultrasound
   i. Describe the relative advantages, disadvantages and limitations of ultrasound as a method of locating nerves
   ii. Describe the basic physics principles of ultrasound and their clinical relevance in identifying different anatomic structures
   iii. Choose the appropriate ultrasound probe and machine settings to properly identify the desired structure
   iv. List and explain the characteristics of the ideal ultrasound machine
   v. Identify the ultrasonographic anatomy relevant to nerve localization
   vi. Use ultrasound to safely and effectively perform regional blocks
   vii. Static vs. dynamic use of ultrasound
   viii. In-plane vs. Out-of-plane techniques

27.4 Clinical Application of Regional Anesthesia
The competent Anesthesiologist must demonstrate an ability to perform the following specific objectives for all regional anesthetic techniques relevant to his/her level of training as indicated below, and in the context of anesthetic care situations within his/her sphere of practice:

a) Anesthetic Planning
   i. Generate and implement an anesthetic plan including appropriate options, contingency plans and expectations
   ii. Select an appropriate regional anesthetic technique(s) for anesthetic care
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iii. Discuss completely the relative advantage, disadvantage and physiologic implications of regional vs. general anesthesia, including specific risks and outcome in the context of anesthetic care situations within his/her sphere of practice
iv. Discuss regional PLUS GA vs. GA vs. regional
v. Discuss the use of regional techniques pre vs. post induction of general anesthesia
vi. Regional techniques in pediatric anesthesia

b) Nerve Localization
i. Describe anatomic landmarks for performance of blocks
ii. Utilize nerve stimulation for identification of plexuses and peripheral nerves for regional anesthetic techniques within his/her scope of practice
iii. Contrast the relative advantages and disadvantages of all applicable techniques of nerve localization including anatomic, stimulation, paresthesia, and image-guided approaches

27.5 Contraindications and Complications
The Anesthesiologist must demonstrate a knowledge of the limitations of regional anesthesia including contraindications and complications

a) Contraindications to Regional Anesthesia
i. Identify and, where appropriate, manage relative and absolute contraindications to regional anesthetics

b) Anticoagulation and Regional Anesthesia
i. Have an approach to regional anesthesia in the patient with abnormal coagulation parameters
ii. Plan regional anesthesia with reference to the current published guidelines from anesthetic associations and regulatory bodies pertaining to the conduct of regional anesthesia in the context of anticoagulation
iii. Assess the appropriate timing of regional anesthetic procedures relative to anticoagulation therapy
iv. Appropriately modify the anticoagulation, anesthetic plan or both in order to minimize overall risk and improve outcome
v. Interact with surgeons and administrators to create policies governing the interaction of anticoagulation and anesthetic/analgesic management

c) Complications of Regional Anesthesia
i. Describe the complications of regional anesthesia and the risk factor, presentation, diagnosis and treatment of:
   • Failed block
   • Intravascular injection of local anesthetic
   • Overdose
   • Epidural hematoma & abscess
   • Anterior spinal artery syndrome
   • PDPH
   • Post-operative neuropathy
   • Inadvertent spinal/subdural block

27.6 Spectrum of Anesthesia Techniques
The Anesthesiologist must demonstrate an understanding of the spectrum of regional anesthetic techniques and the ability to perform those relevant to his/her level of training.

The Anesthesiologist must demonstrate knowledge of basic surface anatomy & palpable landmarks and the dermatomal & peripheral nerve distribution as applicable to each specific block

He/she must be able to describe site-specific equipment; indications; contraindications & drug selection for each block

a) Neuraxial Blocks
i. Spinal – single shot midline and paramedian
ii. Continuous intrathecal catheter
iii. Epidural
   • Cervical
   • T1-4
   • T4-8
   • T8-L-5
   • Caudal
   • Tunneled epidural at any level
b) Upper Extremity Blocks
   i. Interscalene
   ii. Supraclavicular
   iii. Infraclavicular
   iv. Axillary
   v. Continuous – Any of the above
   vi. At the elbow
      • Median nerve
      • Musculocutaneous nerve
      • Radial nerve
   vii. At the wrist and hand
      • Ulnar nerve
      • Median nerve

c) Radial Nerve
   i. Digital nerves

d) Lower Extremity Blocks
   i. Lumbar plexus
   ii. Psoas compartment
   iii. Femoral nerve block/3-in-1 block

 e) Sciatic block
    i. Proximal to thigh
    ii. Popliteal
    iii. Continuous (any of the above)
    iv. Ankle block

f) All Limbs – IVRA (Bier block)

g) Trunk Blocks
   i. Paravertebral block
   ii. Intercostal nerve block
   iii. Continuous either of the above
   iv. Ilioinguinal/iliohypogastric
   v. Penile block

h) Head and Neck Blocks
   i. Supraorbital nerve block
   ii. Mental nerve block
   iii. Mandibular nerve block
   iv. Occipital nerve block
   v. Superficial cervical plexus
   vi. Retrobulbar & peribulbar blocks
   vii. Nasal block
   viii. Deep cervical plexus block

i) Airway Blocks

j) Topicalization
   i. Superior laryngeal
   ii. Lingual nerve
   iii. Transtracheal block
28 Remote Locations
The Anesthesiologist must demonstrate an understanding of the considerations related to providing anesthetic care in non-traditional locations e.g. MRI, Cardiac Catheterization Laboratories, Image Guided therapy suites and endoscopy suites

28.1 Physical Requirements
The Anesthesiologist must demonstrate an understanding of the physical requirements for provision of anesthesia in remote locations:

a) The anesthetizing location must conform to electrical code and excess anesthetic gas scavenging
b) Medical gas pipelines must meet the same standards as a regular operating room
c) The anesthetic machine must conform to CAS standards
d) Standard CAS monitors are required
e) Standard emergency drugs and equipment must be readily available
f) Anesthetic machines, monitoring and scavenging are the same as would be expected in a regular operating room. Including resuscitation equipment etc.

28.2 Personnel
The Anesthesiologist must demonstrate an understanding of the personnel required to provide safe anesthesia

a) Appropriate ancillary help must be available to the anesthesiologist

28.3 The Nature of the Remote Locations
The Anesthesiologist must demonstrate an understanding of the unique considerations for each location including the fact that these are frequently distant from the main operating room

28.3.1 Interventional Radiology

a) Radiation exposure: Patients and staff
b) Anesthetic considerations
   i. Limited access to patient
   ii. Movement of radiological equipment
   iii. Temperature management
c) Contract media complications
   i. Anaphylaxis
   ii. Interaction with Metformin
   iii. Renal failure
d) Temperature regulation.
e) Variety of procedures and their implications
   i. Biopsies
   ii. Angiography
   iii. AAA stent graft
   iv. Carotid artery stent
   v. Kyphoplasty/vertebroplasty
   vi. TIPS (transjugular intrahepatic portosystemic shunt)
   vii. Cerebral Aneurysm / AV malformation coiling
   viii. Radiofrequency ablation
   ix. E.G. vascular access procedures, biopsies, drain insertion angiography

28.3.2 MRI

a) Implications of magnetic field
b) Patient selection
c) MRI compatible anesthesia equipment and monitors
d) Management of resuscitation
c) Noise
f) Management of patient claustrophobia

28.3.3 Cardiac Catheterization Laboratory

a) Considerations as per Interventional Radiology
b) Specific considerations for cardiac patients
   i. Pediatric congenital heart disease
   ii. Adult valvular heart disease
   iii. Coronary artery disease
   iv. Cardiomyopathies
   v. Dysrhythmias – pacemakers and ICD’s
c) Type of procedure: diagnostic vs. therapeutic
   i. AICD
   ii. Electrophysiologic Studies

28.3.4 Endoscopy Suites

   a) Implications of bowel preparation on hydration and electrolytes
   b) Shared airway e.g. upper endoscopy

28.4 Electroconvulsive Therapy

a) Indications

b) Contraindications

c) Complications and management
   - Bradycardia
   - Tachycardia
   - Hypertension
   - Failure of seizure

28.5 Post Procedure Disposition
The Anesthesiologist must demonstrate knowledge with respect to postanesthetic care of these patients

a) Location
   i. Local vs. OR PACU
b) Discharge planning
c) Anticipation of complications
d) Lack of anesthesia personnel available to deal with emergencies
29 Renal / Urologic

Prevention of perioperative morbidity and mortality depends in part upon an understanding of renal physiology and pharmacology and the effects of alterations in renal function on the excretion of drugs administered during and after surgery. Therefore, the competent anesthesiologist must demonstrate knowledge and understanding of anesthesia and the renal system.

29.1 Basic Science

The Anesthesiologist must demonstrate knowledge of the anatomy and physiology of the renal excretory system

a) Functional Anatomy of the Kidneys, Ureters, and Bladder
   i. Description of the nephron
   ii. Description of the renal circulation and its regulation
b) Physiology of Urine Formation
   i. Sodium filtration and reabsorption
   ii. Water filtration and reabsorption
   iii. Physiologic control of glomerular filtration and solute reabsorption
c) Neurohumoral Regulation of Renal Function
   i. Aldosterone
   ii. Antidiuretic hormone
   iii. Atrial natriuretic peptide
   iv. Prostaglandins
d) Neuroendocrine Response to Stress of Trauma and Surgery
e) Effects of Anesthesia on Renal Function
f) Evaluation and Interpretation of Renal Function Tests
   i. BUN, creatinine, ratio, clearance
   ii. Urinalysis: Na, osmolarity, proteinuria, hematuria, urine sediment
g) Pharmacology of the Renal System
   i. Potential nephrotoxic agents
   ii. Renal excretion of anesthetic drugs
   iii. Pharmacology and classification of diuretics

29.2 Renal Protection

The Anesthesiologist must have an understanding of different renal protection strategies and the evidence in their use. The anesthesiologist must be able to describe an approach for renal protection.

29.3 Pathology

The Anesthesiologist must demonstrate knowledge of pathologies related to the renal system:

a) Chronic Renal Failure
   i. Clinical characteristics / the uremic syndrome
   ii. Dialysis treatment: indications, types, physiologic effects and complications
   iii. Anesthetic management of the patient with chronic renal failure:
      • Preoperative evaluation / optimization
      • Monitoring
      • Selection of anesthetic agents
b) Acute Renal Failure
   i. Pathophysiology of oliguria
      • Types
      • Diagnostic tests
      • Management
c) Hepatorenal Syndrome
   i. Pathophysiology
   ii. Treatment
   iii. Response to liver transplant

29.4 Anesthesia for Urologic Procedures
An appreciation of the pathology that can alter normal renal physiology and the non physiologic insults to which patients might be subjected during urological procedures will help the anesthesiologist optimize preoperative preparation, intraoperative anesthetic management and postanesthetic care of these patients.

The competent anesthesiologist must be able to demonstrate understanding of the considerations of, and to independently provide anesthetic care for patients presenting for the following procedures:

a) Transurethral Resection of the Prostate
   i. List the complications of TURP
   ii. Describe the TURP syndrome and its treatment
b) Prostatectomy: Open and Laparoscopic Lithotripsy
   i. Percutaneous ultrasonic lithotripsy
   ii. Extracorporeal shock wave lithotripsy (ESWL)
c) Endourologic Procedures
   i. Urethral
   ii. Bladder
   iii. Ureteral
d) Nephrectomy
e) Renal Transplant
30 Respiratory Physiology and Thoracic Anesthesia

The competent Anesthesiologist must demonstrate an in depth knowledge with respect to anatomy and physiology of the respiratory system.

30.1 Respiratory Anatomy and Physiology

30.1.1 Anatomy of Respiratory Tract

i. Anatomy of the airway and upper airway muscles
ii. Anatomy of the Tracheobronchial tree
iii. Functional histology and anatomy of the alveolus
iv. Pulmonary and bronchial circulation
v. Pulmonary lymphatics

30.1.2 Pulmonary Physiology

a) Pulmonary Mechanics: Elastic Forces and Lung Volumes
   i. Elastic recoil of the lungs and chest wall
   ii. Surface tension, surfactant, and its effects on lung mechanics
   iii. Alveolar, intrapleural and transmural pressures and their relationship
   iv. Hysteresis
   v. Lung and chest wall compliance and elastance
   vi. Static compliance versus dynamic compliance
   vii. Lung volumes, FRC
   viii. Physiologic changes with aging
   ix. Principles of measurement of lung volumes, lung compliance

b) Pulmonary Mechanics: Respiratory System Resistance
   i. Principles of gas flow and resistance: laminar flow, turbulent flow, flow through and orifice, Reynolds number
   ii. Respiratory system resistance
   iii. Gas trapping
   iv. Airway closure, closing capacity and closing volumes
   v. Flow-related airway collapse
   vi. Neuromuscular control of airway diameter
   vii. Pharmacology affecting airway resistance
   viii. Measurement of airway resistance and closing capacity

c) Control of Breathing
   i. Central nervous system control of respiratory drive
   ii. Peripheral receptors and respiratory drive
   iii. Lung reflexes
   iv. Carbon dioxide and respiratory control
   v. Oxygen, respiratory control and the response to hypoxia
   vi. Effects of drugs on respiratory drive
   vii. Methods of assessing control of breathing and sensitivity to hypoxia

d) Pulmonary Ventilation
   i. Functional anatomy of the muscles of respiration
   ii. Postural effects on respiratory muscle function
   iii. Work of breathing
   iv. Work against resistance
   v. Work against elastic recoil
   vi. Measurement of ventilation
   vii. Neuronal control of respiratory muscle function
   viii. Respiratory muscle fatigue

e) Pulmonary circulation
   i. Pulmonary blood flow and blood volume
   ii. Pulmonary vascular pressures
   iii. Pulmonary vascular resistance
   iv. Control of vascular tone – cellular mechanisms and neural control
   v. Control of vascular tone – pharmacology
vi. Effects of hypoxia and hypoxic pulmonary vasoconstriction
vii. Effects of lung volume
viii. Effect of lung inflation on pulmonary blood flow, pulmonary vascular resistance, and cardiac output
ix. Principles of measurement of pulmonary flow, cardiac output and pulmonary vascular resistance
f) Distribution of Pulmonary Blood Flow and Ventilation
   i. Distribution of ventilation
   ii. Anatomical distribution of ventilation
   iii. Gravitational effects on compliance and ventilation distribution
   iv. Gravitational effects on pleural pressure
   v. Distribution related to rate of alveolar filling – time constants
   vi. Distribution of perfusion
   vii. Gravitational effects on perfusion distribution
   viii. Gravity independent determinants of regional blood flow, (cardiac output, lung volume)
   ix. West’s four zones of the lung
   x. Ventilation: perfusion matching – V/Q ratio
   xi. Alveolar gas tensions
   xii. Dead space – anatomical and physiological
   xiii. Quantification of dead space
   xiv. Bohr, (dead space), equation
   xv. Venous admixture or shunt
   xvi. Effect of V/Q ratio on arterial PO2
   xvii. Measurement of ventilation / perfusion matching
   xviii. Alveolar air equation
   xix. Measurement of dead space
g) Gas Diffusion
   i. Diffusion of oxygen from alveolus to RBC
   ii. Diffusion of oxygen within the RBC and uptake by hemoglobin
   iii. Diffusion of carbon monoxide by hemoglobin and measurement of diffusing capacity
   iv. Factors affecting diffusing capacity
h) Oxygen
   i. The oxygen cascade
   ii. Factors affecting alveolar oxygen tension
   iii. The shunt equation
   iv. Oxygen carriage in the blood
   v. Oxygen delivery and oxygen consumption and its measurement
   vi. Physical solution
   vii. Hemoglobin
   viii. The oxyhemoglobin dissociation curve and factors affecting affinity of hemoglobin for oxygen
   ix. Abnormal forms of hemoglobin
   x. Oxygen stores
   xi. The role of oxygen in the cell
   xii. Energy production
   xiii. Aerobic and anaerobic metabolism
   xiv. Oxidative phosphorylation
   xv. Critical oxygen tension
   xvi. cyanosis
   xvii. Methods of oxygen delivery
   xviii. Oxygen toxicity
   xix. Measurement of oxygen levels – blood gases, pulse oximetry, tissue PO2
   xx. Mechanisms and Effects of hypoxia
   xxi. V/Q mismatch, shunt, decreased FiO2, hypoventilation
   xxii. Mechanisms of hypoxia under anesthesia
   xxiii. Physiologic effects of hypoxia
i) Carbon Dioxide
   i. Carriage of carbon dioxide in the lung
   ii. Physical solution
   iii. Carbonic acid and effect of carbonic anhydrase
   iv. Bicarbonate ion
   v. Carbamino carriage
   vi. Haldane effect
   vii. Distribution of CO2 in the blood
   viii. Factors affecting carbon dioxide tension
ix. Alveolar CO₂ – effect of ventilation
x. End expiratory CO₂
xi. Carbon dioxide output
xii. Measurement of carbon dioxide
xiii. Physiologic effects of hypercapnia and hypcapnia

30.1.3 Non-respiratory Functions of the Lung
i. Filtration
ii. Biological hazards
iii. Metabolism of endogenous compounds
iv. Pulmonary interstitial fluid mechanics
v. Starling equation

30.2 Physics of Gas Delivery

See monitoring and equipment 15.2.1

30.3 Inhaled Anesthetics

See Volatiles 34

30.4 Thoracic Anesthesia

The competent Anesthesiologist must demonstrate the knowledge and ability to provide care of patients presenting for thoracic surgery with respect to:

a) Preoperative assessment and optimization of the patient for thoracic surgery
b) Chest radiology
c) Fiberoptic bronchoscopy
d) Physiology of the lateral decubitus position, the open chest and one lung ventilation
e) Regional anesthesia for thoracic surgery
f) Anesthetic management for thoractomy and pulmonary resection
g) Anesthesia for esophageal and mediastinal surgery, including management of patients with a mediastinal mass
h) Management of thoracic trauma
i) Lung isolation for management of hemoptysis and bronchopleural fistula

30.5 Thoracic Surgical Procedures
The Anesthesiologist must demonstrate an ability to independently, provide anesthetic management for:

a) Tracheostomy
b) Rigid and fiberoptic bronchoscopy
c) Bronchoscopy and Mediastinoscopy
d) One-lung ventilation
e) Lobectomy/Pneumonectomy
f) Esophageal resection
g) Video assisted thoracoscopy
h) Endobronchial surgery, including laser resection
i) Transthoracic vertebral surgery
j) Management of post-thoracotomy pain
k) Management of post-thoracotomy complications
31 Statistics

31.1 Definition of terms

The consultant Anesthesiologist should be able to define the following statistical terms and state their differences where appropriate:

a) Mean; median; mode
b) Standard deviation (SD); standard error of the mean (SEM); 95% confidence interval (95% CI)
c) Type of data: continuous (ordinal/interval/ratio) vs. categorical (nominal)
d) Distribution of data: normal (Gaussian) vs. non-normal
e) \( \alpha \) and \( P \) value (level of statistical significance) vs. \( \beta \) and statistical power (1-\( \beta \))
f) Type I error vs. type II error
g) One vs. two sample tests; multiple sample tests
h) One-tailed vs. two-tailed tests and when to use them
i) Linear regression vs. correlation
j) Bias

The consultant Anesthesiologist should be able to define the following statistical terms and concepts, and independently compute corresponding values:

k) Sensitivity
l) Specificity
m) Positive predictive value
n) Negative predictive value
o) Incidence
p) Prevalence
q) Odds ratio
r) Relative risk
s) Absolute risk
t) Number needed to treat (NNT)
u) Number needed to harm (NNH)
v) Intention-to-treat analysis

31.2 Statistical tests

The consultant Anesthesiologist should know when the following statistical tests should be used for the following data types:

a) Comparisons of two groups
   i. Continuous Gaussian data: Student’s \( t \) test (parametric testing)
   ii. Continuous non-Gaussian data: Mann-Whitney \( U \) test/Wilcoxon rank-sum test (non-parametric testing)
   iii. Categorical data: Fisher’s exact test or chi-square test (contingency tables)

31.3 Study Characteristics

The consultant Anesthesiologist should be able to perform the following:

a) State the variables required for an a priori power analysis/sample size projection:
   i. Desired level of statistical significance (\( \alpha \))
   ii. Desired power (1 –\( \beta \))
   iii. Minimum clinically important difference to be detected
b) Evaluate statistical and clinical significance of the findings
   i. Correctly interpret \( P \) values
   ii. Correctly interpret measures of data scatter dispersion/variance (e.g. standard deviation)
   iii. State the difference between primary and secondary outcome variables
iv. Define and state the differences between the following types of experimental design

c) Systematic reviews of the literature and meta-analyses
   i. Experimental studies
   ii. Non-randomized and quasi-randomized controlled trials
   iii. Randomized controlled clinical trials (RCTs)
      - Double-blinded
      - Single-blinded
      - Non-blinded
   iv. Observational analytic studies (retrospective or prospective)
      - Cross-sectional studies
      - Case-control studies
      - Cohort studies
   v. Descriptive studies
      - Surveys

d) To know about but not expected to manage on his/her own, the consultant Anesthesiologist should know about the following methods/tools and be able to explain their purpose:

   i. Univariate and multivariate statistics
   ii. Kaplan-Meyer analysis and comparison of survival curves (logrank test)
32 Thermoregulation

Demonstrate a knowledge and understanding of the physiology and pathophysiology of the thermoregulation and its relevance in anesthesia

32.1 Basic Science

a) The Anesthesiologist will be able to define mild, moderate and deep hypothermia
b) The Anesthesiologist must demonstrate an understanding of the mechanisms of heat loss during anesthesia
   i. Convection
   ii. Conduction
   iii. Radiation
   iv. Evaporation
   v. Decreased heat production/metabolism
   vi. Prepping, draping/exposure
   vii. IV fluid & blood products
   viii. Vasodilation/Central neural blockade

32.2 Principles of temperature measurement

a) Sites
b) Accuracy

32.3 Thermoregulation

a) Body Temperature Regulation
   i. Neonate
   ii. Child
   iii. Adult
   iv. Elderly patient
b) Physiological changes with hypothermia
   i. Cardiovascular
   ii. Respiratory
   iii. CNS
   iv. Metabolic/endocrine/trauma
   v. Musculoskeletal
   vi. Renal
   vii. Haematological
   viii. GI

c) Effect of temperature on gases
   i. Solubilities
   ii. Temperature compensation of ABGs

32.4 Intraoperative heat loss

The Anesthesiologist should be competent in description, mechanism, effectiveness, and complications of the following techniques:

a) Methods of prevention of heat loss and raise of body temperature under anesthesia
   i. Ambient temperature
   ii. Humidification and circle systems
   iii. Fluid and blood warmers
   iv. Warming blankets
   v. Reflection blankets
   vi. Core re-warming including CPB, bladder, peritoneal and other forms of dialysis
   vii. Body thermal gradients & complications of re-warming

b) Adverse consequences of hypothermia including the following:
i. Delayed awakening
ii. Delayed drug metabolism
iii. Shivering including increased oxygen consumption
iv. Hypotension during re-warming
v. Impaired wound healing and infection
vi. Cardiac complications (arrhythmias, ischemia, hypertension, poor peripheral perfusion)
vii. Bleeding
viii. Augmented hormonal and metabolic “Stress response”
ix. Decreased patient comfort

32.5 Deliberate or therapeutic hypothermia

i. cardiac surgery
ii. neurosurgery
iii. vascular surgery
iv. critically ill patient.
v. following cardiac arrest

32.6 Resuscitation Medicine

i. a) Implications of accidental hypothermia in non-anesthetized patients: Emergency Room or Intensive Care Unit
ii. b) Alterations in ACLS protocols in severe hypothermia
iii. c) Management of re-warming patients with severe hypothermia
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33 Transplantation

33.1 Multiple organ donation

a) Preoperative evaluation and intra operative management of organ donors.
b) Define brain death, criteria for certifying brain death and various tests performed to confirm the diagnosis
c) Describe organ dysfunction after brain death especially cardiopulmonary complications, coagulopathy, temperature changes and diabetes insipidus
d) Describe the intraoperative management of multi-organ donors
   i. Multi-organ brain dead donors
   ii. Living related donors for kidney & liver
   iii. Donation after cardiac death (DCD)

33.2 Organ recipients

a) Management recipients for organ transplantation
b) Understand basic principles of Immunosuppression and graft rejection
c) Reperfusion injury
d) Management of Hyperkalemia
e) Understand post transplant complications including rejection, infection, Immunosuppression and be able to conduct anesthesia for surgical procedures in patients after organ transplantation
f) Transfusion medicine and coagulation management: See Hematology 11.6
g) Monitoring:

* Able to insert the transesophageal echocardiography probe and recognize normal cardiac structures and common pathological echocardiographic findings, e.g. mitral regurgitation, aortic stenosis, wall motion abnormalities, cardiac tamponade, perform a bubble contrast study, etc.

The sub-specialist Anesthesiologist will demonstrate an ability to independently provide anesthetic care for recipients in heart, lung and/or liver transplantation

33.3 Heart Transplantation

a) Patient Care

The Anesthesiologist must demonstrate an ability to:

   i. Conduct a preoperative evaluation of the patient presenting for cardiac transplantation
   ii. Understand the effects of end stage cardiac failure on other organ functions
   iii. Determine the cardiovascular and pulmonary monitoring requirements for optimal anesthesia care
   iv. Understand the principles of myocardial preservation
   v. Know the principles of extracorporeal circulation including ECMO, circulatory assist devices and circulatory arrest
   vi. Monitor the patient during cardiopulmonary bypass, and be able to separate a patient from cardiopulmonary bypass
   vii. Manage coagulation issues and blood component therapy
   viii. Monitor, diagnose and treat perioperative myocardial ischemia, cardiac arrhythmias and, left & right ventricular dysfunction
   ix. Monitor, diagnose and treat acute pulmonary dysfunction and pulmonary hypertension in the peri-operative period
   x. Transport critically ill patients to and from the O.R. safely

b) Medical Knowledge

   i. Perform a preoperative cardiac evaluation: History, medications, physical and airway examination, laboratory evaluation, CXR, EKG, stress testing, Echocardiography, cardiac catheterization data
   ii. Describe cardiac physiology: Cardiac cycle, pressure volume loops, systolic and diastolic function, preload, afterload, contractility
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iii. Describe coronary anatomy and physiology: Description of coronary anatomy, determinants of coronary blood flow, pathogenesis of myocardial ischemia, determinants of myocardial oxygen supply/demand ratio, coronary steal, coronary reserve

iv. Demonstrate an understanding of the effects of cardiac deefferentation and deafferentation (Denervation physiology)
v. Describe relevant cardiovascular pharmacology
   - Inotropes and vasopressors agents
   - Beta-blockers
   - Calcium channel antagonists
   - Angiotensin converting enzyme inhibitors
   - Peripheral vasodilators
   - Antihypertensives
   - Pulmonary vasodilators
   - Antiarrhythmic drugs
   - Diuretics
   - Thrombolytics: TPA, uro- or streptokinase
   - Anticoagulants: Heparin and substitutes, warfarin, anti-platelet drugs
   - Heparin reversal agents – Protamine, heparinase
   - Antifibrinolytics: Epsilon aminocaproic acid, tranexamic acid, aprotinin
   - Miscellaneous: Magnesium, DDAVP, Potassium

vi. Describe relevant anesthetic pharmacology in relation to cardiac function and preconditioning

vii. Extra corporeal membrane Oxygenation

viii. CardioPulmonary Bypass (CPB)
   - Initiating and weaning from CPB
   - Myocardial protection during CPB
   - Problems during weaning from cardiopulmonary bypass

ix. Mechanical support as a bridge to transplantation: Types, indications/contraindications, complications and limitations
x. Circulatory assist devices
   - Intra-aortic balloon pump counter pulsation (IABP): indications, contraindications, insertion techniques and complications
xi. Management of right heart failure, specific pulmonary vasodilators

xii. Independently manage anesthesia for surgical procedures after heart transplantation

33.4 Lung Transplantation
The consultant Anesthesiologist must demonstrate an understanding of:

a) Preoperative assessment of a patient before lung transplantation
b) Anesthetic management of lung transplant recipient
c) Monitoring during lung transplantation
d) Management of one lung ventilation, indications for cardiopulmonary bypass
e) Anesthesia for surgical procedures after lung transplantation
f) Outcomes

The sub-specialist Anesthesiologist must demonstrate an ability to independently provide anesthetic care for the patient undergoing lung transplantation.

33.5 Liver Transplantation
The Anesthesiologist must demonstrate an understanding of the management of a patient undergoing liver transplantation:

a) Medical Knowledge - Basic Science

The Anesthesiologist must demonstrate an understanding of:

i. The pharmacology of various drugs in patients with end stage liver disease
ii. Hepatic physiology
iii. Antifibrinolytic agents
iv. Interpret arterial blood gases and acid base balance

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v. Interpret hemodynamic parameters
vi. Physiology and monitoring of Coagulation system
vii. Stages of liver transplantation
viii. Transfusion medicine
ix. Veno-venous bypass
x. Immunosuppression and graft rejection

b) Clinical Knowledge
i. Causes of liver dysfunction
ii. Indications and contraindications for liver transplantation
iii. Effect of liver failure on all organ systems
iv. Scoring systems for severity of liver disease
v. Treatment of Hyperkalemia
vi. Transfusion medicine

c) Patient Care

The sub-specialist Anesthesiologist must be able to provide anesthetic care for patients undergoing liver transplant surgery and are expected to demonstrate and ability to:

i. Perform preoperative evaluation of patients with end-stage liver disease

ii. Manage recipients of cadaveric or living related liver transplant
   - Formulate anesthetic plan
   - Appropriate preparation
   - Manage patients during three phases of liver transplantation
   - Interpret different coagulation parameters and treat coagulopathies
   - Assess and manage blood volume status
   - Treat hyperkalemia and correct other electrolyte abnormalities
   - Treat reperfusion syndrome
   - Prevent and treat anemia
   - Prevent infection
   - Maintain normothermia
   - Transport and hand over the post transplant patient to the ICU staff
   - Management of patients for living donor hepatectomy and major liver resection
34 Volatile Agents
The competent Anesthesiologist must demonstrate an understanding of the volatile anesthetics with regard to safety, and efficacy, toxicity, and inertness of halogenated gases currently in use. He/she must be able to discuss the theories of the mechanism of action of inhaled anesthetics.

a) Nitrous Oxide
b) Ether, chloroform, trichloroethylene, methoxyflurane, cyclopropane
c) Halothane, enflurane, isoflurane, desflurane, sevoflurane

34.1 Physical Characteristics
The competent Anesthesiologist will be able to explain the following Pharmacokinetic concepts:

a) Physical characteristics of gases
   i. Chemical potential (escaping tendency)
   ii. Vapour pressure
   iii. Boiling point
   iv. Mixtures
   v. Gases in solutions
   vi. Gas-liquid interface
   vii. Tension or partial pressure
   viii. Fractional volume
   ix. Solubility

b) Properties of Inhaled Anesthetics
   i. Bidirectional transfer and equilibration
   ii. Relative lack of absorption by tissues
   iii. Metabolism

c) Uniqueness of Inhaled Anesthetics
   i. Route of administration
   ii. Bidirectionality and equilibrium
   iii. Adjustability

34.2 Uptake and Distribution
He/she must demonstrate a thorough understanding of the concepts underlying uptake and distribution and the factors which increase and decrease the rate of rise of $F_A/F_1$

a) $F_A/F_1$
   i. Effect of fresh gas flow
   ii. Capacity of circuit
   iii. Effect of fractional concentration or pressure of gas
   iv. Effect of time and time constant
   v. 1st order kinetic
   vi. Effect of circuit absorbents
   vii. Theory with and without uptake
   viii. Effect of FRC
   ix. Effect of ventilation perfusion mismatching
   x. Concentration effect
   xi. Overpressurization
   xii. Second Gas effect

b) Compartment model
c) Vessel Rich group/Muscle/Fat/Vessel – poor group
d) Gradient from machine to brain
e) Partition coefficients
   i. blood gas
   ii. Blood brain
f) Clinical differences between prolonged and short anesthesia
g) Elimination
h) Percutaneous and visceral
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i) Diffusion between tissues
j) Metabolism
k) Exhalation
l) Diffusion hypoxia

34.3 **Toxicity**
The Anesthesiologist must be able to discuss the metabolism and biotransformation of volatile agents

a) Desflurane and Carbon Monoxide
b) Effect of hepatic and renal disease on metabolism
c) Sevoflurane and compound A
d) Fluoride production
e) Clinical overview of agents

34.4 **Occupational Exposure**
The Anesthesiologist must demonstrate an understanding of the Occupational and Environmental concerns in the use of volatile anesthetic agents

34.5 **Pharmacology**
The Anesthesiologist must demonstrate knowledge with respect to the following issues related to use of the various agents:

a) Halothane
   i. Solubility and metabolism
   ii. Controversy over its’ continued use
b) Enflurane and Isoflurane
   i. Fluoride production
   ii. Seizure activity on EEG
   iii. Coronary Steal controversy
c) Desflurane
   i. Blood gas solubility
   ii. Relative lack of Low potency, stability, pungency, high vapour pressure
   iii. Peculiarity of vaporizer
   iv. Tachycardia and hypertension
   v. Low metabolism
   vi. Effect of dry CO2 absorbent and CO production
   vii. A role in outpatient surgery
d) Sevoflurane
   i. Acceptability as inhalational induction agent
   ii. Solubility
   iii. Coronary vasodilation and pre-conditioning
   iv. Non-production of antibody formation
   v. CO production and heat
   vi. Compound A low flow anesthesia
   vii. Nephrotoxicity controversy - Fluoride
e) Nitrous Oxide
   i. Characteristics
   ii. Role as adjuvant
   iii. Controversies
   iv. Effect of PONV
   v. Inactivation of B12 metabolism
   vi. Effect on closed, and potential air spaces
   vii. Environmental considerations

34.6 **Clinical Effects**
The competent Anesthesiologist will be able to discuss the following with respect to clinical utility of volatile agents:

a) MAC
   i. Definitions, types (MAC awake, MAC movement, MAC aware, MAC BAR)
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ii. What factors increase and decrease MAC
iii. MAC for commonly used agents

b) Induction
i. Volatile induction
ii. Appropriate agents
iii. Risks and benefits

c) Maintenance
i. Safety
ii. Adjustability
iii. Generalizability of use regardless or age, habitus
iv. Cardiac and cerebral blood flow
v. Predictable recovery
vi. Absence of analgesia
vii. PONV
viii. CO and Hepatitis

d) Central Nervous System
i. CMRO2 – effect on EEG
ii. CBF
iii. ICP
iv. Autoregulation and Uncoupling
v. Role of individual agents
vi. Role of nitrous oxide
vii. Effect on CSF production
viii. Effect on response to hyper and hypocarbia
ix. Cerebral protection

e) Circulatory System
i. Hemodynamics
ii. Cardiac Index
iii. CVP
iv. Systemic vascular resistance, pulmonary vascular resistance
v. Contractility
vi. Other effects
vii. Distribution of blood flow
viii. Halothane, sensitization of myocardium
ix. Relation to adrenaline

f) Pulmonary System
i. Effects in spontaneously breathing patients
ii. Resting PCO2
iii. Mechanics of ventilation
iv. Response to CO2
v. Response to hypoxia
vi. Smooth muscle tone and bronchodilations
vii. Mucociliary function
viii. Pulmonary vascular resistance (HPV) and relevance to OLV

h) Neuromuscular System and Malignant Hyperthermia
i. Effect on skeletal muscle
ii. Triggering of MH response; relative potency of different agents
iii. Investigation for MH
iv. Reproductive and genetic effects
v. Limitation of animal studies
vi. Low grade long term exposure

i) Effects of Volatile Agents in Pregnant Patients
ii. Effect of methionine synthetase and thymidylsynthetase by nitrous oxide

viii. NIOSH standards
ix. Effect on Uterine Smooth Muscle
x. Effect on fetus
xi. Effect on fetal loss
xii. Toxicity

j) Nitrous Oxide
xiii. Effect of SNS
xiv. Coronary Steal (see above)
 xv. Preconditioning and Cardioprotection
xvi. Autonomic effects
xvii. Effect on baroreflexes
xviii. Effect on Sympathetic Outflow (Desflurane)
MAD Days

Multidisciplinary Academic Days are held twice a year. They are coordinated through the PGME office. Residents are encouraged to attend these dates and are given time off clinical duties to attend.

http://postgrad.medportal.ca/keydates.aspx

http://delimedia.mcmaster.ca/delimedia/Catalog/default.aspx?cid=479ecaf7-870e-4926-aa9ea2c8cc7b73c
The Department of Anesthesia has a supportive and productive research department, headed up by the Research Chair, Dr. James Paul. The Research Webpage contains a wealth of information: it summarizes our research activities, highlights important meeting dates and deadlines and helps residents in their research pursuits.

Our department has a number of resources to assist residents with their research. Toni Tidy, our Department Research Coordinator, can assist with grant preparation and submission, CommonCV development and REB submissions. Dr. Lehana Thabane is a PhD biostatistician and research methodologist, and can assist with protocol development and statistical analysis. He is in the research office and available to meet with people on most Wednesday mornings. For those that want to discuss their research ideas or current project, the research group meets once a month, typically on the second Tuesday of the month at 16:00. Researchers wishing assistance with their data analysis and sample size calculations need to present at this meeting before beginning their project; please contact Toni Tidy to attend.

Before launching a new study we recommend that residents present their project at a Research Interest Group Meeting. These dinner meetings include a methodology presentation followed by one or two research proposal presentations. After a protocol is presented there is a round table discussion that discusses the finer points of the study design. The goal is to address any potential concerns before beginning.

An Annual Research Retreat is held in the spring to give an overview of the research activity for that year and to allow researchers to present their latest findings. In addition, there is the McMaster-Western Annual Research Exchange Day held in the spring where medical students, residents and fellows present their research projects in a judged competition. This event is alternately hosted in Hamilton or London.

All PGY-1 residents take research methodology course in the fall term in order to give them a framework for formulating a research question, literature reviews, study designs, selecting a study population, choosing outcomes and interpreting results.

All residents are required to complete a research project during the 5-year program and the minimum requirement is a retrospective chart review, but other projects are appropriate, including a meta-analysis, a survey study or even a clinical trial. This is described further within this research chapter, in the document entitled, “Resident Research Requirements”. Besides completing this project, residents are required to present their work once during the residency at the McMaster-Western Research Exchange Day.

Before starting on a research project please find a staff mentor (who can be a staff anesthesiologist or a faculty member from another specialty) and submit a Research Project Application Form. In some cases, a research elective is granted and this can be used to work on research projects during dedicated time. The Research Elective Form must be filled out and signed by the Program Director and the Associate Research Chair. Please ensure that REB approval (if applicable) has been secured prior to booking your research elective.

If you have any questions or need help getting started with your research project please feel free to contact Dr. James Paul: paulj@mcmaster.ca

James Paul, June 24, 2015.

Revised March 2016
Minimum Requirements for Research during Anesthesia Residency

All resident must complete one of the following requirements during their residency training:

- Quality assurance project (chart review); or
- Systematic review or meta-analysis; or
- Clinical trial or questionnaire study

You can choose the type of project that best suits your interests and study question. The most practical choice is likely either a quality assurance project or a systematic review as these studies don’t require funding, you don’t have to recruit patients and get consent and in the case of a systematic review, you don’t need to get Research Ethics Board approval. Most research ideas are born from your clinical practice when questions about diagnosis or treatment arise but if you have trouble coming up with ideas you should talk to your staff or browse the research presentations from previous Resident Exchange Days.

This course is the introduction course for the Health Research Methodology masters program. The required assignments involve identifying a research question, reviewing the literature and writing a protocol with the proposed methods. Residents can carry this proposal forward for their research project or have the option of choosing something different once they have more clinical anesthesia experience. Once a study question is identified, residents need to find a staff member to act as a research supervisor. This person will be responsible for overseeing and assessing the research project. If you have trouble finding a supervisor, contact Toni Tidy or Dr. James Paul in the Anesthesia Research Office.

When planning any kind of project, residents are encouraged to work in teams, either with medical students and/or other residents. It helps to have a group of people to tackle a project. Once the study question, project type, team members and supervisor have been identified, the next step is to do complete the Research Project application form. The purpose of this form is to ensure the project is appropriate and that you have the necessary supports in place. Once approved, you should complete a literature review on the topic, write the introduction for the paper and the last section of the introduction should clearly state the study question. Then the proposed methods for the study need to be written. The goal should be to write both the introduction and methods sections in enough detail that they would be sufficient for publication. You then need to submit the project for REB approval. REB approval is mandatory (except in the case of a systematic review) before any data collection takes place. The Department’s research website has a list of past resident projects under the Exchange Day section and Research Interest Group and Retreats to give you an idea of what is a good resident project.

There are some grants available to residents and the Department of Anesthesia will provide matching funds to help support the projects as required. Residents are encouraged to submit their abstract to both the ASA and CAS Annual Meetings. Residents that are accepted to present their work at these meetings will have their travel costs covered by the Department. Residents are allowed to take research elective time outside of the operating room when they are not booked in off-service rotations. Typically, this would occur during the PGY3 year. The Program Director and the Research Chair must approve the research electives and residents must have REB approval for their project before taking such an elective.

Before completion of residency training, the expectation is that all residents will present at least once during their residency training at Resident Exchange Day, which is held in June of each year in conjunction with the University of Western Ontario. This presentation can be either the methods of a planned project or the results of a completed study. The Program offers prizes to those residents who place first, second or third.

Dr. James Paul
June 26, 2014
June 2016
**Research Electives**

Residents may request to do one block of research elective, which will usually be allocated in the PGY3 year, but could also occur in the PGY2 or PGY4 year. The granting of a research elective is at the discretion of the Program Director and the Associate Chair, Research. Some of the considerations include:

1. The resident must complete the Anesthesia Research Elective Application Form
2. The research project must meet the requirements stipulated for the residence program
3. To be eligible for a research elective the resident must be in good standing in their clinical rotations and not require any remediation for completed rotations
4. REB approval (if applicable) must be in place prior to the elective being approved
5. If the resident plans to undertake a systematic review or meta-analysis, the introduction, question and methods should be written up before the elective begins.
6. Individuals involved in a group resident project may still be considered for a research elective depending on the magnitude of the project and the individual workload. Priority would be given to the lead resident investigator.
7. The elective is approved for the project listed on the application. If the intended project falls through (prior to the elective), the resident must notify the program and the elective will be re-scheduled or substituted with a clinical rotation.
8. The capacity of the resident for self-directed work will be taken into consideration when deciding whether to grant the elective.
9. Significant progress on the project is expected, commensurate with the provision of 20 full working days (minus post-call days).
10. The elective must take place in Hamilton in order to allow for proximity to McMaster research infrastructure and the research supervisor unless the research activity is being done at another academic institution with a mentor from that site.
11. The resident must meet with his/her supervisor 2 weeks prior to their elective plus weekly during the elective to report on progress and receive ongoing guidance. The resident must document these meetings (dates and results of discussions). The meetings have to be booked and confirmed by Toni Tidy.
12. At the end of your elective, the resident is responsible to submit a study document to their supervisor which will be used for the rotation evaluation.
13. Although there is significant latitude for “flex time” during the research elective, the resident must remain available to the program during the research elective. If the resident has a firm personal commitment on a particular day, consideration of booking a vacation or PL day should be made as would be the case on a clinical rotation.
14. The research project will be formally evaluated at the end of the rotation.
I understand that in order to receive a satisfactory evaluation I have to meet the requirements listed in the research elective document. Failure to meet these requirements will result in an unsatisfactory evaluation.

Signature required:

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<th>Resident</th>
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Anesthesia Research Project Application Form

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<th>Name of resident:</th>
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<td>Year of training?</td>
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<td>Name of supervisor:</td>
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<td>Date: (dd/mm/yyyy)</td>
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Project title:

Co-investigators:

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<th>Name</th>
<th>Position*</th>
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*Note: undergraduate student, medical student, resident, graduate student, staff, statistician, research assistant, nurse, pharmacist
1. What is your research question?

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[PICOT format not applicable]

2. Will this project be the one used to fulfill your residency research requirements?

- [ ] Yes
- [ ] No

3. What type of type of research project are you planning?

- [ ] Quality assurance/Chart review
- [ ] Systematic review
- [ ] Questionnaire study
- [ ] Clinical trial
- [ ] Prospective cohort study
- [ ] Case-control study
- [ ] Case series
- [ ] Case report
- [ ] Case report
- [ ] Narrative review
- [ ] Simulator study
- [ ] Animal study
- [ ] Cadaver study
- [ ] Other

4. What area of research does your project investigate?

- [ ] General anesthesia
- [ ] Subspecialty anesthesia
- [ ] Perioperative medicine
- [ ] Postoperative care
- [ ] Critical care medicine
- [ ] Pain medicine
- [ ] Education
- [ ] Other:__________________

5. Have you obtained Research Ethics Board (REB) approval?

- [ ] Yes
- [ ] No
- [ ] Not applicable (e.g. systematic review)
- [ ] Pending

6. Will you require any funding for your study?

- [ ] Yes
- [ ] No
  a. Total budget:_______
  b. Plan for funding
     - [ ] Supervisor
     - [ ] Department
     - [ ] Grant application
     - [ ] Other:
7. Have you met with a statistician to discuss your project?
   - Yes
   - No
   - Pending

8. Have determined the required sample size for your project?
   - Yes, N = __________
   - Pending
   - No
   - Not applicable (e.g., systematic review)

9. Have you presented your study at a Department research meeting?
   - Yes
   - No
   - Describe: ______________________

10. What have you completed to date (check all those that apply)?
   - Literature review
   - Formulated a study question
   - Introduction section
   - Methods section
   - Analysis plan
   - Sample size calculation
   - Study budget
   - Applied for a study grant
   - Applied for REB approval
   - Obtained REB approval
   - Data collection
   - Analysis
   - Manuscript preparation

11. What do you plan to complete for this research project (check all those that apply)?
   - Literature review
   - Introduction
   - Methods section
   - Study budget
   - Apply for a study grant
   - Data collection
   - Analysis
   - Discussion section
   - Manuscript preparation
   - Submit for publication
   - Presentation preparation

Program Director | Date
--- | ---

Associate Chair, Research | Date
Anesthesia Research Elective Application Form

<table>
<thead>
<tr>
<th>Name of resident:</th>
<th>Name of supervisor:</th>
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<tr>
<th>Year of training?</th>
<th>Proposed start date:</th>
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<tbody>
<tr>
<td>☐ PGY-1</td>
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<td>☐ PGY-2</td>
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<th>Proposed completion date:</th>
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<th>Application date:</th>
<th>Duration (weeks):</th>
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Note: You must have a research supervisor before applying for a research elective and the recommended duration for an elective is a one-block rotation. Once your rotation is complete your supervisor will submit a formal evaluation to the Department.

Project title:

Co-investigators:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position*</th>
<th>Name</th>
<th>Position</th>
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</table>

*Note: undergraduate student, medical student, resident, graduate student, staff, statistician, research assistant, nurse, pharmacist
1. What is your research question?

<table>
<thead>
<tr>
<th>Population:</th>
<th>Intervention:</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Outcome(s):</th>
<th>Control:</th>
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<th>Timeframe:</th>
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</table>

☐ PICOT format not applicable

2. Will this project be the one used to fulfill your residency research requirements?

☐ Yes  ☐ No

3. What type of type of research project are you planning?

☐ Quality Assurance/Chart Review  ☐ Systematic Review

☐ Systematic Review  ☐ Questionnaire Study

☐ Questionnaire Study  ☐ Clinical Trial

☐ Clinical Trial  ☐ Clinical Trial

Note: Case reports are not acceptable for research elective projects

4. What area of research does your project investigate?

☐ General anesthesia  ☐ Critical care medicine

☐ Subspecialty anesthesia  ☐ Pain medicine

☐ Perioperative medicine  ☐ Education

☐ Postoperative care  ☐ Other:__________________

5. Have you obtained Research Ethics Board (REB) approval?

☐ Yes  ☐ No  ☐ Not applicable (e.g. systematic review)

☐ No  ☐ Pending  ☐ Pending

Note: If REB approval is required for your study then this must be obtained prior to the start of your proposed research elective.

6. Will you require any funding for your study?

☐ Yes  ☐ No

a. Total budget:________

b. Plan for funding

☐ Supervisor

☐ Department

☐ Grant application

☐ Other:
7. Have you met with a statistician to discuss your project?
   □ Yes □ No □ Pending

8. Have determined the required sample size for your project?
   □ Yes, N = __________ □ Pending
   □ No □ Not applicable (e.g. systematic review)

9. Have you presented your study at a Department research meeting?
   □ Yes □ No
   ○ Describe:________________________

10. What have you completed to date (check all those that apply)?
    □ Literature review □ Applied for a study grant
    □ Formulated a study question □ Applied for REB approval
    □ Introduction section □ Obtained REB approval
    □ Methods section □ Data collection
    □ Analysis plan □ Analysis
    □ Sample size calculation □ Manuscript preparation
    □ Study budget

11. What do you plan to complete during your research elective (check all those that apply)?
    □ Literature review □ Analysis
    □ Introduction □ Discussion section
    □ Methods section □ Manuscript preparation
    □ Study budget □ Submit for publication
    □ Apply for a study grant □ Presentation preparation
    □ Data collection

<table>
<thead>
<tr>
<th>Program Director</th>
<th>Date</th>
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<th>Associate Chair, Research</th>
<th>Date</th>
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</table>
Department of Anesthesia Evaluation of Resident Research

Start Date: ____________________________

Completion Date: ____________________________

Project Title: ____________________________

Mentor: ____________________________

Project Type:
- Quality Assurance/Chart Review
- Systematic Review
- Questionnaire Study
- Clinical Trial
- Prospective Cohort Study
- Case Report
- Other

Research Ethics Board approval obtained?
- No
- Pending
- Yes

Stage of project completed (check all that apply):
- Literature review
- Formulated a study question
- Introduction
- Methods section
- Analysis plan
- Study budget
- Applied for a study grant
- Applied for REB approval
- Data collection
- Manuscript preparation
- Submitted for publication
- Published

Project presented?
- Resident Research Day
- CAS Annual Meeting
- ASA Annual Meeting
- No
- Other (please state below)

If other, please state: ____________________________

<table>
<thead>
<tr>
<th>Scientific background not covered adequately. Rational for the study not clear. Objectives and hypotheses not outlined.</th>
<th>Scientific background, rationale for the study, objectives and hypotheses well described and appropriately referenced.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Poor</td>
<td>2 Fair</td>
</tr>
</tbody>
</table>

Introduction: ____________________________
### Research Question

<table>
<thead>
<tr>
<th>Research question not clear or was incomplete.</th>
<th>Research question was clearly formulated and delineated the study population, intervention, control treatment, outcomes and study timeframe.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Poor</td>
<td>5 Good</td>
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<tr>
<td>2 Fair</td>
<td>6</td>
</tr>
<tr>
<td>3 Good</td>
<td>7 Excellent</td>
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</table>

#### Comments:

- Research question not clear or was incomplete.
- Research question was clearly formulated and delineated the study population, intervention, control treatment, outcomes and study timeframe.

### Methodology

<table>
<thead>
<tr>
<th>Trial design appropriate. Description of eligibility criteria for participants, study setting, primary and secondary outcomes, blinding (if applicable), randomization scheme (if applicable), and data management.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Poor</td>
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<tr>
<td>2 Fair</td>
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<tr>
<td>3 Good</td>
</tr>
</tbody>
</table>

#### Comments:

- Trial design appropriate. Description of eligibility criteria for participants, study setting, primary and secondary outcomes, blinding (if applicable), randomization scheme (if applicable), and data management.

### Sample Size

<table>
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<tr>
<th>'A priori' sample size determined using an appropriate rationale.</th>
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<tr>
<td>1 Poor</td>
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<td>2 Fair</td>
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<tr>
<td>3 Good</td>
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</tbody>
</table>

#### Comments:

- 'A priori' sample size determined using an appropriate rationale.

### Results

<table>
<thead>
<tr>
<th>The flow of patients through the study (enrolment, intervention allocation, follow-up, and data analysis) is outlined. The recruitment period is specified. Baseline data for each study group is tabulated. For each outcome the results for each group, and the estimated effect size and its precision (such as 95% confidence interval) is stipulated.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Poor</td>
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<tr>
<td>2 Fair</td>
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<tr>
<td>3 Good</td>
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#### Comments:

- The flow of patients through the study (enrolment, intervention allocation, follow-up, and data analysis) is outlined. The recruitment period is specified. Baseline data for each study group is tabulated. For each outcome the results for each group, and the estimated effect size and its precision (such as 95% confidence interval) is stipulated.
The discussion doesn't adequately address the interpretation of the results, the trial limitations or the generalizability of the outcomes.

Important results are summarized and discussed in the context of other existing evidence. The trial strengths and limitations, potential biases and generalizability is discussed.

<table>
<thead>
<tr>
<th></th>
<th>Not applicable</th>
<th>1 Poor</th>
<th>2</th>
<th>3 Fair</th>
<th>4</th>
<th>5 Good</th>
<th>6</th>
<th>7 Excellent</th>
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<td>Discussion:</td>
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Report unclear in areas and presentation not well organized.

Writing style clear and concise. Report well organized.

<table>
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<tr>
<th></th>
<th>1 Poor</th>
<th>2</th>
<th>3 Fair</th>
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<tr>
<td>Writing/Presentation/Organization:</td>
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**General Comments:**

Evaluation

☐ ☐ Satisfactory
☐ ☐ Unsatisfactory
☐ ☐ Further Wbrk Necessary

The following will be displayed on forms where feedback is enabled...

*(for the evaluator to answer...)*

*Did you have an opportunity to meet with this trainee to discuss their performance?*

☐ Yes
☐ No

*(for the evaluee to answer...)*

*Did you have an opportunity to discuss your performance with your preceptor/supervisor?*

☐ Yes
☐ No
Policy on Access to Residents for Research Projects

Preamble:

In order to conduct research on topics in postgraduate medical education, researchers sometimes seek to access postgraduate learners. In other cases, researchers seek to determine the specific opinions or view of postgraduate learners on a non-medical education topic.

In order to access postgraduate trainees, the PGME office is often approached and asked to collaborate. While the PGME Office and individual program do have access to the postgraduate trainees, there is some concern that the information sought and the volume of requests for study participation could pose an undue burden on postgraduate trainees and may represent a violation of their expectation of privacy.

Scope:

This policy applies to all research projects that seek access to postgraduate trainees (all trainees registered with the PGME Office) through the central PGME Office. This includes research projects initiated both internally and externally to McMaster University. Programs may have their own specialty specific process for surveys being distributed to their own residents.

Process:

1. Researcher(s) will submit to the PGME Office their proposal. The proposal should consist of an executive summary of the proposed project (1 – 2 pages). The outline must include the purpose, methods, expected outcomes and anticipated timelines. The names and affiliations of all members of the research team must also be provided.

2. Research Ethics Board (REB) approval must be included with the submission.

3. The submission will be reviewed by a subcommittee of the Postgraduate Medical Education Committee who will advise the PGME Office and the PGE Committee.

4. The subcommittee will review the request keeping in mind the following guiding principles:
- Is there a benefit to the residents / clinical fellows who participate in the study?
- Is there a benefit to future residents / clinical fellows or students?
- The overall burden to residents, in terms of the number of surveys being distributed, the length of the survey etc.
- Is the information to be obtained from the study likely to be of use to the Faculty of Health Sciences or the University in program evaluation or future planning?
- The PGME Office will not provide resident email addresses to researchers.
- That the method of distribution and collection of information will protect the trainee’s identity and privacy.

**Membership of Subcommittee**

There will be broad representation on the subcommittee. Representation shall include the major programs such as Family Medicine, Internal Medicine, General Surgery, Pediatrics. Representation may be a Program Director or a faculty member. Resident representatives are necessary to provide Resident input and guidance.
Clerkship Teaching

Anesthesia residents at McMaster have the opportunity to develop teaching skills through their involvement in the Undergrad Clerkship Rotation in Anesthesia (2 weeks). This involvement takes various forms, which are detailed below.

The clerkship rotation involves 7 clinical days in the operating room and 3 days of out-of-OR teaching.

Module 1 (Monday)
- Morning: Resident or faculty delivers a Powerpoint lecture which covers introductory topics in Anesthesia. The Powerpoint file is provided for the resident or faculty. This takes place in MDCL.
- Afternoon: The resident or faculty assists with teaching the clerks in the simulation centre (CSBL) using task trainers, with a focus on airway management and vascular access skills. If the resident is involved, they are joined by a faculty supervisor.

Module 2: (Tuesday)
- The second day involves a full day delivery of didactic lectures covering topics such as Pharmacology, Goals and Objectives of Anesthesia, Volume Assessment, Regional Anesthesia and Special patients. The powerpoint file is provided to the resident or faculty.

Module 3: Clinical Experience:
This takes place on Wednesday until the following Thursday (7 days). During the clinical experience, the clerk will spend one day on call (until approximately 11 pm) during which time he/she reports to and is supervised by the resident on call. The resident may also encounter a clerk during the regular OR days (clerks and residents may, on occasion, have the same assignment).

When working together, the resident will undertake clinical teaching in the operating room, focusing on the correlation of pharmacology/physiology principles with the clinical situations at hand. The resident may assist with the teaching of technical skills under the supervision or direction of the staff anesthesiologists. The clerk will follow the resident to any out-of-OR situations, such as Labour and Delivery or the Trauma Suite. In all cases, the
resident must prioritize patient well-being while also attending to the clerk’s educational needs.

Double-booking of residents and clerks during a daytime OR

In some cases, it may be necessary to double-book a clerk and resident in the same operating room during the day. This provides a good teaching opportunity for a senior resident. **Double-booking should only occur with PGY5 residents and must not occur more than 2 times over the course of one block. (May 2015 RTC).**

Module 4: Simulation

The clerks spend their final day with a written exam (half day) and a half day in the simulation lab. Two different cohorts spend a half-day each in the simulation lab on Module 4.. In the Simulator, they run through a series of scenarios that have been developed for learners at their level. Typically, 4-5 scenarios will be done for the cohort over the half-day. With as many as 8-10 students in each half day session, the students usually run through the scenario in pairs, with the remaining clerks observing.

The resident will attend both morning and afternoon sessions in the Simulation lab, along with a faculty supervisor. One will be the “confederate”, acting as the OR nurse in the scenario. The other would be in the control room, running the scenario and communicating with the confederate by radio/headphone. Usually a more junior resident would act as confederate, and as they gain more experience in the role, may move to the control room in their senior years. The resident, regardless of which role they play, is involved in giving feedback to the clerks after each scenario is completed. The resident will also assist the faculty member in completing the clerks’ evaluation forms.

The resident will be aware that the clerks may have been based at any of the 4 sites in Hamilton or at one of the regional campuses. The resident will evaluate the clerks based on the Objectives of the rotation.

Over the course of a year, a resident can expect to be involved in the formal clerkship teaching (on average) 1-2 days/year. Any given resident is not to spend more than 3 days out of the OR to be involved in clerkship teaching. If they receive more than 2 assignments, they should notify Michele Drake (x75150).
The clerks evaluate the residents for their teaching and the evaluations are included in the resident’s promotions portfolio.

**Teaching the teachers**

Residents are supported in their roles as teachers through a variety of sessions within the core program.

PGY1 residents will complete an online learning module on teaching, provided by the Post-graduate program (for all PGY1’s).

Within our own program, PGY1’s and PGY2’s have a session oriented them to teaching in the simulation centre during the summer Transitions curriculum. PGY1/2’s have an “Introduction to Clerkship Teaching” session during their Foundations Curriculum and PGY3’s have “Advanced Clerkship Teaching” session during their Foundations Curriculum.

Having the opportunity to be involved in Clerkship teaching in such a variety of formats is a unique experience that is highly valued by the residents. The clerks very much appreciate the teaching that they receive from the residents and they rate the experience, and the rotation in general, very highly.

The resident involvement in clerkship teaching is organized by the Undergraduate Chair(s) and is overseen by the Residency Training Committee (RTC).

June 2016.
Department of Anesthesia Library  
Room 2V3, MUMC

Regulations

The Department of Anesthesia Library is available to all members of the Department, Section, Anesthesia Residents, and to M.D. students taking electives in Anesthesia. It is open from 0900-1600 hrs., Monday to Friday, and will be kept locked at all other times. PGY5 residents will be given a key to the library to facilitate group study after hours. Each PGY5 must submit a $200 post-dated cheque as a deposit for the key as the keys are very costly to replace. The key should be returned immediately following the oral exams at which the cheque will be returned.

Regarding the borrowing of books:

Categories

- **Regular** - may be borrowed for a TWO WEEK PERIOD.
- 2) Current copies of Miller and Barash MAY NOT be borrowed. Used in-house and for exam preparation.

Borrowing

To borrow a book, just complete the white card in the back of the book and leave it with Candice Stroud. This indicates who has borrowed what book and the due date (2 week period).

Return borrowed books to Candice- DO NOT PUT BACK ON THE SHELF.

Each year the resident body will be able to purchase 1 – 2 (budget of $750) new books to add to the existing library. The RAC will facilitate this selection process in September.
The Health Sciences Library has been recently renovated and offers a comfortable and inviting atmosphere in which to study and use our resources. We have large and growing collections of print and electronic journals, texts and databases that will interest residents in all programs. Many of our electronic resources are available remotely, from home or off-campus work places via LibAccess. Librarians are available, by appointment, to assist you in finding the literature you need or for information consultations of any sort.

As new residents arrive to begin their work and study at McMaster University, we would like to offer opportunities to learn about the resources (both print and electronic) we have and how to use them. With prior arrangement, we can provide one-hour sessions for small groups on searching databases, or using electronic journals and texts made available through the Health Sciences Library and other campus libraries.

If you would like to arrange instruction or consultation, contact Jennifer McKinnell, Head of Public Services, in the Health Sciences Library: telephone: 905-525-9140 x 24381, or e-mail: mckinn@mcmaster.ca
AWARDS – DESCRIPTIONS AND DEADLINES

1. **RMA SCHOLARSHIPS**

   Applications are invited for R.M.A. Scholarships to support original research carried out by medically qualified registered postgraduate trainees of the Faculty of Health Sciences, McMaster University. A trainee may apply for only one research project per year. The applicant must be the principal investigator, rather than a new investigator added to an existing project.

   **DEADLINE: AUGUST 31**

2. **PARO Senior Resident Teaching Award**

   The Professional Association of Interns and Residents on Ontario (PARO) offers an award to honour and recognize the importance and essential nature of the role that senior residents play in the teaching of junior housestaff and clinical clerks.

   The award, in the amount of $1,000 will be awarded to a senior resident who is recognized as an outstanding clinical teacher.

   1. Junior residents and clinical clerks may discuss and make choices from any senior residents in their own or other programs.

   2. The resident’s name, with an explanation of how the individual has demonstrated excellence in clinical teaching, should be submitted to that resident’s program director. The explanation should include:

      a. The format and style of teaching.

      b. The level of support provided to other residents and clerks.

      c. Any unique characteristics.

   **DEADLINE: FEBRUARY 28**

3. **Physicians Services Incorporated Award**

   Only research projects that have been completed (i.e. problem formulation to data analysis) are eligible. For the purpose of this competition completed research includes case reports and case series, reviews of the literature which are carried out according to scientific principles and completed basic or clinical research. The nominee must be registered as a resident with the Postgraduate Education Office.

   **DEADLINE: MAY 31**

4. **Quality Assurance Award**

   Five awards will be given each year to recognize the best work done in quality assurance projects.
The nomination should summarize the work done and provide sufficient detail to describe the purpose of the project, methodology used, results obtained and a discussion on the impact of this work. When work is done with a supervisor, it is important to describe the initiative shown by the resident and the proportion of the work done by the resident.

DEADLINE: MAY 31

5. PARO Clinical Teachers’ Travel Award

The PARO Trust Fund makes two annual provide-wide awards; each in the sum of $4,000.00. These awards will be designated to faculty member(s) who wish to visit another academic centre to improve his/her clinical teaching abilities, either through the acquisition of a new skill or new knowledge.

The Award is given annually to outstanding clinical teacher(s). An individual may only win the award once.

DEADLINE: FEBRUARY 28


6. PGME Medical Education Research Grant

This award provides both monetary and in-kind support for the selected research projects. The funding will be for one-year, non-renewable for a maximum of $5,000 (with matching funds able to be sought from the home clinical department of the applicant). It is estimated that three projects will be funded each year, but the number of funded projects within a given year remains at the discretion of the selection committee.

Additional in kind statistical support will be provided by the Program for Educational Research and Development (PERD), including mandatory consultation prior to data collection. In addition, consultation with a PERD scientist will be provided to support the methodological and theoretical components of the research.
The program is pleased to be able to support residents financially for academic pursuits. The following describes the criteria and specifics of that support.

**Eligibility:**

To be eligible for academic support, the following criteria must be met:

1) Web eval – To-do’s must be up to date.

2) Log Books- Log books must be kept up to date throughout the year.

3) Attendance - Residents must meet expectations regarding attendance at academic events. Most events are mandatory except if on vacation/leave/post-call. The program orals are mandatory regardless of call or vacation. The in-house exams are mandatory but can be made up later if post-call or on vacation.

4) Resident MUST be in good standing within the program; including academic good standing (which includes not falling below 25th percentile on ABA or AKT-6 (and 25 percentile is cutoff for AK24) in-training exams as well as acceptable performance on in-house exams).

5) Resident must fulfill criteria of the promotions portfolios.

**Academic Support Budget:**

1) Conference Registration will be paid for CanAm OR CPAM for any resident wishing to attend. If resident accepts program funding for these one-day conferences, **resident MUST attend the entire day, including the first session of the day; Tuition will not be paid for partial attendance.**

2) Presenting at academic meetings:

The program will support Residents presenting peer-reviewed abstracts/papers/posters at conferences with the following expenses:

- Economy air fare (original boarding passes must be presented with airline invoice)
- Meeting Registration where it is not provided
- Hotel accommodations (standard) for one or two nights depending on the distance travelled.

We ask that the Resident pay for these expenses out of pocket and then submit original invoices/receipts for reimbursement. – **Maximum reimbursement will be $500 for poster presentation and up to $1000 for an oral presentation.**
Residents are only allowed to submit for conference reimbursement on the same paper/abstract/project one time during their residency. If the same project results in multiple abstracts being accepted at multiple meetings, then one presentation/conference should be chosen for reimbursement.

3) General academic funding for textbooks, tuition, and conferences (excluding CanAm and CPAM)

**July 2015 to June 2016:**

- **PGY1** - $0 (we will pay for your ACLS during your PGY1 year – resident to arrange); Research Methodology course (2-day).
- **PGY2** – monetary allocation TBA
- **PGY3** - nil
- **PGY4** – monetary allocation TBA
- **PGY5** - monetary allocation TBA; also the program pays the Making a Mark tuition.

Funds that are not used by June 30 are not carried over. All receipts must be received no later than July 15 of the following year. Receipts must be dated during the appropriate academic year. Receipts are absolutely required for re-imbursement; if not received, the reimbursement cannot be made.

Allocations will be paid out at the end of the academic year, based on eligibility criteria as described above, and is therefore not guaranteed.

*June 2015*
Journal Club

Residents are expected to attend mandatory journal club, which is held 3 - 4 times per year typically on a weekday evening from 6 - 9pm. Journal club is organized by faculty in the academic department of Anesthesiology at McMaster University and typically hosted at either a restaurant or a faculty member’s home. A typical timeline includes one hour for formal article presentations and discussion, followed by a two hour informal social discussion of the articles over dinner amongst smaller groups of residents and faculty.

Expectations for Residents:
Journal club is mandatory for all residents who are not post-call or on vacation, professional or other type of leave. Residents who are on call may discuss with the staff anesthesiologist who is on call if they can attend journal club. While the department supports this, it recognizes there may be circumstances when it is not appropriate for the on-call resident to attend due to patient care concerns. The final decision is left up to the discretion of the attending on-call anesthesiologist.

Residents are assigned to present at journal club once during their residency training, typically in their PGY-2 year. Residents are assigned a journal article by the organizing faculty and are expected to give a 20 - 25 minute presentation followed by leading a 5 minute discussion. There are typically 2 residents involved, each presenting one of the articles.

All residents are expected to read the pre-circulated journal articles prior to journal club in order to participate in a robust discussion.

Organization of Journal Club
Journal club is organized by the faculty lead(s) from within the academic department of Anesthesiology at McMaster University. The organizer(s) typically hold a 3 - 5 year term as the leader(s) of journal club. The responsibilities include reviewing recent anesthesia journals and picking out key relevant articles typically published within the prior 3 - 4 months. The goal is to try to select two articles that are somewhat related in topic for each journal club. The organizer(s) will circulate the articles to the resident presenters with ample time for completion of their presentations, and to the faculty and residents body as a whole for review prior to journal club.

The organizing faculty member(s) is/are responsible for liaising with the anesthesia program with regards to funding, location and date of the journal club. They are responsible for bringing any audiovisual equipment required to the venue of choice, and for taking attendance of the residents and providing it to the program assistant.
Career Planning

Your number one concern will be to thrive during residency and pass your Royal College exams. But you have to spend a little bit of time thinking about what you would like to do after those exams.

As residency unfolds and you experience one rotation after another, you will get a better idea as to what sort of career in Anesthesia you might most like to pursue. You will have to think about whether you would like to stay in an academic center, or work in the community. With the latter choice, you may stay in an urban center or pursue a more rural or even international setting. Within an academic environment, you will have to think about what sort of fellowship to pursue; what area of clinical practice to focus on; and whether you would like to pursue scholarly work in the area of clinical research or education. You will have an opportunity, as a resident at McMaster, to explore all of these options to determine what suits you best.

There are several resources available to you for advice and guidance:

- Speak to your faculty mentor
- Speak to trusted faculty members, particularly those who have a practice similar to what you may wish to pursue
- Speak to the Program Director
- In your PGY3 year, a meeting will be arranged for you with Dr. Buckley, Chair, to discuss career planning

In the Residency Program office, we receive notifications from other departments across the country regarding job and fellowship opportunities. We forward these on to the residents. As well, the CMA has a useful webpage:

CMA career webpage
Vacation while on Anesthesia

The 25% Rule while on an Anesthesia rotation

Time off

It was agreed by our Residency Training Committee that a resident should not miss more than 25% of the rotation. (Approximately 5V days per 1 block rotation) while completing an Anesthesia rotation. In the case of OR shut down, the 25% rule would be based on available time. Residents who miss more than this time, will be evaluated as incomplete.

Concerns were expressed over the amount of time residents were spending in the OR during their rotations and the in depth evaluations CTU Directors are expected to complete.

As per February 2014 RTC:

Regarding single vacation days, the program will allow some flexibility in how vacation days are taken, beyond what is provided by PARO. Anesthesia will allow one week (5 days) to be taken in individual days and the remaining three blocks of vacation must be taken in blocks of at least 5 days. All four weeks can be taken in blocks, if desired.

Please note that individual vacation/PL/Lieu days can not be stacked around (and exclude) the academic day. Furthermore, the PGY5’s may not take part of a week that excludes their full academic day (e.g. Monday-Wednesday vacation then full academic day on Thursday).

Vacation Days must be requested at least ONE MONTH prior to the first day of the vacation.

With respect to the seven Professional Leave days there is no official PARO policy lead time needed to book these days. It was agreed to require two weeks lead time for booking of professional leave days. For exceptions to this policy, the resident can contact the Program Director for approval.

Policy of the PGME office states


Incomplete “Incomplete” indicates that the Clinical Supervisor has been unable to properly and fully evaluate the Student because the Student’s time spent on the rotation was insufficient, for whatever reason, e.g. illness, extenuating circumstances etc. As the rotation is incomplete, time will have to be made up to fulfill the requirements of the rotation.

All vacation requests must be submitted in a timely fashion to Candice Stroud at stroudc@mcmaster.ca via the vacation system that is used by the program. It will then be forwarded to the admin resident for final approval. In the case of a discrepancy or a concern raised by either
the program coordinator or admin resident, the CTU Director will have the final decision (approval).

No Call Requests

Effective July 1st, 2015, residents will be allowed to have a **Maximum 36 NC requests per year, and requests cannot involve more than one weekend per block**.

Statutory Days

Effective July 1st, 2015 residents are allowed to request 4 statutory holidays each academic year.

*This was voted on in winter 2014 at a resident business meeting.*

http://www.myparo.ca/PARO-CAHO_Agreement#Vacation

http://www.myparo.ca/Top_Things_To_Know#Vacation

VACATION

11.1 Residents shall be entitled to four (4) weeks paid vacation during each year.

11.2 Vacations may be taken by housestaff at any time, but, subject to article 11.4, the timing of vacation may be delayed only where necessary, having regard to the professional and patient responsibilities of the hospital department for the time the vacation is requested.

11.3 Housestaff may arrange for their vacation to be taken in one (1) continuous period or in one or more segments of at least one (1) week in duration provided professional and patient responsibilities are met.

11.4 Requests for vacation shall be submitted in writing to the department head at least four (4) weeks before the proposed commencement of the vacation. In addition each resident taking a certification examination in the Spring shall have until one month prior to the date of the examination to make a written request for one week of his/her vacation entitlement. Vacation requests submitted before March 1, or one month prior to the date of a certification examination, will be considered in priority to those submitted after that time. All vacation requests must be confirmed or alternate times agreed to, in accordance with Article 11.2, within two (2) weeks of the request being made. Where the hospital department rejects the vacation request, it will do so in writing and include the reasons for rejecting the original vacation proposal.

11.5 There will be no adjustment to vacation entitlement for up to seventeen (17) weeks in the case of pregnancy leave of absence and/or up to thirty–seven (37) weeks in the case of parental leave of absence. Where a resident is entitled to and takes pregnancy leave and is also entitled to and takes parental leave, there will be no adjustment to vacation entitlement for up to thirty-five (35) weeks.
11.6 The Hospital shall not institute policies that restrict the amount of vacation that residents can take over a given rotation, it being understood that the hospital continues to have the right to delay an individual resident's request where necessary having regard to the professional and patient care responsibilities of the hospital department pursuant to Articles 11.2 and 11.3.

PROFESSIONAL LEAVE

12.1 In addition to vacation entitlement, residents shall be granted additional paid leave for educational purposes. Such educational leave, up to a maximum of seven (7) working days per annum, shall be consecutive if requested by the resident, and shall not be deducted from regular vacation entitlement. Such leave may be taken by housestaff at any time, provided only that professional and patient responsibilities are met to the satisfaction of the hospital department head.

12.2 Each resident shall be entitled to paid leave for the purpose of taking any Canadian or American professional certification examination; for example, Royal College examinations, LMCC, ECFMG, CFPC. This leave shall include the exam date(s) and reasonable travelling time to and from the site of the examination. This leave shall be in addition to other vacation or leave.

STATUTORY HOLIDAYS

13.1 All housestaff shall be entitled to the following recognized holidays:

1. New Year's Day
2. Family Day
3. Easter Friday
4. Victoria Day
5. Canada Day
6. August Civic Holiday
7. Labour Day
8. Thanksgiving Day
9. Christmas Day
10. Boxing Day
11. One (1) floating holiday

13.2 All housestaff shall be entitled to at least five (5) consecutive days off during a twelve (12) day period that encompasses Christmas Day, New Year's Day and two (2) full weekends. These five (5) days off are to account for the three (3) statutory holidays (Christmas Day, Boxing Day, New Year's Day), and two (2) weekend days.

13.3 If a resident is scheduled to work on a recognized holiday, he/she shall be entitled to a paid day off in lieu of the holiday to be taken at a time mutually convenient within ninety (90) days of the holiday worked.
Vacation Entitlement for Residents
Postgraduate Medical Education

**Scope:** This policy is applicable to all Residents.

**Definition:**
**Resident:** For purposes of this policy, “Residents” refer to all Residents who are members of the Professional Association of Interns and Residents of Ontario (PAIRO). Clinical Fellows are not members of PAIRO and should check with their Department / Division regarding vacation entitlement.

**Policy:**

Vacation entitlement is four (4) weeks for all Residents. Once the vacation period is approved it may only be changed through subsequent negotiations with the appropriate individuals. Vacation time must be taken within the academic year, July to June. Vacation days will be prorated according to the Resident’s appointment for the academic year. The exception is vacation entitlement for pregnancy leave and / or parental leave, which are entitled to the full 4 weeks.

The Postgraduate Medical Education (PGME) Committee has drawn up the guidelines relating to vacations in keeping with the terms of the PAIRO-CAHO Agreement. The PGME Office’s role is to ensure that vacation requests are being managed in a fair and consistent manner:

1. Requests for vacation shall be submitted at least four (4) weeks before the proposed commencement of the vacation.

2. Certification examination requests will be given priority.

3. The PAIRO-CAHO agreement states that, “All vacation requests must be confirmed or alternative times agreed to within two weeks of the request being made.” **It is important that timely communication between all parties take place, in order that the Resident receives timely confirmation of the vacation request.** In exceptional circumstances where a vacation request cannot be confirmed within the two week period, the hospital department will communicate to the Resident, in writing, the reason for the delay. Where the hospital department rejects the vacation request, it will do so in writing and include the reasons; alternate times shall be offered by the department and agreed to by the Resident.

4. Vacations may be taken by Residents at any time; the timing of vacation may be delayed only where necessary, having regard to the professional and patient responsibilities of the hospital department for the time the vacation is requested.

5. Residents may arrange for their vacations to be taken in one continuous period or in one or more segments of at least one week in duration, provided professional and patient responsibilities are met. If a Resident is requesting a full rotation block, this request should be made well in advance, before the rotation schedules are drawn up. In essence, one full rotation block of vacation should be requested prior to the start of the academic year in order to enable the program to
accommodate such requests wherever possible. It should be recognized that missing a one full block of a mandatory rotation could impact on the resident’s program and should be discussed with the Program Director.

6. In addition to vacation entitlements, Residents shall be granted additional paid leave for educational purposes up to a maximum of seven (7) days per annum. It shall be consecutive if requested and shall not be deducted from regular vacation entitlements. Such leave may be taken at any time provided only that professional and patient responsibilities are met to the satisfaction of the hospital department head.

7. All Residents shall be entitled to the following recognized holidays:

   1. New Year's Day  
   2. Family Day  
   3. Easter Friday  
   4. Victoria Day  
   5. Canada Day  
   6. August Civic Holiday  
   7. Labour Day  
   8. Thanksgiving Day  
   9. Christmas Day  
 10. Boxing Day  
 11. Floating Holiday

(Please refer to Medportal for the dates of each holiday)

Christmas/New Years: All Residents are entitled to 5 consecutive days off during Christmas Day and New Year’s Day. These 5 days account for Christmas Day, New Year’s Day, Boxing Day and two weekend days. Each resident must get either Christmas or New Year’s Day off.

8. Vacation entitlements do not carry over from one year to the next. Save for exceptional circumstances such as pregnancy/parental leave.

Note: Residents should be aware that time away from a rotation may impact on a Supervisor’s ability to fully evaluate the Resident and could lead to an Incomplete evaluation. Reference: PGME Policy and Procedures for the Evaluation of Postgraduate Students’ Performance, where it states: “As a guideline, a designation of “Incomplete” may be appropriate where the Student has not spent at least 50% of the required time on the rotation.”

http://www.fhs.mcmaster.ca/postgrad/documents/EvaluationpolicyMAY292009FINAL.pdf

Please refer to the PAIRO website http://www.pairo.org/ for details from the PAIRO-CAHO Agreement.
POSTGRADUATE MEDICAL EDUCATION

Leaves from the Program

Scope

This policy applies to all Residents registered with the Postgraduate Medical Education Office. Clinical and Research fellows should contact their department with respect to departmental policies and procedures.

“Leaves” do not include vacation, professional leave or examination leave time. Please refer to the PGME Vacation policy.

General Principles

1. A resident will remain registered with the Postgraduate Medical Education Office, notwithstanding his / her inactivity and is expected to maintain a standard of conduct in keeping with the standards of the residency program, the University and the medical profession at large.

2. A resident will return to a residency program following a leave from the program.

3. Time lost during a leave must be made up. It is anticipated that the required time lost or rotations missed will be made up with equivalent extra time in the residency on the resident’s return to the program. Residents will normally be required to complete all mandatory / elective components of the program. In special cases a waiver may be granted. (Refer to Waiver of training)

4. When possible, it is the Resident’s professional responsibility to ensure that appropriate people are notified of the leave and that the appropriate arrangements for coverage have been made. It is recognized that this will not always be possible and, in such cases, will not affect the Resident’s leave.

Specific Principles

1. All leaves must be approved by the Resident’s Program Director.

2. All leaves greater than one week must be reported to the Postgraduate Medical Education Office. There may be special circumstances when the Program will report leaves less than one week, for example, if there has been a pattern of days missed over a period of time.

3. All leaves reported to the PGME Office will be reported to the College of Physicians and Surgeons of Ontario. The PGME Office will report the dates of the leave and the type of leave to CPSO; any additional information will only be provided with the Resident’s consent.

4. Medical leaves

5. Extended medical leaves that are greater than 3 months in duration the Resident or his / her delegate will provide a report to their Residency Program Director on the status of their leave.

5. For medical leaves greater than two weeks, the PGME Office requires a written medical letter from the Resident’s physician indicating that they are fit to resume training. Some programs may require a doctor’s note prior to taking a scheduled medical leave. It is the Resident’s responsibility to check with their individual Residency Program Office. The resident’s privacy is respected and information should not disclose the reason for the medical leave.
6. While on medical leave, Residents will be maintained and continued until the end of the appointment or for six (6) months, whichever occurs first. Employee benefits enumerated in Article 19.1 and 19.2 under the PAIRO-CAHO collective agreement shall be maintained until the end of the appointment during such medical disability.

Process

1. Resident completes the Request for Leave form (on medportal under Forms and Manuals) prior to the leave.
2. Resident submits to his / her Program Director for approval.
3. Program Director submits to the Postgraduate Medical Education Office for processing.

Types of Leaves

- Medical Leave
- Compassionate / Personal leave (Leave without Pay) – a resident may decide to take a personal leave from the residency program. Normally residents are not paid for a personal leave.
- Pregnancy – Residents who are either the birth mother or surrogate mother
- Parental – New parents. Defined as birth parent, adopting parent or person in a relationship with a parent of a child and plans to treat the child as their own.

For detailed information regarding Employment Insurance and benefits etc., please refer to the Information Sheet on Leaves.
INFORMATION ON LEAVES OF ABSENCE
Postgraduate Medical Education
Medical Leave • Leave Without Pay • Compassionate Leave • Pregnancy/Parental Leave

While this information applies specifically to Residents, many of the same principles and obligations apply to Fellows.

GENERAL INFORMATION

It is understood for those residents who maintain a current level of appointment in a residency program that a resident:

- will return to a residency program following a leave of absence; and
- is still registered with the program, notwithstanding his/her inactivity, hence s/he is still expected to maintain a standard of conduct in keeping with the standards of the residency program, the university and the medical profession at large.

Failure to meet these two obligations may result in the withdrawal of a resident’s appointment in the program.

Leaves do not include professional leave time or vacation. For vacation and professional leave information see the PGME Vacation policy.

Time lost during a leave must be made up. It is anticipated that the required time lost or rotations missed must be made up with equivalent extra time in the residency on the resident’s return to the program. Normally all residents will be required to complete all mandatory/elective components of the program.

The Resident’s Professional Responsibility

When possible, it is the resident’s professional responsibility to ensure that appropriate people are notified of the leave and that the appropriate arrangements for coverage have been made. It is recognized that this will not always be possible and, in such cases, will not affect the Resident’s leave.

When does the PGME office need to know?
All leaves are reported, by the Postgraduate Medical Education Office to the College of Physicians and Surgeons of Ontario. The Postgraduate Medical Education office normally does not need to be informed about leaves that are less than one week in duration.

MEDICAL LEAVE

The Postgraduate Medical Education Office requires that, before returning from your medical leave, you must provide a written medical letter from your physician, indicating that you are fit to resume training. Normally, a doctor’s note is not required for leaves less than two weeks in duration. If there are recurrent leaves, the Program Director/PGME Office may require a doctor’s note.

Some programs may require a doctor’s note prior to taking a scheduled medical leave; please check with your individual residency program office.

To maintain your residency appointment with the University, the resident or his/her delegate will provide a report to the Postgraduate Dean on the resident’s status every three months.

Ministry of Health funded residents, on medical leave, will receive full pay for six months and after six months are eligible to apply for Long Term Disability. Residents/Fellows with non-MOH funding should check with their sponsor/department.

The PGME office normally does not need to be informed about leaves that are less than one week in duration.

Remember you will require a DOCTOR’S NOTE to return to work after a Medical Leave.

LEAVE WITHOUT PAY

These include Personal Leaves and Compassionate Leaves. Residents will be responsible for prepaying benefits for duration of leave. If payment is not received benefit coverage will cease effective start of leave. Please call Human Resources at (905) 393-2700 OR 1-877-667-2700 to arrange. In the case of Compassionate Leaves, trainees may apply for Employment Insurance Benefits that are paid to individuals who have to be away from work temporarily to provide care or support for a family member who are gravely ill. See Service Canada for eligibility at http://www.servicecanada.gc.ca/eng/ei/types/compassionate_care.shtml#Definition.

LEAVE WITH PAY

The resident must complete the leave form. Support from the program director must be communicated to the PGME office.
PREGNANCY/PARENTAL LEAVE

The total amount of time off for a Pregnancy & Parental Leave is 52 weeks. This is comprised of the following:

1. Pregnancy Leave ➤ 2 weeks unpaid EI waiting period ➤ 15 weeks paid Leave
2. Parental Leave ➤ 35 weeks of

If you are on vacation when the baby is born
Pregnancy leave will start on the birth date and the vacation will end. The Postgraduate Office must be informed of the change.

What is the difference between Pregnancy & Parental Benefits?

<table>
<thead>
<tr>
<th>Duration</th>
<th>Who is Eligible</th>
<th>When does it start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy</td>
<td>17 weeks</td>
<td>Birth mother or Surrogate mother</td>
</tr>
<tr>
<td>Parental</td>
<td>35 weeks or 37 weeks if pregnancy leave not taken (i.e. adoptive parents, fathers or non-birth mothers)</td>
<td>New parents Note: The Employment Standards Act defines “parent” as birth parent, adopting parent or person in a relationship with a parent of a child and plans to treat the child as their own.</td>
</tr>
</tbody>
</table>

Parental Benefits
Can be claimed by one parent or shared between the two parents but will not exceed a combined maximum of 35 weeks. Parental leave cannot be taken until the birth of the baby.

How much will you receive?
Employment Insurance will pay a maximum of 50 weeks at a basic benefit rate of 55% of your average insured earnings up to a maximum payment of $468 per week.

Top-Up
Hamilton Health Sciences Corporation will top-up salary to 84% of resident’s regular weekly earnings for 15 weeks of Pregnancy Leave and for 12 weeks of Parental Leave. To receive your top-up:

1. Log into your Service Canada account (www.servicecanada.gc.ca).
2. Click on “View My Payment Information.”
3. “My Payments” will display with dates listed below. Click on each date to view “My Payment Details” which will show the gross amount, federal tax amount, net and benefit entitlement.
4. Send either a screen shot or photo of this page by email to hrservicecentre@hhsc.ca. Alternatively you can also mail to: Hamilton Health Sciences, Human Resources, Chedoke Site, Southam Building, Room 114, 559 Sanatorium Road, Hamilton, ON L9C 1C4.

Record of Employment
On your last day worked contact hrservicecentre@hhsc.ca or 905 393-2700 or 1-877-667-2700. The record of employment is generated when an employee has worked their last paid shift as scheduled. It will be submitted electronically to Service Canada once it has been generated.

Apply to Employment Insurance as soon as you stop working
For more information contact 1 800 206 7218.
Website www.servicecanada.gc.ca - Employment Insurance-
Apply for Employment Insurance.

MORE INFORMATION....
See the PARO Pregnancy & Parental Leave FAQ at http://www.myparo.ca/Pregnancy_FAQ for frequently asked questions and guidelines on qualifying & applying for benefits.
Request for Leave of Absence  
Postgraduate Medical Education

In order to request a leave of absence from the program, the trainee should complete this form and submit it to his/her Program Director for approval. The PGME office normally does not need to be informed of leaves that are less than one week in duration.

Name of Resident/Fellow ____________________________

Current Training Level ____________________________

Training Program ____________________________

Start Date of Leave ____________________________

Return Date from Leave* ____________________________

*If on pregnancy or parental leave, any accrued vacation shall be taken immediately after the leave expires, or at such later date if agreed to between the resident and the program director.

Ensure that you read the preceding pages “Information on Leaves of Absence” for important information regarding your leave & detailed information on Pregnancy, Parental Leave & Parental Benefits.

<table>
<thead>
<tr>
<th>Category of Leave</th>
<th>Details</th>
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<tbody>
<tr>
<td>Medical</td>
<td>Doctor’s Note: Normally, a doctor’s note is not required for leaves less than two weeks in duration. If there are recurrent leaves, the Program Director/PGME Office may require a doctor’s note. You will be required to supply a doctor’s note indicating that you are fit to resume training after leaves &gt; two weeks.</td>
</tr>
</tbody>
</table>

Leaves Without Pay:

- **Personal Leave**
  - Remember to arrange prepayment of benefits.

- **Compassionate Leave**
  - Remember to arrange prepayment of benefits.
  - See [http://www.servicecanada.gc.ca/eng/ei/types/compassionate_care.shtml#Definition](http://www.servicecanada.gc.ca/eng/ei/types/compassionate_care.shtml#Definition) for information on Compassionate Care Benefits

Leave with Pay

- Special circumstance PGME approval required.

**Pregnancy**

- up to 17 weeks
  - Birth mother or surrogate mother only

AND/OR

**Parental**

- up to 35 weeks 37 weeks if pregnancy leave not taken (i.e. adoptive parents, fathers or non-birth mothers
  - All new parents (as defined by Employment Standards act)

Trainee Signature ____________________________ Date ____________________________

Program Director Signature ____________________________ Date ____________________________

Submit form to: Postgraduate Medical Education Office,
Attention Jan Losier, losier@mcmaster.ca, MDCL-3101a Fax: 905-527-2707
The Postgraduate Medical Education (PGME) Office provides all new Residents and Fellows with a booklet entitled, Support Systems for Postgraduate Medical Trainees. This information is available on the PGME website: http://www.fhs.mcmaster.ca/postgrad/. The information is also provided to returning trainees at the time of Re-registration, to let them know of any updates to the services, as well as to remind them where the information resides. The information is also available on medportal: https://www.medportal.ca

There was a McMaster Wellness / Mindfulness Week held the week of March 17, 2014, targeting Residents and faculty. During the week there were events / offerings throughout the week, taking place at the three campuses: Hamilton, Waterloo and Niagara. http://fhs.mcmaster.ca/wellness/

Support Services Available to Residents:

- At the time of registration, Residents are made aware that the PGME Office (in conjunction with the Department of Family Medicine) have a list of local family doctors who will accept residents as patients. Residents are provided with the list on request.

- The PGME Office has made arrangements with Ms. Valerie Spironello, MSQ, RSW, to see Residents. This is a confidential service that Residents can access if they feel they need to discuss the many stresses of residency and life balance. Ms. Spironello specializes in dealing with compassion fatigue in individuals in the caring profession. The PGME Office pays for the initial visit to facilitate this service. Further visits can be covered through the Resident’s benefit plan.

- Waterloo Regional Campus and Niagara Regional Campus support systems have been established to assist and guide the Residents who are based at the regional campuses as well as Residents who do rotations there.

  Dr. Margo Mountjoy, Resident Wellness Director, Waterloo Regional Campus

  Dr. Kathy Swayze, Resident Wellness Director, Niagara Regional Campus.

  Dr. John Miller, Resident Wellness Director, Hamilton
  Email: jmiller@mcmaster.ca or Phone: 905-525-9140, extension 22833
• The PGME Office is able to facilitate a confidential referral to the Department of Psychiatry. This is particularly helpful in emergent situations.

• The University Office of Human Rights and Equity Services is available to assist with issues surrounding harassment, discrimination, and complaint resolution. Robin Edwards, B.P.E., LLB, Advisor, Professionalism, Faculty of Health Sciences is available to the Residents and faculty for issues related to professionalism.

• Mohawk Shared Services is the Employee & Family Assistance Program available to all Residents. The program offers a broad range of services to Residents and their dependent families including counselling.

Professional Association of Residents of Ontario (PARO) have a stress hotline 1-866-HELP-DOC. (1-866-435-7362). The PARO 24 Hour Helpline is available to residents, their partners and family members, as well as medical students. The toll-free number, 1-866-HELP-DOC (1-866-435-7362), is accessible anywhere in Ontario, 24 hours a day, 7 days a week. In order to provide this service, PARO has partnered with Distress Centres of Toronto. Since 1967, Distress Centres of Toronto volunteers have answered approximately 80,000 calls per year, 24 hours a day, 365 days a year.

When you call the toll-free number you will be directly connected to a Helpline volunteer. These volunteers have had extensive training in acute crisis intervention, depression, anxiety and many other conditions. They have also received special training relating specifically to residents including information about hours of work, working conditions and common stressors.

In addition to providing immediate assistance in emergency or urgent matters, the Helpline will provide referrals for such issues as but not limited to:

• Stress management
• Eating disorders
• Sexual, emotional or physical abuse
• Anxiety
• Anger management
• Depression
• Gender issues
• Intimidation or harassment
• Substance abuse
• Relationship counselling
• Career or work-related crisis
• Sexual issues

All calls are strictly confidential and cannot be traced.

To find out more information about the PARO 24 Hour Helpline please contact the PARO office at 416 979-1182 or toll free at 1 877 979-1183 or email paro@parotecam.ca  
http://www.myparo.ca/24_HOUR_Helpline
Ontario Medical Association Physician Health Program. Confidential toll free line: 1-800-850-6606. Confidential fax line: 416-340-2860. Website www.phpoma.org. Physicians Health Program (Monday - Friday 9-5pm) A confidential service providing assistance on issues such as stress, burnout, mental health and substance use to physicians and their families. Offering expedited referral to third party providers with expertise in physician health.

Confidential CMA helpline. Resources for the Centre for Physician Health and Well Being are accessible via the CMA website www.cma.ca or by calling 1-877-CMA-4-YOU. Canadian Medical Protective Association is available to discuss medico-legal issues.

Homewood Health Centre is a leader in mental health and addiction treatment, providing specialized psychiatric services.

| Family Doctor | All residents are encouraged to have a local Family Physician.
|---------------|-------------------------------------------------------------------
|               | The PGME Office has a confidential list of family physicians that are willing to accept residents as patients. Please contact, Brenda Montesanto. |
|               | The Hamilton Academy of Medicine has a current listing of family physicians who are accepting new patients. |

<table>
<thead>
<tr>
<th>ATTACHMENT 28</th>
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<tbody>
<tr>
<td>Letter of Understanding re: Employee Assistance Program</td>
</tr>
<tr>
<td>It is agreed that each hospital will provide all residents access to Employee Assistance Programs (EAP), to the same extent and on the same basis that such programs are available to other employees of the Hospital.</td>
</tr>
<tr>
<td>It is further agreed that access to EAP programs in accordance with the terms of the EAP letter of understanding will in no way diminish the rights, benefits or protections otherwise afforded to residents under the collective agreement.</td>
</tr>
<tr>
<td>This letter of understanding forms part of the collective agreement.</td>
</tr>
<tr>
<td><a href="http://www.myparo.ca/PARO-CAHO_Agreement#Attachment">http://www.myparo.ca/PARO-CAHO_Agreement#Attachment</a> 28</td>
</tr>
</tbody>
</table>

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<tr>
<th>Distress Centre of Hamilton</th>
<th>24 Hour Crisis Line: 905-525-8611</th>
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<td>Salvation Army Suicide Prevention Services</td>
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<td>Intimidation &amp; Harassment</td>
<td>Intimidation &amp; Harassment - Break the Cycle Booklet</td>
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<td>Robin Edwards, FHS Advisor, Professionalism, FHS, HSC -3E09, 905-525-9140, ext. 22417. Contact R. Edwards if you think you are being harassed or intimidated.</td>
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<td>Human Rights &amp; Equity Services, Confidential advice on the options available if you</td>
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have a question or concern that may involve harassment based on race, gender, religion, sexual orientation, disability or other human-rights related concerns

**EAP**  
**Human Solutions**, Employee & Family Assistance Program

**General Well Being, Personal Safety & Supports**  
**Communicable Diseases & Occupational Health Policy & Procedures for Preventing Transmission of Blood Borne Pathogens**

**Security Services**

**Student Accessibility Services (SAS)**

**SWHAT  Student Walk Home Attendant Team**

**Stress - Guided Relaxation CD, Diaphragmatic Breathing, Progressive Muscle Relaxation, & more**

**Workplace Hazardous Materials Information System, more**

Get Connected. Consider the following in broadening your experience or seeking additional support:  
Gay Lesbian, Bisexual, Transgender & Queer, Aboriginal Groups.

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### Other Tools & Resources

#### Career Counseling & Employment

- **HealthForceOntario**, career planning service  
  - COMPASS, Career-planning tips, tools & links for Ontario Residents  
  - MedicalEmployers.com, Canadian Healthcare Employment Network

#### CanMEDS Physician Health Guide

- **CanMEDS Physician Health Guide** - Practical Handbook for Physician Health and Well-being

#### Financial Planning

- **MD Management Limited**  
  - Geoff Vieira, CFP, Financial Consultant, 905-526-8999 or 1-800-883-6015, etc. 229  
  - In Kitchener/Waterloo contact Kristine Greenfield, 1-800-461-9587

#### Fitness & Nutrition

- **Goodlife Fitness discounts via PARO**  
  - EatRight Ontario, Eating on the Run,

#### General Well Being, Resources & Education

- **CAIR Resident Well Being E-Library** repository of documents about CAIR & resident issues.  
  - CMA **Centre for Physician Health & Well Being** is a centre of excellence providing leadership, education & research aiming to keep Canadian physicians healthy.  
  - CMA **Guide to Physician Health & Well Being, Facts, advice and resources for Canadian doctors**,  
  - **Communicable Diseases & Occupational Health Policy**  
  - ePhysicianHealth.com, first comprehensive, online physician health & wellness resource designed to help physicians and physicians in training be resilient in their professional and personal lives.  
  - eWorkplaceHealth.com details the many factors that shape workplace health.

- **Federation of Medical Women of Canada**, Committed to the development of women physicians & the well-being of all women.

- **MD Health e-Coach**, Self administered questionnaire to determine & improve your
| Medico-Legal          | **CMPA**  
|                     | "What to do when facing a College complaint", from CMPA Perspective, September 2010 |
| Mental Health & Addiction | **Homewood Health Centre** is a leader in mental health & addiction treatment, providing specialized psychiatric services. |
| Sexual Abuse         | **Maintaining Appropriate Boundaries & Preventing Sexual Abuse**, CPSO |

personal emotional & physical health. Also assists in designing & monitoring your commitment to change.

PAIRO - Resident Well Being Day is held annually & features topics related to residents and includes. See Medportal "Key Dates" for details.
This booklet has been put together by the Postgraduate Medical Education Office as a quick reference of the various support mechanisms available to you during your training at McMaster University. It is important to have mechanisms to relieve stress. Finding a good mentor, pursuing hobbies & interests outside of medicine, maintaining relations with friends/family can help with dealing with stress. Remaining physically active during your training program may also help with stress relief. However, in some cases additional support may be necessary, and in these cases additional support is available. Issues may vary from medico-legal matters, stress, alcohol or substance abuse, emotional support, and other personal situations that may be too difficult to handle alone. All services are completely confidential.

In addition to the resources mentioned in this booklet, each program and/or department may have their own support structures in place. Please be sure to check with your program/department regarding program specific support features that are offered and available to you.

Always keep in mind that your Program Director is there to help support and guide you through your training program. Fellows may seek help through their Clinical Supervisor or departmental representative.

At each of the three campuses there is a Director of Resident Affairs that can assist and direct you in finding the appropriate supports: Dr. John Miller (Hamilton Campus), Dr. Margo Mountjoy (Waterloo Campus) and Dr. Kathy Swayze (Niagara Regional Campus). See page 2 for contact information.

Some services listed in this book are available only to residents. Examples are those programs that are associated with a resident organization or those programs associated with the hospital (i.e. EAP). If in doubt of who to contact, fellows should contact the PGME office or one of the Resident Affairs Directors.

This booklet is available electronically on the Trainee Well-Being page on the McMaster PGME website at fhs.mcmaster.ca/postgrad/trainee_well_being.html and on the Well-Being page on Medportal at postgrad.medportal.ca/wellness.aspx. These pages also list additional resources that are available to trainees though McMaster University, the community and various professional organizations.
There is a wide network of confidential resources available to support and assist you throughout your training program at McMaster. For a full list please visit the Well Being page on medportal.ca

A. DIRECTORS OF RESIDENT AFFAIRS

There is a Director of Resident Affairs at each of the three campuses (Hamilton, Niagara and Waterloo). They are able to assist and direct you in finding the appropriate supports, should you require, to help you throughout your residency. Feel free to contact them directly, either by email or phone.

Dr. John Miller
Director of Resident Affairs, Hamilton Campus
McMaster University
1200 Main Street West
Health Sciences Centre
Room 3H5
Hamilton, ON L8N 3Z5
jmiller@mcmaster.ca
905 525-9140 ext 22833
or contact
Gina Furlong
MD Student/PG Trainee Affairs Coordinator
furlong@mcmaster.ca
905 525-9140 ext 22979

Dr. Margo Mountjoy
Director of Resident Affairs, Waterloo Regional Campus
Waterloo Regional Campus
10-B Victoria Street South
Room 3019
Kitchener, ON N2G 1C5
mountjm@mcmaster.ca
226-971-2940 or 519-885-5426 ext 21122

Dr. Kathy Swayze,
Director of Resident Affairs, Niagara Regional Campus
Niagara regional Campus,
Cairns Family Health & Bioscience Research Complex Brock University,
500 Glenridge Avenue
St. Catharines, ON, L2S 3A1
swayze@mcmaster.ca
By phone contact
Dr. Swayze’s assistant,
Barbara Kidd,
905-378-5717 ext 6411

McMaster Resources
B. PROFESSIONALISM ADVISOR & HUMAN RIGHTS EQUITY SERVICES OFFICE

If at any time during your training you feel that you are being harassed or intimidated, you can either contact the Professionalism Advisor or the Human Rights and Equity Office for confidential guidance and assistance.

Robin Edwards
Professionalism Advisor
Faculty of Health Sciences, McMaster University
Health Sciences Centre Room 2E09
1200 Main Street West, Hamilton
edwardro@mcmaster.ca
905-525-9140 ext 22417

or

Human Rights and Equity Services Office
McMaster University 1280 Main St W, Hamilton
MUSC Room 212
Office Hours: Monday – Friday, 9am-5pm
905-525-9140 ext 27581
hres@mcmaster.ca

For more information on dealing with harassment see page 16.

C. SOCIAL WORKER

VALERIE SPIRONELLO, MSW, RSW
Assistant Professor (Part-time) Department of Family Medicine
Valerie@choosewellness.ca
905-730-0754

Ms. Spironello specializes in life work balance and wellness and is available to all residents registered with McMaster University. Ms. Spironello is trained to recognize and address compassion fatigue in those within the caring profession. In her private practice, “Choose Wellness” she uses a mindfulness
approach to assist others in improving wellness in body, mind and spirit. For more information please refer to her website: www.choosewellness.ca

Visits for residents are covered under the Resident Benefit plan as per the PARO agreement (the current agreement covers up to $500 – this would be approximately 4 – 5 visits). Visits are confidential. To promote resident wellness, the PGME Office will pay for the initial visit.

D. FAMILY PHYSICIAN

All trainees are encouraged to have a local family physician.

The Postgraduate Medical Education Office has a confidential list of family physicians who are willing to accept trainees as patients. Please contact Brenda Montesanto at 905-525-9140, ext. 22947 or email at brenda.montesanto@medportal.ca.

Residents at the Niagara and Waterloo Regional Campuses who are in need of a family physician can contact; Dr. Margo Moutjoy (Niagara Campus) or Dr. Kathy Swayze (Niagara Campus). See page 2 for contact information.

Alternatively, those with a PARO membership can contact the organization for assistance. PARO has compiled a list of family physicians willing to accept medical residents as patients despite the fact that their practice is already full. Contact www.myparo.ca/During_Residency#Hey Doc, need a Doc?

E. MOHAWK SHARED SERVICES (POWERED BY LIFEWORkS) EAP

Services are available to residents throughout Southern Ontario. A convenient geographical location will be determined at the point of intake.

Call: 905-521-8300 or 1-888-521-8300 (toll-free) or visit www.mohawkssi.com

LifeWorks is a full-service, confidential, bilingual employee assistance program for residents and their families. The goal is to help members effectively manage their personal and professional priorities, choose healthy practices, maintain wellness and achieve balance in their work and personal lives. This EAP provides access to WorkLife and Wellness expertise on a wide range of issues including but not limited to:
Life
Health and well-being
Mid-life and retirement
Legal
Everyday issues

Money
Personal budget management
Debt management
Home buying or renting
Retirement planning

Family
Parenting and child care
Education
Older Adults

Work
Time management
Workplace change
Business travel
Relocation

LifeWorks provides:
- Expert counselors available 24 hours a day, seven days a week via a toll-free number
- In-person counseling during the day, evening and on weekends
- Support and intervention services for critical incidents
- Programs for formal referrals
- Hundreds of online resources including life articles, booklets and CDs which can be downloaded or shipped at no cost to the trainee.
- Access to a wide range of sessions for members including Lunch & Learns; Mediation; Outplacement; Team Building and Innovative customized programs to suit your requirements
- Support for Managers

When members call the EAP, they will hear a recorded message saying that Ceridian LifeWorks adheres to all privacy laws, and that calls will be recorded for training and quality purposes. The consultants will explain confidentiality, privacy and limitations. Callers will need to provide their name, address, and the name of their employer. Remember all information identifying the caller, such as name, address, etc. will be kept confidential.
F. STUDENT ACCESSIBILITY SERVICES (SAS)

sas@mcmaster.ca, sas.mcmaster.ca or call 905-525-9140 ext 28652

SAS offers support services for residents and fellows with disabilities. These disabilities may include: Chronic Health, Psychological, Neurological, ADD/ADHD, Learning, Sensory and Mobility.

The program coordinator at SAS will assist with:

- Guiding trainees’ progress in relation to their disability
- Discussing disability-related issues confidentially
- Collaborating with trainees and faculty to determine appropriate accommodations

The SAS Learning Strategist is dedicated to the trainees’ overall development and will provide one-on-one support with:

- Writing Skills
- Organizational Skills
- Study Strategies
- Use of technology in learning support
- Time Management

The Assistive Technologist will provide trainees assistive technology support:

- Access to up-to-date technologies, assessment, and training
- Appropriate SAS and bursary technology recommendations
- Accessing campus technologies
- Prospective vendors for the purchase of appropriate technology
- Understanding web accessibility
G. GETTING CONNECTED

The McMaster community is a diverse place. Consider the following in broadening your experience here or seeking additional support.

**Gay Lesbian, Bisexual, Transgender & Queer**

**McMaster’s Positive Space Program** increases the visibility of lesbian, gay, bisexual, trans, and queer (LBGTQ) staff, student and faculty members on campus. Positive Space provides a way for all interested campus members to become voluntarily involved in creating a more supportive and inclusive environment for LGBTQ members on campus and in the broader community. ([hres.mcmaster.ca/resources-1/positive-space-program](http://hres.mcmaster.ca/resources-1/positive-space-program))

The Queer Students Community Centre (QSCC) offers a variety of services, including Peer Support for individuals who may be dealing with issues related to sexual orientation and/or gender identity or who are perhaps dealing with others’ attempts to come to terms with their sexual orientation or gender identity (e.g. family members, partners). For more information, check [www.msumcmaster.ca/qscct.htm](http://www.msumcmaster.ca/qscct.htm).

Niagara Regional Campus residents can contact Brock Pride via brockpride.ca. Weekly meetings are hosted where like-minded people can meet and discuss issues. The site also lists resources/community partners. Contact email: info@brockpride.ca

Waterloo Regional Campus residents can contact Glow Centre - For Sexual & Gender Diversity. It is run by students and is the oldest queer student organization in Canada. It offers a wide variety of discussion groups, social events, advocacy opportunities, awareness campaigns, resources and information. See [Feds.ca/glow/](http://Feds.ca/glow/) or call 519-888-4567 ext 38569.

Gay Lesbian Bisexual Transgender Medical Students Canada is a national professional organization dedicated to address the issues and concerns of GLBT medical students and physicians in Canada. Their email is: glbtmeds@yahoo.com

**Aboriginal Groups**

**Aboriginal Students Health Sciences Office** ([fhs.mcmaster.ca/ashs/](http://fhs.mcmaster.ca/ashs/)), email ashs@mcmaster.ca, HSC Room 2E5A, 905-525-9140 x22824.
Niagara Regional Campus trainees can contact Brock University Aboriginal Students Services [www.brocku.ca/aboriginal-student-services](http://www.brocku.ca/aboriginal-student-services), Sandra Wong, Aboriginal Student Services, Academic Support, Program Coordinator/Instruction. 905-688-5550 ext 5883 or swong2@brocku.ca.

Waterloo Regional Campus support can be found through Myeengun Henry, Manager of Aboriginal Services/Aboriginal Councilor/Band Councilor (Chippewas of the Thames), Conestoga College, Be-Dah-Bin Gamik, 299 Doon Valley Drive, Kitchener, 519-748-5220 ext 2251 or contact mhenry@conestogac.on.ca or myeegun@cottfn.com

Email, info@ipac-amic.org. Phone: 204-219-0099.

**International Student Services** (contact 905-525-9140 ext 24747) provides services and programs and coordinates with a variety of entities on and off campus to ensure that the educational and personal needs of students are met.

McMaster University is home to over 275 [clubs and associations](http://www.msu.mcmaster.ca/clubs) students can join addressing every interest, whether they are looking to join a cause, learn about a culture, practice a hobby or just meet others. ([www.msu.mcmaster.ca/clubs](http://www.msu.mcmaster.ca/clubs))
Resources Available Outside of McMaster

A. PROFESSIONAL ASSOCIATION OF RESIDENTS OF ONTARIO (PARO)

The PARO 24 hour Confidential Helpline at 1-866-HELP-DOC (1-866-435-7362) is available to residents, their partners and family members. The Help line will not only provide immediate assistance in emergency or urgent situations but will also provide referrals. Help line volunteers have extensive training in acute crisis intervention, depression, anxiety and many other conditions. They have also been trained to the specific issues of residents such as hours of work, working conditions and frequent stressors. For more information on the helpline contact the PARO office at 416-979-1182 or 1-1877-979-1183 or email paro@paroteam.ca

B. ONTARIO MEDICAL ASSOCIATION (OMA) PHYSICIAN HEALTH PROGRAM

The Physician Health Program provides services to trainees and their family members. They will provide clients with prompt, confidential advice, preliminary assessment, intervention co-ordination, and referral for counselling and clinical services. They will assist with such issues as stress, burnout, marital and family issues, substance abuse or dependency, conduct or behavioral problems, sexual boundary issues, gambling and mental health. Visit php.oma.org or call the confidential OMA Helpline at 1-800-851-6606 (Monday-Friday 0845-1700)

C. CANADIAN MEDICAL PROTECTIVE ASSOCIATION (CMPA)

The CMPA provides information and resources with regard to Medico-Legal concerns. CMPA medical offices are available to discuss your issues. The website at www.cmpa-acpm.ca/home provides access to articles written by the CMPA and the sharing of member experiences. For more guidance on Medicolegal issues see page 20.
D. CAREER COUNSELLING

Along with program specific resources for career counselling, trainees can seek assistance from the following:

1. **Practice U** [www.healthforceontario.ca/en/M4/Practice_U](http://www.healthforceontario.ca/en/M4/Practice_U)
   
   Practice U will connect trainees with practical, career-focused information sourced from experts throughout Ontario’s healthcare sector.

2. **Practice Ontario** [www.healthforceontario.ca/en/M4/Practice_Ontario](http://www.healthforceontario.ca/en/M4/Practice_Ontario)
   
   Practice Ontario is a free career-planning service for postgraduate medical trainees created by HealthForceOntario. Postgraduate trainees are provided access to a personal regional advisor who is a regional expert with a wide range of network connections in Ontario’s healthcare sector. They can assist with:
   - exploring locum and permanent job opportunities available throughout Ontario
   - resume preparation
   - arranging visits to and interviews with potential employers

3. **HFOJobs** [www.hfojobs.ca](http://www.hfojobs.ca)
   
   The HFO Jobs employment website provides physicians (both in training and in practice) information on healthcare employment available in Ontario.

4. **MD Management** [mdm.ca](http://mdm.ca)
   
   MD Management provides information and resources on preparing for practice while also providing financial advice (ie. consolidating student loans, paying off debt vs investing, insurance). Visit [mdm.ca](http://mdm.ca) for more information.

5. **Ontario Medical Association** - Practice Advisory Service
   
   [www.oma.org/Benefits/Pages/default.aspx](http://www.oma.org/Benefits/Pages/default.aspx)
   
   OMA Practice Advisory Service offers a broad range of resources, services and training programs that help trainees establish and maintain a successful medical practice.
A. POSTGRADUATE HEALTH AND PERSONAL SAFETY POLICY

The Postgraduate Health and Personal Safety Policy is available in the policy section of Medportal, medportal.ca. The policy addresses the scope of personal safety, including levels of responsibility, reporting of safety issues and travel. The policy also details the process of action if a trainee experiences an injury.

B. WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

The Workplace Hazardous Materials Information System (WHMIS) is a comprehensive national system for safe management of hazardous chemicals which is legislated by both the federal and provincial jurisdictions.

WHMIS is mandatory training for anyone working with or in the proximity of hazardous materials. The WHMIS legislation provides that workers must be informed about the hazards in the workplace and receive appropriate training to enable them to work safely. To accomplish this, WHMIS requires all suppliers (manufacturers, importers, packagers and processors) to label and prepare Material Safety Data Sheets (MSDSs) for products they make, import, package, or process that meet the hazard criteria set out in the Controlled Product Regulations under the federal Hazardous Products Act. The buyers of these controlled products must make sure that these products are correctly labeled and that MSDSs are available.

Employers must set up worker education programs that instruct workers about the contents and significance of labels and MSDSs and how to work safely with hazardous materials.

In summary, WHMIS delivers the necessary information by means of:

- cautionary labels on containers of controlled products
- the provision of an MSDS for each controlled product
- a worker education program

The ultimate goal is to create a safer workplace by providing workers with the knowledge and tools to enable them to work safely.
The Postgraduate Medical Education office will provide you with a link on how to complete WHMIS training on-line.

C. POLICY REGARDING COMMUNICABLE DISEASES

Also see the Council of Ontario Faculties of Medicine, Immunization Policy at cou.on.ca or fhs.mcmaster.ca/postgrad/policies.html

I Applicants:

All applicants should be aware that they will be required to participate in the care of patients with various communicable diseases including hepatitis, TB and AIDS throughout their education. Therefore, there is a risk that the trainee may contract a communicable disease during the course of their studies.

As each trainee has a responsibility to prevent the spread of communicable diseases to others, the Faculty of Health Sciences is committed to providing education and training to all trainees in the methods of preventing spread of communicable diseases that is consistent with Health Canada Guideline Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care (www.phac-aspc.gc.ca/publicat/ccdr-rmtc/99vol25/25s4/index.html) and the Ontario Hospital Association/Ontario Medical Association Communicable Disease Surveillance Protocols for Ontario Hospitals.

II Requirements on acceptance into the program:

1. All trainees are expected to be in a state of health such that they may participate in the academic program, including patient care, without posing a risk to themselves or others. (Council of Ontario Faculties of Medicine COFM Policy Document: Essential Skills and Abilities Required for the Study of Medicine; www.ouac.on.ca/omsas/omsas-essential/)

2. All trainees will be required to understand and comply with faculty/program immunization policies and requirements. All students will be required to comply with provincial communicable disease surveillance protocols developed under the Public Hospitals Act, Regulation 965. (Public Hospitals Act, R.R.O. 1990, Regulation 965, www.e-laws.gov.on.ca/html/regs/english/elaws_regs_900965_e.htm)
III Students with a communicable disease:

Strict confidentiality concerning the trainee’s state of health will be maintained. The trainee is central to the process. Trainees who are accepted into the program, who have a communicable disease, may pursue their studies provided that their continued involvement does not pose a health or safety hazard to themselves or to others. Trainees will be offered counseling regarding career decisions and transferring.

1. Trainees with tuberculosis, hepatitis B, hepatitis C or HIV infection are professionally obligated, on acceptance, to inform the relevant Assistant Dean (Undergraduate, Postgraduate).

2. The Assistant Dean should consult with an Expert Board (ExB), and/or other experts, as appropriate.

When a trainee’s clinical duties or clinical exposure is to be modified, limited or abbreviated, the Assistant Dean should be notified. The Assistant Dean will request input from the Expert Board regarding the details of the modifications or limitations.

3. The trainee will be offered advice and counseling that will assist him/her regarding clinical practice.

4. Trainees who acquire a communicable disease, or incur an injury or other medically related incident during their education program are required to seek medical attention immediately. The incident must be reported and documented by the trainee, at the earliest opportunity, to the Faculty of Health Sciences Occupational Health and Safety Office, the appropriate clinical supervisor, program director and the Assistant Dean. The Assistant Dean will ensure that appropriate documentation and counseling is provided through the assistance of the Expert Board.

5. Trainees have the right to appeal decisions made by the Assistant Dean or the Expert Board by submitting, in writing or in person, a proposed amendment to the decision and the rationale supporting such an amendment. The trainee may submit additional documentation from his/her personal physician or other healthcare worker in support of their appeal. In the case where the trainee’s appeal is rejected by the Assistant Dean and/or Expert Board, the trainee may engage in the Student Appeal Procedure of the University to submit any additional appeal.
IV Composition of the Expert Board:

The case will be reviewed anonymously by the Expert Board. To ensure that the trainee’s confidentiality is respected and maintained, the trainee will be advised of the membership of the Board prior to the case being reviewed. Disclosure of the nature of the communicable disease will be limited to the relevant Assistant Dean and the Director of the student’s education program.

- Assistant Dean, Chair (from appropriate program)
- Infectious diseases expert physicians (1-2)
- Physician from the discipline of the student (if applicable)
- Student representative (e.g., local PARO representative)

Additional resources available to the Expert Board:

- Medical Officer of Health
- Occupational Health
- Ethicist

The Expert Board will meet on an ad hoc basis, as required.

V Co-Responsibility with Hospitals

The Faculty of Health Sciences and the teaching hospitals each are responsible for ensuring that trainees are adequately instructed in infection prevention and control as it relates to communicable diseases. This will include the following:

1. The Faculty will provide an introductory program on routine practices/standard precautions, infection prevention and control that is consistent with current guidelines and occupational health and safety. In addition, the Faculty will inform trainees as to their responsibilities with respect to infection prevention and control and occupational health and safety.

2. Affiliated teaching hospitals are required to comply with the Communicable Disease Surveillance Protocols for Ontario Hospitals developed under the Public Hospital Act, Regulation 965. Compliance with these Protocols requires the hospitals, in liaison with the University’s academic programs, to provide instruction in infection prevention and control as well as occupational health and safety.
VI Occupational Health

All trainees will receive appropriate instruction with respect to adverse exposures (e.g., chemicals and radiation) which they may encounter during their program.

“While students are not covered by the Occupational Health and Safety Act or its regulations, the University is also committed to fulfilling its responsibilities concerning the health and safety of its students.”

Residents, as employees of the hospitals are covered through the hospital Occupational Health; refer to the current PARO contract for details.

Examples of specific communicable diseases included in this policy:

Blood-borne pathogens
HIV / Hepatitis B, C, D.

Enteric pathogens
Salmonella / Shigella / Campylobacter / E-coli 0:157 / verotoxin producing Giardia Amoebiasis

Other
Influenza / Hepatitis A / Meningococcal disease / Measles / Mumps / Rubella / Tuberculosis / Varicella
A. INTIMIDATION & HARRASSMENT

A.1 DEALING WITH HARASSMENT – A BRIEF GUIDE

McMaster University is dedicated to the pursuit and dissemination of knowledge in order to enable its members to pursue these twin objectives. McMaster seeks an atmosphere free of harassment and discrimination.

Prohibited grounds of discrimination under the Ontario Human Rights include ancestry, citizenship, colour, creed, ethnic origin, family status, handicap, marital status, place of origin, race, receipt of public assistance, sex, and sexual orientation.

Prohibited grounds of discrimination also include language, accent, or dialect, except as language, accent, or dialect may interfere with legitimate requirements of education or employment. Prohibited grounds of discrimination also include discrimination because of political belief; membership or non-membership in a political organization; or membership or non-membership in a trade union, or employee or employer organization.

Harassment means engagement in a course of vexatious comments or conduct that is known or ought reasonably to be known, to be unwelcome. “Vexatious” is a comment or conduct made without reasonable cause or excuse.

If you think you are being harassed or intimidated, contact:

Robin Edwards
Professionalism, Advisor,
Faculty of Health Sciences,
McMaster University, Room 2E09
1200 Main Street West,
Hamilton, ON, Canada L8N 3Z5
Phone: 905.525.9140 Ext. 22417
Fax: 905.526.6623
edwardro@mcmaster.ca
mcmaster.ca

Or

Human Rights and Equity Services Office
McMaster University, 1280 Main St. W.
MUSC Room 212
Hamilton, Ontario L8S 4M4

Office Hours: Mon - Fri, 9 a.m - 5 p.m.
905-525-9140, ext. 27581
hres.mcmaster.ca

Trainees can also contact the Director of Resident Affairs for assistance. See page 2 for contact information.
If you make a complaint, the Sexual Harassment and Intimidation policies at McMaster ensure that the complainant AND the respondent, AND any other parties to the complaint are treated fairly. Complaints are kept strictly confidential unless the health or safety of members of the McMaster community is at risk, in which case appropriate safety steps will be taken.

If you initiate a complaint and decide at any time not to continue with the complaint, you cannot be compelled to proceed with a complaint against your wishes.

If you are being harassed:

Depending on the nature of the harassment and the identity of the people involved, you might consider taking these steps:

Ask for Help: Contact the FHS Advisor on Professionalism or the Director of Resident Affairs. Alternatively, contact the HRES and ask for assistance. Talk to your supervisor, another member of faculty you trust, or the program director or chair.

Keep a Record: Take notes of the dates, times and locations of all harassing behaviours and include the names of any witnesses. If you know of others who are being harassed as well, talk to them and ask them to document their experiences as well. Consider making a joint complaint.

Tell the Harasser to Stop: If you feel you can do so safely, tell the harasser in a diplomatic tone that you consider his or her behaviour to be harassment and you expect them to stop. If you feel you cannot face the person directly, you might also consider sending an e-mail or letter. Identify what they are doing that is inappropriate and tell them to stop it. Keep notes of your conversation or a copy of the e-mail or letter.

Keep Yourself Safe: Whatever you do, make sure you remain safe (both physically and emotionally). Try to avoid being alone with the harasser; bring a friend or colleague if you have to meet with the person. Remain calm and professional in those situations where you have to have contact with the person. Keep a record if you see the person in a place or at a time when you would not expect to see them.

Get Support: Find someone (a friend, colleague, supervisor, faculty member) who will respect how you feel and be supportive of you. Tell them about the situation. Ask for their help. See your doctor if the stress of the situation is having a negative effect on your health.
A.2 SEXUAL HARASSMENT

The Human Rights & Equity Services office implements the Sexual Harassment and Anti-Discrimination Policies. These policies apply to on-campus activities as well as certain off-campus activities. For example, students engaged in off-campus University-sanctioned academic activities (such as co-op placements, internships, and practica) have access to these policies. Our services to students, staff, and faculty include:

Consultation and Advice

We provide confidential consultations on human-rights-related issues of all kinds. We’ll listen to what you have to say, discuss your options with you, and intervene (in most cases) only if you wish us to intervene.

Awareness and Education

We raise awareness and provide education with regard to harassment, discrimination, accommodation (of religious beliefs and disabilities of all kinds) and other human-rights-related issues. We will work with you, your organization, or group to design programs to address specific situations.

Resolution of Complaints

We will meet with campus members who feel that they have been subjected to harassing or discriminatory behaviour based on a human rights ground. We can offer guidance as to the options the person has available to address the concern, including the dispute resolution process under the Sexual Harassment and Anti-Discrimination policies.

Milé Komlen, Director
Vilma Rossi, Program Coordinator
McMaster University Student Centre, Room 212
Telephone: 905-525-9140, ext. 27581
Fax: 905-522-7102
hres@mcmaster.ca
www.mcmaster.ca/hres
Office Hours: 8:30 a.m. to 4:30 p.m. (Appointment times outside of these hours may be accommodated upon request.)
Regional Campus Support

Trainees at the regional campuses can contact the Director of Resident Affairs. See page 2 for contact information.

A.3 COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO (CPSO) - TASK FORCE ON SEXUAL ABUSE OF PATIENTS

In January 1991 the CPSO appointed an independent Task Force on Sexual Abuse of Patients. After review, consultation and revision, the College presented its own recommendations to the Ministry of Health in September 1992.

In October 1992 the Ministry of Health introduced a discussion paper based on the College recommendations and in November the Ministry introduced Bill 100, an Act to Amend the Regulated Health Professions Act.

The recommendations of the CPSO are 60 in total. The document in its entirety is available from the College upon request. The College’s address is: The College of Physicians and Surgeons of Ontario, 80 College Street, Toronto, Ontario M5G 2E2 or Telephone: 1-800-268-7096.

DEFINITIONS:

The College has defined three levels of PROFESSIONAL MISCONDUCT.

I SEXUAL IMPROPRIETY - any behaviour such as gestures or expressions that are sexually demeaning to a patient, or which demonstrate a lack of respect for the patient’s privacy.

II SEXUAL TRANSGRESSION - any inappropriate touching of a patient that is of a sexual nature, short of Sexual Violation.

III SEXUAL VIOLATION - physician-patient sex, whether or not initiated by the patient, including, but not limited to, sexual intercourse, masturbation, genital to genital contact, oral to genital contact, oral to anal contact and genital to anal contact.

MANDATORY REPORTING:

It is mandatory that a member of the College notify the College in writing when he or she has reasonable grounds to believe that another member of the
College is or has been engaged in sexual transgression or sexual violation, and that such information be recorded and retained by the College.

CPSO also makes recommendations regarding Third Party Reports, Multiple Party Reports, Mandatory Reporting whereby the patient is a physician.

THIRD PARTY PRESENCE DURING EXAMINATIONS:

Patients have the right to a third party present during internal/intimate examinations if they wish, with the exception of life threatening emergencies. In some cases, the physician will be able to provide this third party. In cases where a physician is unable to provide such a person, patients should be informed that they may bring a person of their choosing with them. In non-emergency situations, physicians have the right to insist that a third party be present during internal/intimate examinations, and to refuse to conduct a routine internal/intimate examination if the patient refuses consent for a third party to be in the room.

B. MEDICAL & LEGAL MATTERS - GUIDELINES

If you are involved in any legal matters related to your professional activities (including being asked to give evidence) the following guidelines are recommended, according to the specific nature of the problem:

You should always contact the clinical supervisor responsible for the case in question; they will be able to provide support and advice, especially if they are required to participate in the same legal proceedings.

Contact your Program Director; your program director is there to offer support and guidance. S/he will ensure your best interests are being attended to and that appropriate management is being offered.

Canadian Medical Protective Association should be contacted immediately. Membership with CMPA is required.

Residents may wish to contact PARO as they are a members of the Professional Association of Residents. Each school has representatives who will be able to counsel and assist you.

Trainees can also contact a Director of Resident Affairs to assist and guide them with Medico-Legal issues. See page 2 for contact information.
# Important Phone Numbers

## McMaster University

### McMaster Campus
905-525-9140 ext 22118

### Niagara Regional Campus
905-378-5717

### Waterloo Regional Campus
519-885-5426

### Brampton
905-494-2120 ext 57339

### Grand Erie Six Nations
519-751-5544 ext 2615

### Halton
905-632-3737 ext 2134

### Rural Stream

<table>
<thead>
<tr>
<th>Location</th>
<th>Phone Number</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collingwood</td>
<td>1-877-445-ROMP</td>
<td>7667</td>
</tr>
<tr>
<td>Fergus</td>
<td>519-783-0024</td>
<td>1</td>
</tr>
<tr>
<td>Mount Forest</td>
<td>519-783-0024</td>
<td>1</td>
</tr>
<tr>
<td>Owen sound</td>
<td>1-877-445-ROMP</td>
<td>7667</td>
</tr>
<tr>
<td>Simcoe</td>
<td>519-751-5544</td>
<td>2615</td>
</tr>
</tbody>
</table>

### Mohawk Shared Services (EAP)
905-521-8300 or 1-888-521-8300

### Human Rights & Equity Services Office
905-525-9140 ext 27581

### Student Walk Home Attendant Team (SWHAT)
905-525-9140 ext 27500

### Security
905-525-9140 ext 24281
COMMUNITY SERVICES

Police Services

Hamilton Police Services (HPS)
905-546-4925

Niagara Regional Police Services
Non-Emergency 905-688-4111

Waterloo Regional Police Services
519-653-7700

Crisis/Suicide Lines

COAST – Crisis Outreach & Support System Team
24 Hour Crisis Line 905-972-8338

The Salvation Army Suicide Prevention Services
Crisis Line: 1-855-294-HOPE

Niagara Region 24 hour crisis lines
St. Catharines, Niagara Falls And Area – 905-688-3711
Port Colborne, Wainfleet and Area – 905-734-1212
Fort Erie and Area - 905-382-0689
Grimsby, West Lincoln – 905-563-6674

Distress Centre of Waterloo Region
519-744-1813 (crisis line)

Sexual Assault Hotline

Sexual Assault Hotline (Hamilton)
905-525-4162

Niagara Region Sexual Assault Crisis
905-682-4584

Sexual Assault Centre of Waterloo Region
519-571-0121

Victim’s Services

VICTIM’S SERVICES (Hamilton)
905-546-4904

Victim Services Niagara
905-682-2626

Victim Services Waterloo Region
519-585-2363

Other

Poison Information Centre
1-800-268-9017

Drug & Alcohol Infoline
1-800-463-6273

AIDS

Hamilton AIDS Network Infoline
905-528-0854

AIDS Niagara
905-984-8684 or 1-800-773-9843

AIDS Committee of Cambridge, Kitchener, Waterloo & Arena
519-570-3687 Toll Free 1-877-770-3687
ASSOCIATIONS, etc.

Canadian Medical Protective Association (CMPA)
1-800-267-6522 or 613-725-2000

College of Physicians & Surgeons of Ontario (CPSO)
1-800-268-7096 or 416-961-1711

Hamilton Academy of Medicine
905-528-1611

Homewood Health Centre
519-824-1010

Professional Association of Residents of Ontario (PARO)
416-979-1182 or 1-877-979-1183

PARO Hotline
1-866-435-7362 (HELP-DOC)

HOSPITALS

A full list of Ontario Hospitals and their contact information can be found at www.health.gov.on.ca/en/common/system/services/hosp/locations.aspx
Hamilton Health Sciences is committed to supporting the health and well-being of staff, physicians, and volunteers. Our corporate vision, “Best Care for All”, also applies to each and every member of the HHS family. Our best resource is you—our people, which is why Shine (Supporting Health IN Everyone), the new HHS wellness program, was developed. This exciting new program will help bring wellness right to the workplace environment and provide support to staff, physicians, and volunteers in leading a healthier lifestyle. A range of wellness programs, events and initiatives have arrived to help you live well and work well. We look forward to seeing you soon!

Wellness Centres, please do not go to the Security Office yourself to make the request. All access requests must go through Jessica, the Wellness Coordinator. This is meant to streamline the process and ensure that everyone has completed the necessary paperwork. If you would like access, please head to the "Get Access" page to get started. Thank you for your understanding and cooperation!

Shine Wellness Program Video

*Important Note* If you would like 24/7 badge access to https://hhsshine.barkbuilder.com/files/HHSShine/Videos/Film%20Festival/Film%20Festival%20Shine%20Video.mp4

The Program has an Ombudsman, Dr. JD Cyr, available for independent counseling if they should desire, but they may also select an advisor/mentor from the faculty.

2014-2015 – Program Ombudsman Dr. JD Cyr
Contact information: cyri@hhsc.ca
905 521 2100 ext. 46698

The University also has an Ombudsman’s office (email ombuds@mcmaster.ca) that is available to act as a “confidential service designed to assist students, faculty and staff in the just, fair and equitable resolution of university related complaints and concerns”.

https://hhsshine.barkbuilder.com/
Mentorship Overview

The Anesthesia residency program runs a formal mentorship program whereby each new resident is assigned a faculty mentor. Mentorship plays an important role in resident wellness, conflict resolution as well as career planning. Some important things to note about our mentorship program:

- Assignment of mentors will be done by the Program Director (PD) or Mentorship lead (an RTC member) with a view to achieving a good “fit” between mentor and mentee
- Mentor pairings can remain the same over the course of the residency if the pairing is working well from both mentor and mentee perspective
- Mentor pairings can be re-assigned at any time should the need arise. Residents should not hesitate to ask the PD for a reassignment
- Resident Mentees are required to meet with their mentor at least 2 times/year (in person); there is no upper limit to the number of meetings that may occur (in person or by phone or email) and that should be determined by the resident’s needs
- The faculty mentor will document the meetings on a resident meeting documentation form. The forms are attached in this chapter for your information
- Residents are required to discuss their Reflection Forms with their mentor and have the mentor sign off on them
- Residents are also assigned a senior resident “buddy”, a more informal component to our mentorship program.

Further information on the mentorship program is contained in the “Letter to Mentors”, also in this chapter.

Karen Raymer
August 11, 2014
**Mentorship Meeting Documentation- Faculty Mentor to Complete**

**To go to faculty (mentor) to document mentorship meeting with resident (mentee)**

Note: To protect the resident’s confidentiality, this form is a checklist to be documented and acknowledged. You may document issues or concerns within your own confidential records. If there are issues that warrant discussion with the Program Director or the Mentorship Program Coordinator, they can be discussed in further detail with the consent of the resident mentee.

Did the resident raise any issues or concerns?  
☐ yes  ☐ no

If yes, were these concerns related to one or more of the following:

- Academic
- Personal
- Professional
- Faculty
- Research
- Allied Health Team

If yes, were you able to resolve those issues or concerns?  
☐ yes  ☐ no

Prior to the meeting, did any of the faculty or the program director raise any issues or concerns regarding your resident?  
☐ yes  ☐ no

If yes, did you communicate those issues to the resident?  
☐ yes  ☐ no

If no, please explain why issue was not communicated to resident:

If yes, were you able to resolve those issues and come up with solutions?  
☐ yes  ☐ no

Did you discuss the resident’s academic progress?  
☐ yes  ☐ no

Did you discuss the resident’s clinical / professional progress?  
☐ yes  ☐ no

Did you discuss the resident’s research / educational progress?  
☐ yes  ☐ no

Did you discuss the resident’s personal life and progress?  
☐ yes  ☐ no

Did you discuss the resident’s subspecialty interests?  
☐ yes  ☐ no

Did you discuss fellowships and applications?  
☐ yes  ☐ no

Did you provide contact information for emergency or crisis situations?  
☐ yes  ☐ no

Did you make arrangements for the next meeting?  
☐ yes  ☐ no

If yes, please provide date: _ _ / _ _ / _ _ _ _

Do you feel confident in continuing to provide mentorship to this resident?  
☐ yes  ☐ no
Do you think that a meeting with a mentorship coordinator or program directors is necessary to address outstanding concerns or issues?  ☐yes  ☐no
If yes, has the resident agreed to the meeting?  ☐yes  ☐no
If yes, does the resident wish to be present at the meeting?  ☐yes  ☐no

Comments:

Reflection Forms reviewed/discussed?  ☐yes  ☐no

Comments:

**After form is completed by faculty (mentor) – to be sent to resident (mentee) for review and ‘sign-off’.**

Resident: I confirm that a meeting with my mentor did take place on the above stated date, and that the above documentation of that meeting is accurate.

☐yes  ☐no

Comments:

Resident Signature:
Resident Retreats and Business Meetings

There will be three resident retreats per academic year. Typically they will occur in the months of August, December, and April. One retreat (often in August) will be a full day on a Wednesday, while the other two will be a half day on a Wednesday afternoon. The retreats will replace all academic half days for residents PGY 1-5 during the same week. (I.e. PGY 2 residents will attend the retreat on the Wednesday but not have an academic session on the Thursday rather will be in the OR).

Retreats are mandatory for all residents who are not post-call, on leave, vacation, professional leave, or using a lieu day. Individual residents have the opportunity to opt out of the retreat in order to attend usual clinical duties and this should be brought to the attention of both the chief resident and program director. Attendance will be taken by the resident advisory committee (RAC) and submitted to the program assistant.

Resident business meetings conducted by the chief resident and RAC will likely coincide with retreat days. These meetings also follow the same mandatory policy as above.

Retreats will be planned and organized with have the following objectives in mind:

- Resident Wellness
- Collaboration and Team Building
- Socialization and informal mentorship across different levels of training

Residents who participate in retreats assume all risks associated with travel and retreat participation. Residents who do not feel comfortable assuming risk can attend regular clinical duties.
Reach for the Top

Reach for the Top is a year-end social event that takes in June, usually just after the PGY5’s have received their RC exam results. The PGY5’s organize Reach for the Top.

Reach for the Top is a longstanding tradition in the McMaster Anesthesia Residency Program and nowhere else is the camaraderie between Faculty and Residents more evident than at this event.

Reach for the Top involves a Staff vs. Resident game of “Jeopardy”, followed by dinner. After dinner, awards are presented. Usually a series of “gag” awards are presented to both faculty and residents.

The serious awards are:

- The Vince Politi Award (Best Clinical Teacher, as voted by the residents)
- The Lawrence Chiu Award (Professionalism as voted by the residents)
- The Hisham Zokari Award (Resident award, as voted by residents)

On call residents should be released to attend Reach for the Top unless doing so would compromise patient care.
**Resident Supervision**

It is recognized that appropriate staff supervision is an important component in achieving training objectives over the course of the residency program. The fundamental principle of graded responsibility applies, whereby the level of independence given to the resident is commensurate to their experience, knowledge and abilities, as assessed by both faculty supervisor and resident. Patient well-being is paramount and should be at the forefront of all considerations.

At the very highest level of training, the resident can, where appropriate, be supervised by “remote supervision”, whereby the resident should discuss in advance the proposed management in detail with the supervising consultant. The same supervising consultant should be immediately available to assist the resident when requested. This would occur during the “PGY5 Junior Staff Lists” where the PGY5 resident runs his/her list independently with a dedicated faculty immediately available (and in attendance for safety briefings to comply with hospital by-laws).

**Non Urgent/ Non-emergent Services**

Residents should not conduct elective, non urgent/non-emergent procedures independently unless directed to do so by their supervisor. That supervisor must be immediately available to the resident. Both the Resident and Supervising Faculty must be comfortable with the degree of graded responsibility permitted in the delivery of elective, non-urgent or non-emergent services. Residents should request the immediate attendance of a faculty member if they are not comfortable with the situation. At no time should residents perform elective, non-urgent or non-emergent patient care services for which they are not trained in the management of emergency complications.

The resident is not to substitute for an absent (sick-call) staff member, whether on a regular rotation or community elective, even if this is the local practice at the community site.

**Emergency Situations**

In extraordinary circumstances it may be necessary for the resident to provide patient care in an emergency situation when supervising faculty are not immediately available. The resident is expected to provide patient care commensurate with their ability and level of training until such time as the supervisor is available. Assistance should be obtained at the earliest possible opportunity and contact with the attending/supervising faculty should be made in a timely fashion. Formal guidelines were written in 2006 and are outlined below.

KR June 2014

**Resident Responsibilities during Life Threatening Emergencies when the Staff Physician is Absent**
McMaster Anesthesia Program Resident Safety Policy

Safety Concerns While On Call for Anesthesia

These include the below-mentioned Work Concerns plus:

Access to Call Rooms

Residents will be ensured easy access to clean and safe rooms while on call
These rooms must have a door that can be locked and to which no one else excepting security services, has a key
Residents will have access to these rooms beginning at 5pm the day they are on call and continuing until 12pm the following day.

Safety in Hospital

Refer to “Health and Personal Safety Guidelines” or


Adequate Back-Up

Refer to “McMaster Guidelines for the Supervision of Clinical Activities of Postgraduate Medical Students”

Please refer to the CPSO guideline “Professional Responsibilities in Postgraduate Medical Education” http://www.cpso.on.ca/policies/policies/default.aspx?ID=1846

Staff should be present in the immediate OR area for patient induction and available to be present in the OR for emergence; staff supervision and availability should be appropriate to the resident’s level of training.

At times when residents are left alone in the OR, staff should establish a means of personal contact should patient concerns arise; staff must remain within 5 minutes of the OR or, alternately, should appoint a delegate to be available on their behalf.

Should staff not be available or responding, residents should request assistance from anesthesia staff in an adjacent OR or call overhead for “any available anesthesia staff”; if residents encounter problems with staff adherence to this practice, they should notify the CTU director and/or the Program Director.

Moonlighting

Refer to “Moonlighting Policy”, of residency manual

Refer to http://www.restrictedregistrationontario.ca/index.html for more information
4. Safety Concerns While On Community Placement Electives

5. Safety Concerns While Outside of Work

**Privacy/Harassment**

Refer to “Postgraduate Medical Education Guidelines on Harassment”,

**Sexual Harassment/Abuse**

Refer to “Excerpt from McMaster University Policy and Procedures on Sexual Harassment” and “Excerpt from CPSO Article on Strategies for Preventing Sexual Abuse”,

**Additional Sources:**

- McMaster University → McMaster University Policy and Procedures on Sexual Harassment [www.mcmaster.ca/policy/General/HR/sexharassment.pdf](http://www.mcmaster.ca/policy/General/HR/sexharassment.pdf)

- PAIRO – [www.pairo.org](http://www.pairo.org) → Subsection ‘No Discrimination/Harassment/Intimidation’

- CPSO – [www.cpso.on.ca](http://www.cpso.on.ca) → Subsection ‘Maintaining Appropriate Boundaries and Preventing Sexual Abuse’

**Communication around Resident Safety**

Residents should be made aware of the McMaster University Residency Safety Handbook, as well as the Anesthesia Safety Document during their PGY1 Orientation

Information should be readily accessible via the internet, as well as at each hospital site (MUMC, HGH, JHCC, and SJH)

Refer to: [http://postgrad.medportal.ca/wellness.aspx](http://postgrad.medportal.ca/wellness.aspx)

**Perceived Lack of Adherence to Resident Safety Policy**

Situations where there is a perceived lack of adherence to the McMaster Anesthesia Residency Program Safety Policy should be communicated immediately to the CTU Director and/or Program Director, who will attempt to address the issue(s), as appropriate, with the CTU Directors and/or the Postgraduate Medical Education Office

**Ongoing Evaluation of Resident Safety Policy**

The McMaster Anesthesia Residency Program Resident Safety Policy will be revisited annually in September, at which time any identified revisions or additions can be made

**Safety Issues Related to Travel To and From Work**
Driving Post-Call

Residents should be guaranteed safety coming from and returning to all hospital sites (MUMC, HGH, HJCC, SJH, and community placements). This clause includes post-call travel and travel that occurs after hours during home call shifts.

Call Room Availability
To this end, call rooms at all hospital sites requiring in-house call (MUMC, HGH, and SJH) should be made available from 1700 on call days until 1200 on post call days, to allow residents to rest prior to travelling home post call.

Refer to “Health & Personal Safety Guidelines”,

Taxi Chits/Reimbursement
Cost should not deter from the use of taxis or public transit, if the resident is too tired to safely travel home from a hospital site after hours or post call. Residents are responsible for the submission of documentation of expenses for reimbursement to the Department of Anesthesia Residency Program Administrator (Judy Pace).

Travel Between Hospital Sites

Refer to “Principles of Cross Coverage and Multi-Site Coverage”,

When travelling for clinical/academic duties in private vehicles, residents are expected to:
- Maintain their vehicle adequately
- Travel with appropriate supplies and safety equipment
- Ensure the department has up to date contact information and an itinerary to the Anesthesia Residency Program office or a colleague

An exception to this would be travel between sites within the city where the itinerary would be implicit in the schedule itself.

Residents are not to be on call the day before driving a long distance for clinical/academic assignments. Instead, residents should:
- Request to be off call on the day prior to travel, up to four weeks in advance
- If it is not possible to be off call the day before travel (>300 km), then a guaranteed travel day should be provided before starting any clinical duties

Refer to “Health & Personal Safety Guidelines”,

Inclement Weather
Residents are not to be expected to travel during inclement weather for academic or clinical purposes, if they feel it is unsafe to do so.


Residents may, at their own discretion, utilize public transit or taxis to ensure safe transit to/from duty sites during inclement weather.

Cost should not be a deterrent from the use of these facilities.

If inclement weather prevents travel or the resident feels unsafe travelling in such weather, the resident should:

- Contact the Anesthesia Residency Program office (Judy Pace) immediately, by phone or email
- Contact the administrative resident, CTU Director and assigned Anesthesia Staff person at their respective site immediately by phone or if available, Instant Messaging

**Security Related to Hospital Parking**

Residents should not walk alone for large or unsafe distances at night or after hours, including in parking facilities and on hospital premises.

Residents are expected to request security escorts in such circumstances.

Security Services should be readily available and accessible for such instances.

Residents should familiarize themselves with the locations of the emergency stations in the major hospital sites and parking lots.

**Safety Issues While at Work (Regular Working Hours)**

**Needlestick Injuries**


For additional information, please refer to the following documents on the HHS Intranet under “Infection Control”:

- Standard (Routine) Precautions
- Health Safety and Wellness for Percutaneous or Mucus Membrane Exposure

Residents may choose to consult Employee Health Services or the Infection Control Practitioner at the site at which they are working.

Also, additional information can be found on the College of Physicians and Surgeons of Ontario website: [http://www.cpso.on.ca/policies/policies/]
Should a needlestick injury occur while a resident is working in the OR, the supervising staff should excuse the resident as soon as patient safety considerations permit or immediately, if resident safety is compromised, so that appropriate and timely assessment may be sought.

**Other Workplace Injuries**

If an injury occurs while working, the injury must be reported.

Refer to "Health & Personal Safety Guidelines


During daytime hours, while working at one of the Hamilton teaching hospitals (e.g. Hamilton Health Sciences or St. Joseph’s Healthcare) the resident should go to that hospital's Employee Health Office to fill out an incident report form (that will be provided).

A copy of the incident report form should be submitted to the Anesthesia Residency Program Administrator (Judy Pace) for notification.

During evenings or weekends at either one of the Hamilton teaching hospitals or one of the training centers outside of the Hamilton area, the resident should go to the nearest Emergency Room; the resident must complete, within 24 hours, an Injury/Incident Report (forms should be available in the local Emergency Room).

Available Hamilton resources:

<table>
<thead>
<tr>
<th>Postgraduate Medical Education Office</th>
<th>Hamilton Health Sciences Human Resources – Employee Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone: 905-525-9140, ext. 22118</td>
<td>Telus Sourcing Solutions</td>
</tr>
<tr>
<td>Fax: 905-527-2707</td>
<td>120 King Street West, Suite 200 Hamilton, ON</td>
</tr>
<tr>
<td></td>
<td>Phone: 905-387-9495, ext. 63900</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Faculty of Health Sciences Safety Office</th>
<th>St. Joseph’s Healthcare Occupational Health and Safety Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone: 905-525-9140, ext. 24956</td>
<td>50 Charlton Avenue East Hamilton, ON L8N 4A6</td>
</tr>
<tr>
<td>Fax: 905-528-8539</td>
<td>Phone: 905-522-1155, ext. 33344</td>
</tr>
<tr>
<td>Health Sciences Centre, Room 3N1C</td>
<td></td>
</tr>
<tr>
<td>1200 Main Street West Hamilton, ON L8N 3Z5</td>
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</tbody>
</table>
Communicable Disease

For vaccination requirements,

Refer to  “Immunization and TB Skin Test Form”,

For pandemic/outbreak guidelines,

Refer to “Pandemic, Support of Learners in Clinical Placements”,

http://postgrad.medportal.ca/documents/Pandemic.pdf

For information regarding resident communicable disease,

Refer to “Communicable Diseases and Occupational Health“, 


For personal exposure prevention,

Refer to and “Communicable Diseases and Occupational Health”,


Specific to the Anesthesia Residency Program, the Department of Anesthesia will ensure that residents are trained and properly supported, to help protect residents from contagious respiratory conditions during airway and anesthesia management

WHMIS/Occupational Health

The Postgraduate Education Office PGY1 orientation will include the location of written and/or online WHMIS resource http://fhs.mcmaster.ca/safetyoffice/whmis-page.html

Residents will receive teaching in the prevention of OR fires and OR fire safety procedures for both patient and personal protection.

Residents will receive education related to surgical laser safety. Reference can also be made to the following resources:

Up to Date, “Basic Principles of Medical Lasers” and “Operating Room Safety” Miller’s Anesthesia (7th ed), Chapter 77 “Anesthesia for Laser Surgery” and Chapter 101 “Environmental Safety Including Chemical Dependency”

Personal Protective Equipment (PPE)

Appropriate PPE in reasonable condition will always be available to residents, whether working on the wards or a clinic, in the PACU, in Diagnostic Imaging, in the EPS lab, in the HIU, or in the OR. Should appropriate PPE not be immediately available, residents should provide care only to the extent that it does not endanger themselves or the patient
Adequate Supervision

Refer to “McMaster Guidelines for the Supervision of Clinical Activities of Postgraduate Medical Students”,

Refer to the CPSO guideline “Professional Responsibilities in Postgraduate Medical Education” located at


Staff should be present in the immediate OR area for patient induction and available to be present in the OR for emergence; this supervision should be appropriate to the resident’s level of training. At times when residents are left alone in the OR, staff should establish a means of personal contact should patient concerns arise; staff must remain within 5 minutes of the OR or, alternately, should appoint a delegate to be available on their behalf. Should staff not be available or responding, residents should request assistance from the staff in an adjacent OR or a nurse in the room call overhead for “any available anesthesia staff”; if residents encounter problems with staff adherence, residents should notify the CTU director and/or the Program Director.

Concerns Regarding Inappropriate Behaviour of Supervising Staff

Refer to “Resolution of Resident Disagreement with attending Physician or Supervisor on an Issue of Patient Care”,


If residents encounter immediate patient safety concerns related to inappropriate attending physician behavior, the resident should notify the CTU Director immediately, or if not available, any available anesthetist for assistance.

Dispute Management

In the case of disputes with staff not related to patient care, residents should attempt to resolve the issue through direct communication with the staff in question. In situations where the fist line approach does not resolve the problem, the CTU director should be informed of the issue.

The CTU Director may choose to address the concern through direct communication with the staff and resident involved, either individually or in the form of a group meeting. If this does not lead to a satisfactory resolution, the Program Director should be informed and may elect to deal with the issue directly or to involve the Department Chair and/or Clinical Chief, the Postgraduate Medicine Office, or an appropriate outside mediator.

Harassment

Refer to “Harassment” policy,
Please see a number of links in the section on “Safety Away From the Workplace” (e.g. sexual harassment policies from PAIRO, McMaster, and the CPSO are included in this section).

Privacy of Resident Evaluation

Refer to “Forwarding of Assessment Information”,

http://postgrad.medportal.ca/policies/documents/ForwardofAssessmentInformation.pdf

Recognizing that it is important that staff communicate to one another regarding resident strengths and weaknesses, both for patient safety and resident learning, any concerns that are communicated to other staff should also be conveyed to the resident in question.

Pregnancy during Residency

If a resident becomes pregnant during residency, the Program Director should be informed as soon as possible.

The Program Director will liaise with CTU directors, as appropriate, to ensure appropriate accommodations are made (cessation of work in OR with expected and/or extended use of fluoroscopy, diminished call during third trimester, etc...).

Breastfeeding

The McMaster Anesthesia Residency program supports breastfeeding in the workplace and, as such, will take steps to accommodate residents who choose to do so, including access to private space, a fridge and allotment of time, insomuch as it does not interfere with patient safety or resident educational goals.

Radiation Safety

All residents will receive appropriate instruction with respect to adverse exposures (e.g., chemicals and radiation) that may be encountered during the course of their training.

Of note, if residents have any immediate questions or concerns, radiation safety officers are assigned within each hospital OR and the Radiation Technicians present at the time of exposure are additional resources for questions and concerns.

Refer to “Health & Personal Safety Guidelines”


Refer to “Communicable Diseases and Occupational Health”


Refer to PARO/CAHO agreement:
Residents should have the opportunity for annual teaching sessions and education should be received early in the residency training program. Residents working in areas with long term or high exposure to radiation must follow radiation safety policies and minimize exposure according to current guidelines. Refer to the McMaster University Guidelines located at Risk Management Manual – Subsection ‘Radiation Safety’ and Health Physics Advisory Committee.

Pregnant residents should be aware of specific risks to themselves and their fetus in the training environment; requests for low exposure rooms should be accommodated, so long as it does not affect the resident’s academic experience. Radiation protective equipment (Aprons, Neck Guards etc.) should be used by all residents when exposed to radiation. Appropriately sized protective equipment should be available at all hospital sites.

**ATTACHMENT 25**
Letter of Understanding Re: Post Call Travel Safety
http://www.myparo.ca/PARO-CAHO_Agreement#Attachment 25

The parties will meet to discuss mechanisms for ensuring resident safety in relation to driving home after being on call.

**Laser**


Reference can also be made to the following resources:
Miller’s Anesthesia (7th ed), Chapter 77 “Anesthesia for Laser Surgery” and Chapter 101 “Environmental Safety Including Chemical Dependency”

Up to Date, “Basic Principles of Medical Lasers” and “Operating Room Safety”

Participation in Medivac/Ambulance Transport

Refer to “Health & Personal Safety Guidelines”,


For additional information, refer to the following documents on the HHS Intranet/Medportal:
Safety Concerns While on Off-Service Rotations

All off-service rotations should have a residency-specific policy and the residents should refer to said policy while on that service.

Refer to “Health and Personal Safety Section”,

For concerns regarding ‘cross-coverage’ and ‘multi-site coverage’,

Refer to “Principles of Cross Coverage and Multi-Site Coverage


Residents should always feel safe and be assured appropriate supervision from senior residents, fellows and/or staff physicians when working outside of the OR (including the ER, ICU, CCU, Trauma and while on other off service rotations)

If a resident is unable to obtain support in an emergent situation for which he or she is not sufficiently trained, it is expected that they, like other physician, will deal with such situations as practicing professionals to the best of his or her ability

Refer to section(s) on adequate backup/supervision within this document (Section 2f and 3c)

Refer to other sections of this safety policy for information regarding:
Travel (Section 1a, 1b and 1c)
Harassment/Intimidation in the Work Environment (Section 2g and 2i)

**Lockers**

Residents at all sites should have access to locker storage for personal belongings
If lockers are not available, then space should be provided for residents to store their belongings in a supervised area, where said belongings will be reasonably safe from damage and theft
Refer to “Health & Personal Safety Guidelines”,

Refer to PAIRO/CAHO Agreement: Subsection ‘Facilities’
www.myparo.org

Resident Support Systems

Residents will be made aware of available support systems, which are described in the postgraduate support systems handbook (http://postgrad.medportal.ca/documents/Resident_Wellness-2012.pdf) Confidential access to these services is guaranteed.
If the resident chooses, additional support and accommodation can be accessed by speaking to the Anesthesia Residency Program Director or Department of Anesthesia Chair

June 2016
2.6 The following information is required for TLDs to be issued:

2.6.1 Surname
First Given Name
Social Insurance Number
Date of Birth
Place of Birth
Job Classification: i.e. Nurse, physician, x-ray tech, student etc.
Male/ female

2.7 All staff classified as “x-ray workers” as defined by the X-ray Safety Regulation 861 must be issued a TLD to be worn under the apron at the waist level. Staff/students working in fluoroscopy areas are to be issued a second TLD to be worn outside the apron at the collar level. TLDs are to be worn at all times when working with ionizing radiation.

2.8 TLDs must be kept on-site to reduce the possibility of erroneous readings. TLDs may be moved between HHS sites for those staff members who require their use at multiple sites.

2.9 A central repository for TLDs is to be located in each department where staff and students are expected to leave their TLDs at the end of their working day. Staff and students are to pick up their TLDs from the same location at the start of their working day. TLDs are to be exchanged each quarter. The most responsible person as defined in section 2.5 is responsible to remove old TLDs from the central repository and replace them with the new TLDs. The following are the locations of the central repositories.

2.9.1 General Site:
Heart Investigation Unit: Control Rooms
Operating Room: OR Entrance
Pain Clinic: Procedure Area storage room
EPS Lab: Control Room
Diagnostic Imaging: Locker Rooms

2.9.2 McMaster Site:
Diagnostic Imaging: Staff lounge
Operating Room: Hallway leading to OR change rooms
Pathology: Locker room

2.9.3 Juravinski Site:
Diagnostic Imaging: Interventional Corridor
Operating Room: Entrance hall to Operating Room

2.9.4 Urgent Care Centre
Diagnostic Imaging

2.10 All x-ray workers MUST wear their TLDs when working with ionizing radiation.

2.11 HHS is to maintain a record of the occupation exposure of x-ray workers for a period of at least three years. The originals of the records are to be kept by the issuing department.
2.12 The Quality Control Officer is to review the reports when received. The Quality Control Officer is to make copies of the reports that are to be sent to the responsible manager with instructions to post the reports for staff to review.

2.13 The Quality Control Officer is to investigate incidents in which a TLD is damaged or a reading cannot be obtained. The Quality Control officer will interview the x-ray worker to determine the nature of their work and any unusual occurrences during the period in which a reading could not be obtained. The Quality Control officer will submit a written report of the details to the site safety coordinator.

2.14 Incidents of quarterly exposure in excess of the limits set out in the Schedule (see Appendix 1) or the X-ray Safety Regulation 861 are to be investigated immediately. These limits are 50 mSv for the body or trunk. A written report of the findings and the corrective action is to be submitted to site safety coordinator for reporting to the MOL and Joint Health and Safety Committee. The Quality Control Officer is responsible to report the incident to the Site Safety Coordinator.

2.15 When an accident or failure of equipment that results in the exposure of a worker in excess of the limits set out in column 3 of the schedule (Appendix 1), the Quality Control Officer is to notify the site safety coordinator for reporting to the Ministry of Labor (MOL) and the Joint Health and Safety Committee. Within 48 hours of the accident or failure a written report must be sent to the site safety coordinator for reporting to the MOL and the Joint Health and Safety Committee.

2.16 In certain circumstances the need for additional extremity or ring dosimeters may be requested.

3.0 Definitions

RPO – Radiation Protection Officer: Physician appointed by the CEO to oversee the safe use and practice of diagnostic imaging equipment, and radiation safety devices.

Thermoluminescent Dosimeter (TLD): Device worn by medical radiation workers to measure occupational radiation exposure

X-ray Worker: a worker who, as a necessary part of the worker’s employment may be exposed to x-rays and may receive a dose equivalent in excess of the annual limits set forth in Column 4 of Schedule ( Appendix 1) in the Occupational Health and Safety Regulation 861.

4.0 Cross References

DI-X-ray Protective Devices for Staff Use
X-ray Worker letter- Form-Appendix 2
TLD Request Form-Appendix 3

5.0 External References

Safety Code 35

6.0 Developed By

Diagnostic Services Policy and Procedure Committee
Appendix 1

SCHEDULE
(Occupational Health and Safety Act—X-Ray Safety Regulation 861)

<table>
<thead>
<tr>
<th>Part of Body Irradiated</th>
<th>Exposure Conditions and Comments</th>
<th>Dose Equivalent Annual Limit (millisieverts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1</td>
<td>Column 2</td>
<td>X-ray Workers Column 3</td>
</tr>
<tr>
<td>Whole Body or Trunk of Body</td>
<td>Uniform Irradiation</td>
<td>50</td>
</tr>
<tr>
<td>Partial or non-uniform irradiation of body</td>
<td>The limit applies to the EFFECTIVE DOSE EQUIVALENT defined in Note (a)</td>
<td>50</td>
</tr>
<tr>
<td>Lens of eye</td>
<td>Irradiated either alone or with other organs or tissues.</td>
<td>150</td>
</tr>
<tr>
<td>Skin</td>
<td>The limit applies to the mean dose equivalent to the basal cell layer of the epidermis for any area of skin of 1 square centimeter or more.</td>
<td>500</td>
</tr>
<tr>
<td>Individual organs or tissues other than lens of eye or skin.</td>
<td>The limit on effective dose equivalent applies with an overriding limit on the dose equivalent to the individual organ or tissue.</td>
<td>500</td>
</tr>
</tbody>
</table>
Appendix 2

X-ray Worker Letter

Dear ____________________________ (worker name)

As required by the X-Ray Regulations respecting X-Ray Safety made under the Occupational Health and Safety Act (O.Reg 861/90), section 9, I hereby inform you that you are employed as an X-Ray Worker.

Subsection 10 imposes limits as to the radiation exposure that you may receive as part of your employment. They are: that doses are to be kept as low as reasonably achievable, and that in any case, as an x-ray worker you shall not receive a dose equivalent in excess of the annual limits set out below.

<table>
<thead>
<tr>
<th>Part of the Body Irradiated</th>
<th>Exposure Conditions &amp; Comments</th>
<th>Dose Equivalent Annual Limit for X-Ray workers (millisieverts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Body or trunk</td>
<td>Uniform irradiation</td>
<td>50</td>
</tr>
<tr>
<td>Partial or non-uniform</td>
<td>Limit applies to the effective dose equivalent defined in O.Reg 861/90</td>
<td>50</td>
</tr>
<tr>
<td>Irradiation of body</td>
<td>Limit applies to mean dose equivalent to the basal cell layer of the epidermis for any area of skin of 1 square centimetre or more</td>
<td>500</td>
</tr>
<tr>
<td>Lens of Eye</td>
<td>Irradiated either alone or with other organs or tissues</td>
<td>150</td>
</tr>
<tr>
<td>Skin</td>
<td>Limit on effective dose equivalent applies, with an overriding limit on the dose equivalent to the individual organ or tissue</td>
<td>500</td>
</tr>
</tbody>
</table>

Hamilton Health Sciences shall take every precaution reasonable in the circumstances to ensure that the mean dose equivalent received by the abdomen of a pregnant x-ray worker does not exceed five millisieverts during the pregnancy.

Sincerely,

__________________________
(name of employer or employer’s rep)

Your signature here indicates that you have read and understood this document and that you have received the original. A copy is to be kept in your employee file/

__________________________ (Worker Signature), dated ________________

P Fuhr 011101 RPS 519/434-2210 Ontario Ministry of Labour
Radiation Badge (TLD) Request Form
Please fill out ALL fields in order for request to be processed

Today’s Date: ____________________________________________________
Surname: ____________________________________________________________
First Name: _____________________________ Middle Initial: ____________
Date of Birth: _________________ (mm/dd/yyyy) Male: _____ Female: _____
SIN: __________________________________
This information is required by the National Dose Registry which is regulated by Health Canada.
SIN is a federal requirement for registering occupational exposure to radiation as it enables dose tracking for
a specific individual throughout their lifetime nationally.)
Place of Birth: ______________________ (province if in Canada, otherwise only country)
Job Classification: _______________________ (tech, physician, resident, RN, student etc.)
Department: ____________________________________________________
E-mail address: _________________________________ Extension ________
If you only require temporary use of TLDs, please indicate the end date:
(ie. students, residents) ________________________________________________

I understand that it is my responsibility to ensure the timely return of TLDs to the
appropriate person and that I am financially responsible if my TLDs are not returned for
exchange quarterly or at the end of my employment at HHS.
Signature: ____________________________________________________________________

FOR OFFICE USE ONLY
Temporary Badges issued on: ____________________ Wearer #: ______________
Permanent Badge ordered on : ________________________________
X-Ray Worker notification letter has been signed:
Signed off by: _________________________________ Date: _________________

Keyword Assignment
TLD, Quality Control Officer, Radiation Protection Officer, RPO, dosimeter

END OF DOCUMENT
For internal use only at HHS. Persons reviewing a hard copy of this document should refer to
the electronic version posted in the Policy Library to ensure this copy is current.
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Preamble

Resident education must occur in a physically safe environment (Royal College of Physicians and Surgeons of Canada, standard A.2.5; College of Family Physicians of Canada).

The collective agreement between the Professional Association of Interns and Residents of Ontario (PAIRO) and the Council of Academic Hospitals of Ontario (CAHO) states, that residents are postgraduate trainees registered in university programs as well as physicians employed by the hospitals. The agreement states that the residents must have secure and private rooms with secure access between call room facilities and the service area; maximum duty hours are defined; uniforms and protective equipment standards; as well as access to and coverage for Occupational Health services.

McMaster University is committed to provide and maintain healthy and safe working and learning environments for all employees, trainees (including postgraduate trainees), volunteers and visitors. This is achieved by observing best practices which meet or exceed the standards to comply with legislative requirements as contained in the Ontario Occupational Health and Safety Act, Environmental Protection Act, Nuclear Safety and Control Act and other statutes, their regulations, and the policy and procedures established by the University. (President Patrick Deane January 2011)

Purpose

- To demonstrate the commitment of Postgraduate Medicine, Faculty of Health Sciences’, to health, safety and protection of its postgraduate medical trainees.
- To minimize the risk of injury and promote a safe and healthy environment on the university campus and affiliated teaching sites
- To provide a procedure to report hazardous or unsafe training conditions and injury along with a mechanism to take corrective action.

Scope

- All Postgraduate Trainees – Residents and Clinical / Research Fellows
- Personal Health and Safety – may include, violent or harmful behaviour in patient or staff; damage to personal items; secure lockers; safe access routes from call room to service floor; secure call room doors; panic/emergency buttons in patient observation room; transportation home; access to personal vehicle in parking garage.
- Workplace and Environmental Health and Safety – e.g. hazardous material, indoor air quality, chemical spills, radiation safety
- Occupational Health – e.g., immunization policies, blood borne pathogens, respiratory protection
- Training outside of Canada
PERSONAL SAFETY

McMaster University, Faculty of Health Sciences strives for a safe and secure environment for postgraduate trainees to train in its facilities and training sites through maintenance of affiliation agreements. Affiliated hospitals are responsible for ensuring the safety and security of postgraduate trainees training and supervision in their facilities in compliance with their existing employee safety and security policies/procedures as well as the requirements outlined in the PAIRO-CAHO collective agreement.

It is expected that the Postgraduate Trainee, the Residency Program, the Postgraduate Medical Education Office will work together with the affiliated teaching hospitals and community training sites to ensure the personal safety of all Postgraduate trainees.

Responsibility

1. Postgraduate Trainee

It is the responsibility of the trainee to participate in required safety sessions, which include Workplace Hazardous Materials Information and Safety (WHMIS), Fire Safety (as required), etc. and abide by the Safety codes of the designated area where s/he is training. This includes dress codes, particularly as they relate to safety.

The Postgraduate trainee must report any situation where personal safety is threatened (see Faculty Protocol below).

2. Residency Program and the Postgraduate Medical Education Office

It is a responsibility of each Residency Program and the Postgraduate Medical Education Office to ensure that appropriate educational safety sessions are available to all Postgraduate Trainees eg., generic WHMIS and safety training. In addition to WHMIS, the Residency Program must ensure that there is an initial, specialty, site-specific orientation available to the Postgraduate trainee.

It is the responsibility of the Residency Program to ensure that individual clinics or practice settings develop a site specific protocol to deal with:

- patient(s) who may represent a safety risk and policies
- working alone
- working in isolated areas or situations e.g., medivac transports (See Ontario Guidelines re: the Role of Residents during Medivac/Ambulance Transports – Appendix 2)
- or any other situation that may be a safety issue to the Postgraduate Trainee.

The protocol must be communicated to the Postgraduate Trainee at the beginning of the rotation.

The Postgraduate Medical Education Office will work, in conjunction with the affiliated Hamilton teaching hospitals to ensure that hospital areas are in compliance with the requirements as outlined in the PAIRO-CAHO collective agreement.

Site Specific Protocol

The protocol should include the following:

- identify potential risks to the Postgraduate Trainee
include how the Postgraduate Trainee would alert the supervisor if they felt at risk during an encounter, identification of potentially problematic patients at the beginning of the encounter, so they could be monitored, etc.

A supervisor* or co-worker must be present:

(a) while the Postgraduate Trainee is seeing a patient after hours in clinic. This would not apply if the patient is being seen in an emergency room/hospital based urgent care clinic, nursing home and hospice.
(b) When the Postgraduate Trainee does home visits.
(c) At the end of office hours if the Postgraduate Trainee is still with patients.

* The supervisor as defined by the Occupational Health and Safety Act – “a person who has charge of a workplace or authority over any worker.” It can be a physician (including another Postgraduate Trainee), midwife, nurse practitioner or social worker depending on the encounter.

Faculty Protocol
Postgraduate Trainees identifying a personal safety or security breach:

2. If a Postgraduate Trainee identifies a personal safety or security breach, it must be reported to their immediate supervisor and/or Program Director to allow resolution of the issue at the local level.

3. If a Postgraduate Trainee feels that his/her own personal safety is threatened, s/he should seek immediate assistance and remove themselves from the situation in a professional manner. The Postgraduate Trainee should ensure that their immediate supervisor has been notified and/or Program Director, as appropriate.

4. The Postgraduate Medical Education Office (905-525-9140, extension 22118) is available for consultation during regular work hours, particularly if the Program Director is not available. If an issue arises after regular office hours, where the clinical supervisor and/or Program Director may not be available, contact Security of the institution where the Postgraduate trainee is based.

Travel

If, in the residents’ estimation, it would not be safe to travel because of weather, the resident may elect not to attend their academic half day, clinic, etc., but must inform the appropriate people as soon as possible in a professional manner.

If travel between sites, in remote areas, is more than 300 km., the Resident may be provided with one day of travel time (post call day not included) between sites.

Training Outside North America

Postgraduate Trainees must complete the Field Trips and Electives Planning and Approval process when planning to do an elective outside of North America to ensure compliance with standards and best practices for the safety of all Postgraduate Trainees. [http://www.workingatmcmaster.ca/link.php?link=eohss%3Aeohss-events-electives](http://www.workingatmcmaster.ca/link.php?link=eohss%3Aeohss-events-electives)
WORKPLACE ENVIRONMENTAL HEALTH AND SAFETY  
(eg. hazardous material (biological or chemical agent named in the Occupational Health and Safety Act), indoor air quality, chemical spills)

OCCUPATIONAL HEALTH  
(e.g., immunization policies, blood borne pathogens, respiratory protection)

Both McMaster University and its employees are jointly responsible for implementing and maintaining an Internal Responsibility System directed at promoting health and safety, preventing incidents involving occupational injuries and illnesses or adverse effects upon the natural environment.

The University is responsible for the provision of information, training, equipment and resources to support the Internal Responsibility System and ensure compliance with all relevant statutes, this policy and internal health and safety programs. Managers, Supervisors, Deans, Directors, Chairs, Research Supervisors are accountable for the safety of postgraduate trainees who work/study within their area of jurisdiction. Postgraduate trainees are required by University policy to comply with all University health, safety and environmental programs such as Workplace Hazardous Materials Information and Safety (WHMIS). (excerpt from Peter George 2008)

The Faculty of Health Sciences and the teaching hospitals each are responsible for ensuring that postgraduate trainees are adequately instructed in infection prevention and control as it relates to communicable diseases.

The Faculty and the teaching hospitals will provide an introductory program on routine practices / standard precautions, infection prevention and control that is consistent with current guidelines and occupational health and safety. In addition, the Faculty and the teaching hospitals will inform postgraduate trainees as to their responsibilities with respect to infection prevention and control and occupational health and safety.

Affiliated teaching hospitals are required to comply with the Communicable Disease Surveillance Protocols for Ontario Hospitals developed under the Public Hospital Act, Regulation 965. Compliance with these Protocols requires the hospitals, in liaison with the University’s academic programs, to provide instruction in infection prevention and control and occupational health and safety. Refer to Policy regarding Communicable Diseases and Occupational Health for Applicants to and Trainees in Undergraduate and Postgraduate Medicine - http://www.fhs.mcmaster.ca/postgrad/ (See Policies)

The Faculty Postgraduate Medical Education Office collects the immunization data on all Postgraduate Trainees on behalf of the teaching hospitals.

If an injury occurs while working, the injury must be reported as follows (Refer to chart 1 on page 7)

- During daytime hours, while working at one of the Hamilton teaching hospitals: (e.g. Hamilton Health Sciences, St. Joseph’s Healthcare)
  
The Postgraduate Trainee should go to the Employee Health Office at any of the teaching hospitals. An incident form will be provided by the Employee Health office to the Postgraduate Trainee.

  Reporting: All trainees are encouraged to submit a copy of the incident form to their home program for notification. The home program will send a copy to the Postgraduate Medical Education Office for University records. Non-Ministry of Health funded trainees: (e.g., foreign sponsored Residents and all Clinical Fellows *) must submit a copy of the incident form to the Postgraduate Medical Education Office, in order for the PGME Office to notify their
sponsor and ensure proper follow-up. Occupational Health & Safety Office of the University will be notified.

Postgraduate Medical Education Office (PGME)
Phone: 905-525-9140, ext. 22118 Fax: 905-527-2707

- During the evening or on the weekend at one of the Hamilton teaching hospitals or if working at a training site outside of the Hamilton area

The Postgraduate Trainee should go to the nearest Emergency Room and identify themselves as a Resident / Clinical Fellow and request to be seen on an urgent basis. The Postgraduate Trainee must complete, within 24 hours, an Injury/Incident Report (forms should be available in the local Emergency Room).

In Ontario - The injury/incident form should be submitted to the hospital where the injury took place. That hospital will be responsible for administering the claim.

Reporting is the same as indicated above.

* The Postgraduate Trainee’s employer administers the claim. All Ministry of Health funded Residents are paid through Hamilton Health Sciences. There are a variety of different funding sources for externally funded Residents and Clinical Fellows. In these instances, HHS would not administer the claim or be responsible for follow-up. Important: Please see Appendix 1 for information on follow-up.

Resources available:

Postgraduate Medical Education Office
Phone: 905-525-9140, ext. 22118
Fax: 905-527-2707

Faculty of Health Sciences Safety Office
Phone: 905-525-9140, ext. 24956
Fax: 905-528-8539
Health Sciences Centre, Room 3N1C
1200 Main Street West, Hamilton, Ontario L8N 3Z5

Hamilton Health Sciences
Human Resources – Employee Health
Telus Sourcing Solutions
120 King Street West, Suite 200
Hamilton, Ontario
Phone: 905-387-9495, ext. 63900

St. Joseph’s Healthcare
Occupational Health and Safety Services
50 Charlton Avenue East
Hamilton, Ontario L8N 4A6
Phone: 905-522-1155, ext. 33344
Chart 1: Workplace Environmental Health & Safety

Postgraduate Trainees – Injury/Incident

Working at HHS/SJH
Daytime Hours

Employee Health
HHS/SJH
(Incident form to be completed)

HHS (or employer)
Injury/incident report
within 24 hours
copy to PGME

Residents/Clinical Fellows funded by
their Government/Sponsor

Residents funded by Ministry
Hamilton Health Sciences

Clinical Fellows funded by McMaster University

PGME

Working At:
• Training site outside Hamilton
• Evenings or weekends at HHS/SJH

NEAREST EMERGENCY ROOM
PG Trainee should identify themselves as a Resident/Clinical Fellow and that they need to be seen on an urgent basis

Injury/Incident report within 24 hours to the hospital where the injury took place
Copy to PGME

To sponsor
Appendix 1

Notes:

1. Residents* who are funded by the Ministry of Health and Long Term Care and are seen at the Employee Health office at St. Joseph’s Healthcare, SJH will submit the incident report to HHS and the Postgraduate Medical Education Office. HHS will follow up with the Resident re Workplace Safety and Insurance Board (WSIB) and follow-up. Hamilton Health Sciences is the paymaster for Ministry of Health funded residents.

2. Residents* and Clinical Fellows who are funded by a foreign sponsor and are seen in Employee Health - the Postgraduate Medical Education Office will forward the incident report to the sponsor for handling. The individual trainee is responsible for follow-up with their family physician.

3. Clinical Fellows who are funded through McMaster University, McMaster University will handle WSIB.

* Residents refers to individuals proceeding to certification examination, ie. not for Clinical Fellows; who are funded through a variety of sources, but often paid through the University.
Appendix 2

POSTGRADUATE EDUCATION COMMITTEE OF COFM (PGE:COFM)
Dec. 9, 1999

EDUCATIONAL PRINCIPLES

RE: THE ROLE OF RESIDENTS DURING MEDIVAC/AMBULANCE TRANSPORTS

1) In many programs, participation in patient transport is a valuable learning experience for residents.

2) There must be clear educational objectives underlying the resident’s participation in patient transport.

3) Residents must have appropriate training with demonstrated competency in the circumstances relevant to the transport experience.

4) Communication and supervision between the resident and his/her designated supervising physician must be available at all times.

5) Resident well-being should be considered in all transports.

Note: On occasion residents/fellows may be confronted with a situation for which they are not sufficiently trained. It is expected that they, like other physicians, will deal with such situations as practicing professionals to the best of their ability.
Some related links for further reference:
(links available on Medportal)


PG policies/resident safety draft

December 2011
Harassment

http://postgrad.medportal.ca/policies/harassment.aspx

Relationships With Other Agencies

If the resident has reported the incident to an outside institution with a collective agreement in place, (eg. the respondent may be affiliated with another hospital, agency, etc.) the collective agreement will supersede these guidelines and, as well, the University Policy and Procedures on Sexual Harassment.

- If the incident is patient related it must be reported to the College of Physicians and Surgeons of Ontario and dealt with in accordance to CPSO policy.
- Consideration of the Regulated Health Professions Act, including the Medicine Act, Nursing Act, Midwifery Act, etc.
- No one shall be compelled to proceed with a complaint.
- Intimidation and discrimination will not be tolerated.
- Reprisal of the complainant for involvement in this process will not be tolerated.
- Confidentiality of the identity of the complainant and the respondent will be protected.

Reporting Mechanisms

Informal Complaint (ie. not written)

If a resident has experienced problems with harassment, sexual or otherwise, s/he should choose to deal with the issue in a way that s/he feels most comfortable.

The following are some resources/options available to deal with these types of problems. Again, the complaint is informal, ie. unwritten; however, it is preferred that these discussions include the Faculty of Health Sciences Liaison, where appropriate. Even if discussions do not include the Faculty of Health Sciences Liaison, it would be preferred if the incident was reported to him/her, without naming the individuals involved; however, reporting will be left to the discretion of the complainant.

(i) Discuss with the individual who is involved in the incident.

(ii) Discuss options with the Clinical Supervisor and/or Programme Director and/or Assistant Dean, Postgraduate Education. If the incident falls within the University definition of Sexual Harassment, the Sexual Harassment Officer and/or Faculty of Health Sciences Liaison will be consulted. The complainant and respondent will not be identified.

(iii) Seek advice through the Professional Association of Interns and Residents of Ontario.

(iv) Discuss with a friend or family physician.
If the incident is a sexual harassment issue, discuss options with the Sexual Harassment Officer and/or Faculty of Health Sciences Liaison.

**B. Informal Written Complaint**

(i) When a written/verbal complaint is received in the Postgraduate Education, the Assistant Dean, Postgraduate Education will formally seek appropriate counsel eg. Sexual Harassment Officer of Faculty Liaison, in consultation with the Resident’s Programme Director.

The complaint should be made in a timely fashion, eg. no later than 12 months from the date of the harassment.

The complaint should include:
- dates
- names of individuals involved
- full description of the incident

(ii) The respondent will be notified that a complaint has been filed with the Postgraduate Education Office.

(iii) With the permission of the complainant and the respondent a meeting will be scheduled with the Assistant Dean, Postgraduate Education and/or Programme Director and/or Clinical Supervisor and appropriate University counsel eg. Sexual Harassment Officer. The complainant and/or respondent may be invited to meet separately with these individuals. Other individuals may be contacted to substantiate information.

The group will arrive at a negotiated process. However, the group may reach the conclusion that no resolution is possible. Both the complainant and respondent will be informed, in writing, within 5 working days of that determination.

(iv) If the complainant and/or the respondent is not satisfied with the decision of the group, s/he may request, in writing, a formal hearing. This request will be forwarded to the Board of Governors.

The procedures for formal hearings are detailed in the McMaster University Policy and Procedures on Sexual Harassment.

**Prevention & Avoidance of Sexual Misconduct**

1. Avoid any behaviour, gestures or expressions that may be seductive or sexually demeaning to a patient.

2. Show sensitivity and respect for the patient's privacy and comfort at all times: - do not watch a patient dress or undress - provide privacy and appropriate covers and gowns.

3. Obtain permission to do intimate examinations, offer explanations as to the necessity of the examination and answer or anticipate questions concerning the examination.
4. Use gloves when examining genitals.

5. Do not make sexualized comments about a patient's body or clothing.

6. Do not make sexualized or sexually demeaning comments to a patient.

7. Do not criticize a patient's sexual preference.

8. Do not ask or make comments about potential sexual performance except where the examination or consultation is pertinent to the issue of sexual function or dysfunction.

9. Do not ask details of sexual history or sexual likes/dislikes unless related to the purpose of the consultation or examination.

10. Do not request a date with a patient.

11. Do not kiss a patient. Do offer appropriate supportive contact when warranted.

12. Do not engage in any contact that is sexual (from touching to intercourse).

13. Do not talk about your own sexual preferences, fantasies, problems, activities or performance.

14. Learn to detect and deflect seductive patients and to control the therapeutic setting.

15. Maintain good records which indicate the necessity for intimate examinations or questions of a sexual nature as well as the pertinent positive or negative clinical findings.

16. Patients have the right to a third party present during internal/intimate examinations if they wish, with the exception of life threatening emergencies. In some cases, the physician will be able to provide this third party. In cases where the physician is unable to provide such a person, patients should be informed that they may bring a person of their choosing with them. In non-emergency situations, physicians have the right to insist that a third party be present during internal/intimate examinations, and to refuse to conduct this examination if the patient refuses consent for a third party to be in the room.
Resident Intimidation Harassment

Break the Cycle

Postgraduate Medical Education

McMaster University
Are you part of the problem?

“It’s just part of the job.”

“I don’t like it, but this is the way it’s always been.”

“Complaining won’t change anything.”

“What can I do? ...besides I’ll be out of here soon.”

“It’s a necessary part of training.”

Is it? Break the Cycle

• workload abuse
• ridicule
• threatening gestures
• exclusion from learning experiences
• disallowing sick leave
• belittling comments

It’s not “just part of the job,” and it’s not a “necessary part of training.” It’s harassment.

Surveys have confirmed that resident harassment does occur and, worse yet, is somehow viewed as acceptable behavior by some staff and residents.

It is not.

Resident Well Being

Trust, respect, fairness and a spirit of collegiality between faculty and residents at McMaster is essential for creating the best possible environment for learning. And in a teaching hospital, creating this environment will attract the best to McMaster as well as produce top quality physicians.
Research has shown that harassment and intimidation actually achieves the opposite environment – one that hinders learning. Incidents of harassment or intimidation undermine professional confidence, and in some cases compromise health care delivery. And, simply put, it’s unprofessional.

Harassment and intimidation includes, but is not limited to:

- unfair work demands;
- discrimination based on race, culture, gender, religion, sexual orientation or school of medical graduation;
- verbal abuse: shouting, swearing, belittling, ridiculing, disparaging remarks of sexist, homophobic, religious or ethnic grounds;
- physical abuse: throwing objects, pushing, slapping or making threatening gestures; sexual abuse: unwelcome comments, gestures, touching or actions of a sexual nature;
- workload abuse: contractual infraction, excessive service volume, lack of supervision, or not making reasonable illness, disability or leave allowances;
- reprisal for having lodged, or being a witness in, a harassment or intimidation complaint; and
- education compromise: grading unfairly, or unreasonable exclusion from a learning experience.

Residents – what you should do:

The only way to break the cycle is to come forward. McMaster needs a process that is open and responsive to these issues, for everyone involved.

As a first step, residents can discuss the situation with either:

- the individual involved;
- a clinical supervisor;
- a representative of PAIRO
- a Program Director
- a Department or Division Head
If in doubt, or if a resolution does not occur, residents are encouraged to make a verbal or written complaint to the Assistant Dean, Postgraduate Medical Education.

It will then be investigated in a fair and constructive manner for all parties concerned. The process is complainant driven, meaning the complainant will be consulted along each step of the way.

**Faculty – what you should know**

McMaster Postgraduate Medical Education strongly encourages faculty to be familiar with and adhere to the guidelines on harassment and education. A copy of these guidelines can be obtained from the Postgraduate Medical Education Office at 525-9140, extension 22118.

**Break the Cycle**

Like any form of abuse, resident harassment will continue in a generational pattern. If residents are taught in a way that focuses on learning through intimidation, they will be more likely to teach their future residents in the same destructive manner. All faulty and residents must help break this cycle.

For more information contact:
Postgraduate Medical Education Office
MDCL 3113
525-9140, extension 22118

Adapted with permission from Dalhousie Medical School.
Practice Oral Exam Policy

Beginning in May, residents may schedule practice oral exams any time at or after 3:30 pm and can be excused from their lists at or after 3 pm to attend these practice examinations. List selection should be governed by educational value rather than the end-time of the list. In other words, residents may be excused from a late list to attend their practice oral.

Prior to May, residents should schedule practice oral examinations such that they do not interfere with their clinical work whatsoever. Prior to May, daytime exams can still be done on the (full) academic day; the post-call day if able; and on PL days.

The program supports residents with formal, organized practice oral exam sessions, twice per week, from Jan-early June inclusive.

June 2014
June 2015 - revised
MARCH BREAK/ “MAKING A MARK” POLICY

PGY5s will be excused from daytime clinical assignments during the March break period in order that they may prepare for their upcoming examinations. The PGY5 group will still be expected to participate in the call schedule and will be assigned evening call duties by the administrative resident at the respective sites.

PGY5 Residents will be excused from clinical duties at noon of the first day of “Making a Mark” in order to allow for travel to Toronto.
Oral Exam Attendance Policy

Program oral exams are held biannually and are mandatory. The dates for the Fall oral exams will be announced on or before the release of the block schedule for the equivalent academic year. The dates for the spring oral exam will be released before the end of September of the same academic year. Therefore, all residents should plan their vacation time considering the oral exam dates. Vacation requests will be granted for the weeks encompassing the program orals with the condition that attendance at the exam is still mandatory.

Absence from the program orals is permitted in the following circumstances:

1. PGY1 and PGY3 residents (exams are optional for PGY3. PGY1’s will not be scheduled for exams
2. If participating in the exams would compromise one’s sincerely-held and previously-established religious beliefs.
3. In exceptional circumstances- such as a family wedding abroad- at the discretion of the program director.

May 2014
Out of Sync Residents

Residents who are out of sync (residency end-date other than June 30) should be aware that writing the exam up to 6 months prior to the finish of the residency is allowable but not mandatory. If the resident’s end-date for residency is Dec 31 or earlier, and they have received satisfactory evaluations and not requiring remediation, they are eligible to write the RC exam in June. They may, however, decide to write the following year (up to 6 months after finishing residency) and this can be accommodated through residency extensions (as negotiated with the post-grad office) or clinical fellowship time or term locum appointment (as negotiated with the Department Chair and Clinical Chiefs).

Writing the exam early adds an extra level of challenge for the resident compared to writing at the end of the full residency. The resident is required to prepare for the exam during the busy PGY4 sub-specialty rotations while still meeting the expectations for those rotations. As well, the resident will have up to 6 months less clinical experience on which to draw when answering oral examination questions.

The RTC will provide a recommendation to the out-of-sync resident regarding the timing of their exams. This will be based on clinical performance, degree of clinical exposure, and portfolio completion. The Royal College makes it very clear that they do NOT want programs to send residents to the exam who are not ready, to use the exam process to weed those residents out. This is traumatic for the resident and is also not the function of the exam process.

The resident who is writing early is out of sync with the rest of the exam-study group in terms of their academic days. Specifically, the PGY4’s have an academic day on Wednesdays during Sept-June only. PGY4’s do not have academic programming during the summer. The summer of PGY4 is an important time to accelerate one’s clinical experience at the senior resident level and is felt by the RTC to be key to the resident’s development.

PGY5’s have an academic day on Thursdays throughout the whole PGY5 year. Residents who are out of sync and are doing the RC exams early will still be in the PGY4 year during the summer prior to their RC exams and possibly until as long as December, while their (in-sync cohort) would flip to PGY5 on July 1.

The RTC wants all residents to succeed at the RC exams and recognizes the importance, both academically and personally, of the group study support. Residents who have RTC support for early exam writing will be granted the concordant academic time (Thursday academic days for exam study) beginning in September of the year preceding the exams, or as soon as they become a PGY5, which ever comes first.

Residents taking leaves should work with Candice and the PD to plan which core program they attend strategically in order to maximize their exposure to the full program, even if this means splitting their core programs over the course of a Sept-June schedule.

Residents are not scheduled for academic time after writing the exam in June. For on-track residents, this amounts to just a few weeks’ time. For out-of-sync residents, this can amount
to just over 6 months of residency. This time is an opportunity for the out-of-sync resident to maximize clinical time over the remaining months of residency, without the distraction of exam preparation, and to take advantage of functioning as a “junior staff person”. It is an opportunity that on-track residents do not have.

While the automatic academic time would no longer apply after the RC exam, there is the possibility for the out-of-sync resident to apply to the Program for academic time, at the discretion of the PD. The decision would be based on the resident’s clinical performance, log book statistics and need for more clinical experience. The resident would be required to be accountable for how the academic time was used, for example:

- The completion of an academic project that has a stated supervisor to which the resident is accountable; this would not include the mandatory research project but could represent a subsequent research project(s).
- Participation in other academic work such as tutoring or clinical skills teaching
- Attending conference or workshop
- The academic time could be allocated in a flexible fashion to accommodate the format of whatever academic activity the resident proposes to participate in.

Sept 2014; revised June 2016.
Restricted Registration

McMaster University Department of Anesthesia

There is a proposal for limited licensure/restricted registration. This will start as a pilot project. For Anesthesia residents this would allow residents on a “restricted license” to function as a Critical Care Clinical Assistant in a supervised Intensive Care Unit, in a teaching hospital.

There is concern about whether licensure might lead residents into situations for which they are unprepared, such as might occur if they were allowed to practice anesthesia independently in a relatively unsupervised environment. There is also concern about conflicts with clinical work related to their residency program and excessive workload, possibly leading to a deterioration in academic performance or family relationships.

There are also some advantages to the work experience, both academic and financial. Working in the ICU should provide valuable experience and might be beneficial to the resident’s academic development. Easing the debt burden might improve stress levels and reduce strain on family relationships.

It was the Residency Training Committee’s decision that we will sanction anesthesia residents providing coverage in ICU as Critical Care Clinical Assistants. The following restrictions would be operative:

1) A limit of two shifts (maximum of 48 hours) per month up to 12 per year.

2) The ICU must be in a teaching hospital with a consultant immediately available, without other duties to limit their availability.

3) Shifts must be booked after the Anesthesia call schedule has been posted.

4) There must be at least a 12 hour gap between CCCA shifts and clinical work in the residency program. Conversely, CCCA shifts must not be booked sooner than 12 hours after the duty period in Anesthesia.

5) The PARO contract must be honoured. The number of call periods must include the CCCA shifts. Residents cannot be post call for any day-time duty, (either residency related or “moonlighting”). No more than two weekend shifts per month are permitted, which includes the call required by the Program and the “moonlighting” shift.

6) The Program Director, with the agreement of the Residency Training Committee, reserves the right to veto any resident from participating in extracurricular shifts, if there are concerns about academic or personal issues. Residents will not be eligible for moonlighting if they have received an unsatisfactory or provisional evaluations on any rotation within the previous year. Moonlighting privileges will be withdrawn upon receipt of an unsatisfactory or provisional evaluation.

7) The mandatory academic project must be completed or, in the case of ongoing research, well under way, for the resident to qualify for privileges to “moonlight”.
8) Attendance at academic activities, (academic day on Wednesday, journal club, rounds), must be maintained at 90% or higher, (excluding days after call, illness or vacation).

9) Residents will not be eligible to work in ICU until they have completed four months of adult ICU training, in their 3rd year of residency.

10) If a resident is “out of sync” and is able to obtain an independent licence to practice Anesthesia while still having between 1-6 months of residency remaining, the resident is not permitted to moonlight as a staff Anesthesiologist at any of the McMaster University sites. They may moonlight at other community sites, provided that they are not currently at that site for a Community rotation. If any resident is moonlighting as an anesthesiologist, then all the other rules about Moonlighting (described above) apply.
MOONLIGHTING POLICY

COFM policy

Moonlighting is defined as: Residents registered in postgraduate medical education programs leading to certification with the Royal College of Physicians and Surgeons of Canada or the College of Family Physicians of Canada who provide clinical services for remuneration outside of the residency program. Moonlighting has been more recently called “restricted registration for residents”.

The Ontario Faculties of Medicine does not support resident moonlighting. Moonlighting compromises postgraduate programs and undermines the educational environment.

McMaster Postgraduate Medical Education Policy on Resident Moonlighting

McMaster Postgraduate Medical Education (PGME) supports the COFM policy on Resident Moonlighting. It is recognized that McMaster PGME cannot restrict, from a practical point of view, those residents with an independent practice certificate but feel that this activity must not interfere with the training program. The program director should be informed by the resident of this activity so that s/he can monitor its effect on the resident as well as the program.

It is recognized that there is a manpower problem within health care in Ontario but it is not under the mandate of McMaster PGME to solve this problem. The McMaster Postgraduate Medical Education Program wishes to maintain an environment in which there is

1. a positive balance between education and service
2. a strong academic focus in our training programs
3. no confusion regarding the resident’s role in the clinical setting

Background:

In 2004 the College of Physicians and Surgeons of Ontario outlined a proposal for Restricted Registration for Residents.

In September 2006 the Ontario Ministry of Health and Long-Term Care identified Restricted Registration as a potential solution to Emergency Room challenges. In
November 2006 PGE:COFM approved the submission of a proposal to the CPSO and the Ministry.

At the request of the Minister and after consultations with stakeholders, the University of Toronto developed a pilot project for Restricted Registration with the participation of the CPSO, PAIRO and the other medical schools.

In May 2010, PGE:COFM put forth a recommendation that the Restricted Registration Pilot Project transition to a permanent program.

**Restricted Registration**

There is a process whereby residents are able to practice medicine with a certificate of Restricted Registration. “Restricted Registration” is a certificate offered by the College of Physicians and Surgeons of Ontario (CPSO) to Residents who meet agreed on criteria.

The Council of Ontario Faculties of Medicine have defined “Restricted Registration”, another term for Limited Licensure, as “Residents registered in postgraduate medical education programs leading to certification with the Royal College of Physicians and Surgeons of Canada or the College of Family Physicians of Canada who provide clinical services for remuneration outside of the residency program.”

For details, please refer to the website:

http://www.restrictedregistrationontario.ca/index.html

Approved PGEC/November 26/05

Revised May 2011
Department of Anesthesia

Dispute Resolution Process

On occasion, conflicts arise between residents and

a) Other residents

b) Anesthesiology staff

c) Staff from other disciplines

d) Non-medical staff

Often these can be resolved at the local level, by the CTU Director or other staff members. If this is not possible, and formal review is deemed necessary, the following process shall apply:

1. The complaint will be forwarded in writing to the Program Director

2. The Program Director will meet separately with

   a) The resident

   b) The other parties involved

      At these meetings the complaint will be reviewed, information will be gathered and the process of complaint resolution will be reviewed with all parties. The individual about whom the complaint is made will be made aware of the nature of the complaint.

   c) If resolution of the issue has not been achieved by intervention by the Program Director, a meeting may be convened of the involved parties, the Program Director, the appropriate CTU Director and any other parties relevant to the process of resolution. If a resident is involved, the Chief Resident or another resident or individual of the resident’s choosing should be in attendance

3. If resolution of the issue is not achieved at this or further meetings, the Department Chair will be asked to intervene. The Postgraduate Assistant Dean may also be involved at this time.
Miscellaneous Policies of the Postgraduate Medical Education Office.

http://postgrad.medportal.ca/

All policies can be found on medportal.

http://postgrad.medportal.ca/policies/

Can’t find what you are looking for. Check here!

http://postgrad.medportal.ca/onlineresidencymanual.aspx
Policy & Procedure: Transfer Policy, Provincial and McMaster Postgraduate Medical Education

Principles for Transfers in Ontario Residency Programs

The Ontario medical schools and Ministry of Health and Long Term Care (MOHLTC) support a system of improved flexibility in postgraduate medical education. As of October 1, 2013, all transfer requests are handled in accordance with the principles outlined in this document, and under local transfer policies in force at each Ontario medical school.

Transfers will be accommodated through funding from:

- the usual local recoveries (e.g. vacated positions), and
- within the up-to numbers allocated in the Transfer Payment Agreement (TPA).

General Principles

The following general principles apply to all resident transfer requests:

- Wherever possible, transfers should not subvert the CaRMs Match.
- Discussions regarding transfers will remain confidential until such time as the resident consents to disclosure.
- Overall, transfers should not significantly alter the distribution of residency position allocation across schools and within disciplines.
- Residents must be acceptable to the program to which they are seeking transfer.
- It is strongly encouraged that residents utilize the second iteration of CaRMS as a route to change programs that residents may use outside of the regular transfer process.
- Capacity, funding, and other constraints may limit the availability of program transfers; it is therefore not possible to accommodate all requests.

Specific Principles

In addition to fulfilling the requirements of the general principles, the following specific principles apply:

- Transfers should optimize the supply and distribution of physicians in Ontario to meet provincial and/or societal needs that facilitate access to health care for all Ontarians.
- Each transfer request is unique and will be considered on its own merit; however priority will be given to transfers based on evidence of wrong career choice or demonstrated
need, e.g. disability, health issues that prevent residents from completing their initial program, etc.

- Internal transfer requests will be considered by each school after January 1st of each year.

- In most cases, intra-provincial transfers will be considered after the school's internal transfer process is complete. Intra-provincial PGY1 transfer requests can be made to the PGME Office of the resident's home school after January 1st each year, but will not be approved until after the second iteration of the CaRMS Match.

- PGY2 or higher internal transfer requests can be made at any time and will be forwarded to the programs at the discretion and internal procedure / schedule of each school.

- Final approval of any transfer lies with the Postgraduate Dean.

**Resident Responsibilities**

Residents are responsible for the facilitation of a transfer.

- A Resident requesting a transfer to another Ontario school should initially inform the Postgraduate Medical Education Office at the Resident’s home school.

- A Resident should contact the program they are interested in to determine capacity, possibly arrange an elective and gather information regarding fit.

- A Resident must submit a curriculum vitae, ITERS and other documentation as requested by the program.

- Prior to accepting a transfer position, the Resident must request a release from his/her current program. Program Directors will then determine whether the resident may be released by their home program and will advise the Postgraduate Medical Education Office.

- Residents who apply for a transfer through CaRMS do not have to request a release from their home program.

- The formal decision will be made by the Postgraduate Office.

- It should be noted that IMG’s who transfer out of province when in a base specialty are in breach of contract with the Ministry.

**PGY1 Transfers (PGY1 covers the entire first 12 months of training)**

- Residents must have at least 6 months of active training within the residency with ideally one block in the discipline from which they request transfer.

- Residents should have sufficient exposure to the discipline to which they are requesting transfer either in the last year of medical school or during their residency.
• Residents must be of similar aptitude to successful candidates through the CaRMS match by the receiving program, utilizing similar selection methods and rating systems where they are used; and

• If the resident applied through CaRMS to the program that they wish to transfer into, that program should ordinarily have ranked them favorably.

PGY2 or Higher Transfers

• Transfers within the last six months of a program will not normally be accepted, except in cases in which the programs significantly overlap i.e. Family Medicine to Public Health and Preventative Medicine.

The transferring resident is responsible for contacting the RCPSC or CFPC to have their prior postgraduate training assessed for credit towards the new program. Until notification has been received from the appropriate College, the resident will be registered at the lowest applicable PGY level to ensure adequate funds are available for a complete training path. The resident will be advanced, as appropriate, once the assessment notices have been received, accepted by the program and approved by the Postgraduate Dean.

Special Case

A transfer request that does not meet the principles outlined in this document may be brought forward to PGM: COFM as a special case at the discretion of the Postgraduate Deans.

Inter-provincial and U.S. Transfer Requests

Ontario Ministry of Health funded residents are free to seek transfer of residency programs outside Ontario schools, but funding is not transferrable / portable outside the province. Residents must advise their Postgraduate Medical Education Office that they wish to seek transfer to another province. The PGME Office will determine with the other school(s) if there is capacity / funding for the transfer. Please refer to the National Guidelines on Transfer.

Similarly, if a resident from another school, outside of Ontario, is seeking to transfer to McMaster, the request must come through the PGME Office. Program Directors may review such transfer requests according to the “General Principles” outlined above.

Any resident accepted for transfer must be officially released by his/her Program Director, as well as approved by the Postgraduate Dean. A letter from the Postgraduate Medical Education Office approving the release will be sent to the Postgraduate Dean at the receiving school.

Residents from other Canadian or U.S. medical schools are free to contact PGME Program Directors at Ontario medical schools directly regarding program capacity and transfer possibilities. Residents should indicate their interest in a transfer to their home Postgraduate Medical Education office.
McMaster University: Transfer Guidelines for Residents

McMaster University, Postgraduate Medical Education supports and adheres to the “Principles for Transfers in Ontario Residency Programs”. The process outlined below is one route to transfer; the second iteration of CaRMS is another alternative (please refer to CaRMS website, second iteration: http://www.carms.ca/index.html

McMASTER PROCESS:

DEADLINE: is normally January 31 for all transfer requests.

TRANSFER REQUEST FORM: All Residents seeking transfer must complete this form and submit to the PGME Office. The form is available on medportal: http://postgrad.medportal.ca/, under “Policies and Procedures”

1. The Resident should make enquiries about the program that s/he is interested in; this may include seeking information from the PGME Office, talking to other residents and/or the Program Director of the program that s/he is interested in.

2. The Assistant Dean may wish to meet with the Resident to discuss the reasons for the transfer.

3. The Resident must meet the selection criteria of the program into which s/he wishes to transfer.

4. The Resident may receive a conditional offer of acceptance into a program, contingent on their release from their current program. The Resident should meet with their current Program Director to request the written release.

5. The PGME Office is provided with the letter of offer and the letter of release.

6. All transfers are contingent on funding. If additional funding is required to facilitate the transfer McMaster has four extra funding years (the funding allocation may change from year to year – funding provided since March 2003). The Resident should contact the PGME Office regarding funding.

INTRA-PROVINCIAL TRANSFERS

1. The Postgraduate Medical Education office will communicate with the Resident seeking a transfer to another university and determine if s/he wishes to proceed with the intra-provincial process.

2. Direct and equal transfers are sought during this process.

3. Transfers for geographic reasons are considered lower priority.

4. Intraprovincial transfers will not be approved until after the second iteration of CaRMS.

Approved PGEC June 16/10
Reviewed May 2012
Revised January 2016
Postgraduate Medical Education

National Transfer Guidelines

Preamble

The Postgraduate Medical Education Offices across Canada are supportive of transfers from institution to institution. These guidelines are intended to provide a transparent process that is clear to both the Resident and Universities involved. Prior to engaging in discussion regarding a transfer, it is the responsibility of the Resident to review the national guidelines as well as his or her home school’s transfer guideline / policy.

Scope

These guidelines apply to Residents currently enrolled in a postgraduate training program in Canada (subject to the criteria of the RECEIVING provincial licensing jurisdiction(s) and the RECEIVING University). These guidelines apply to all transfers that take place outside of the second iteration of CaRMS.

Principles

The following are basic principles to which all PGME Offices adhere regarding Resident transfers:

1. Transfers should not subvert the CaRMS match, and consideration will not be given until at least 6 months and adequate exposure to the Resident’s home discipline, as determined by the Associate Dean, PME at the HOME University.

2. Discussions regarding transfer will remain confidential until such time as the Resident consents to disclosure of his/her intent to transfer.

3. Provincial government funding is not transferrable between institutions. Special cases that require the transfer of government funding are to be resolved between concerned PGME Offices.

4. The local Faculty of Medicine guideline / policy takes precedence over the national guidelines.

5. Residents have the ability to access positions in the second iteration of CaRMS, with the exception of Quebec. It is the Resident’s responsibility to clear any return-of-service commitments with the provincial Ministry of Health. Quebec programs will not consider any Residents with return-of-service obligations to other jurisdictions.

Process

Initial enquiry:

1. A Resident who is interested in pursuing a transfer to another Canadian University should contact the Postgraduate Medical Education (PGME) Office of his / her HOME University to register their interest in transfer.

2. The PGME Office of the HOME University will notify the PGME Office(s) of the desired University(s) of the Resident’s interest in transfer.

3. The RECEIVING PGME Office will review the request and determine whether clinical training capacity and funding capacity is available.
4. The RECEIVING PGME Office will inform the HOME PGME Office if the RECEIVING program can or cannot receive a transfer application. If they are able to review the request the RECEIVING PGME Office would request the documentation identified below.

5. The Resident must provide his / her consent for their HOME PGME Office to release the following documents / information to the RECEIVING PGME Office:
   - All in-training assessments
   - Summary of Training Record from the Home University (including leaves from the program)
   - Brief summary from the PGME Office regarding any remediation and outcomes. If there are ongoing investigations / appeals in progress, the other school will be notified.

   The Resident will also provide a brief letter outlining his / her request and the reason for the transfer

6. The file will be sent from the home PGME Office to the receiving PGME Office. If consideration is possible:

   If there is agreement by the RECEIVING program to consider the candidate, then the Resident must contact the program for their program-specific selection process used by the RECEIVING program.

   If consideration is not possible:

   If the RECEIVING PGME Office or program determines they cannot accommodate a transfer request, then the second iteration of CaRMS may be an alternate route where funding and resources have already been determined. It is up to the Resident to apply through this route if desired. In such a case, the policies and guidelines of the second iteration of CaRMS would apply.

   After acceptance into a transfer (RECEIVING) program:

   1. If the Resident is accepted into the RECEIVING program, the RECEIVING PGME Office, in consultation with the RECEIVING program, will issue a conditional offer contingent on the release from their HOME program. A copy of the letter of offer will be provided to the HOME program (so confidentiality will not be possible after this point).

   2. Should the Resident decide to accept, s/he is expected to follow any additional internal steps required by their HOME PGME Office.

   3. The Resident must write to their HOME Program Director (copied to the HOME PGME Office) to request a release from his/her HOME Program and arrive at a mutually acceptable departure date.

   4. The HOME program will provide a written release, copied to the HOME PGME Office, including the agreed transfer date. All documentation, including verification of training dates, will be provided via the HOME PGME Office to the RECEIVING PGME Office.

AFMC/policies/ national transfer guidelines final
Approved at Postgraduate Deans meeting November 26, 2015
Links to the School policy / guideline re Transfers:

UBC
http://postgrad.med.ubc.ca/current-trainees/policies-procedures/

University of Calgary

University of Alberta
http://www.med.ualberta.ca/-/media/medicine/pme/policy/resident_transfer_policy.pdf

University of Saskatchewan
http://www.medicine.usask.ca/education/medical/postgrad/policies-guidelines/Inter-provincial%20transfer%20guidelines.pdf

University of Manitoba
http://umanitoba.ca/faculties/health_sciences/medicine/education/pgme/transfer.html

Northern Ontario School of Medicine

University of Western Ontario
http://www.schulich.uwo.ca/medicine/postgraduate/docs/Policies%20for%20Website/Transfer_Policy.pdf

University of Ottawa
http://www.med.uottawa.ca/postgraduate/assets/documents/policies_guidelines/PGME_guidelines_for_trainees_wishing_to_change_programs.pdf

Queen’s
http://meds.queensu.ca/education/postgraduate/policies/transfers

McMaster University

University of Toronto

McGill
http://www.medicine.mcgill.ca/postgrad/residentinfo_changesofprogram.htm

Universite de Montreal
http://medecine.umontreal.ca/etudes/etudes-medicales-postdoctorales/etudiants-actuels/reglements-procedures/transfert-duniversite/

Universite de Sherbrooke
http://www.usherbrooke.ca/medpostdoc/guide-de-residence/

Université Laval
http://www.fmed.ulaval.ca/site_fac/formation/post-md/changement-de-programme/

Dalhousie University
http://postgraduate.medicine.dal.ca/calendar13.html

Memorial University
http://www.med.mun.ca/medpolicies/documents/Program%20Transfer%202014%2005%2027.pdf
http://www.med.mun.ca/PGME/Current-Residents/Inter-Provincial-Transfer.aspx
If you are involved in any legal matters related to your professional activities (including being asked to give evidence) the following guidelines are recommended, according to the specific nature of the problem:

1. **Contact your Clinical Supervisor**
   
   You must always contact the clinical supervisor responsible for the case in question.

2. **Contact Canadian Medical Protective Association**
   
   Canadian Medical Protective Association must be contacted, ([www.cmpa-acpm.ca](http://www.cmpa-acpm.ca)).

3. **Contact your Program Director**
   
   Your Program Director is there to offer support and guidance. S/he will ensure that your best interests are being protected and that appropriate management is being offered.

4. **Contact PARO**
   
   You may wish to contact the Professional Association of Residents of Ontario (PARO); of which you are a member. Each school has representatives who will be able to counsel and assist you, ([www.myparo.org](http://www.myparo.org)).

Approved by Faculty Postgraduate Medical Education Committee
June 2013
(electronically)
Hamilton Health Sciences Administration Manual

Posting Date: 2007-06-30

Title: CORP - Values-Based Code of Conduct

Applies to: All Hamilton Health Sciences staff, hospital affiliates and members of the Medical, Dental, and Midwifery staff including Juravinski Cancer Center and McMaster Children’s’ Hospital.

HAMILTON HEALTH SCIENCES (HHS) IS COMMITTED to fostering a positive and supportive work environment for all HHS team members. It is expected that all HHS team members live the values of respect, caring, innovation and accountability in order to accomplish day-to-day responsibilities, achieve organizational and team goals, and provide exemplary patient and family-centred care.

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1.0 Purpose

1.1 This protocol promotes conduct that aligns with HHS’ values.
1.2 This protocol outlines appropriate behaviour that fosters positive working relations between every member of HHS.
1.3 This protocol outlines a process to address and eliminate inappropriate behaviour.

2.0 Policy Statements

2.1 Principles

2.1.1 This protocol is corporate-wide, and pertains to board members, employees, medical/professional staff, contract staff, volunteers, learners and students.
2.1.2 Respect is something that we all deserve. The HHS Values-Based Code of Conduct is based on RESPECT and is outlined below:

**R Responsibility** - Accountable for own actions and outcomes.

**E Etiquette** - Demonstrate awareness and acceptance of diversity by being polite and considerate.

**S Support** - Foster an environment that recognizes the various needs of individuals.

**P Professionalism** - Adhere to HHS values and policies, as well as professional and regulatory standards and practices.

**E Education** - Continuously develop and demonstrate behaviour that fosters a positive working and teaching environment.

**C Communication** - Use clear and concise language, along with appropriate methods for giving direction and providing constructive feedback: remember your body language.

**T Teamwork** - Treat all individuals as valuable members of the team.

2.1.3 Unionized staff has the right to union representation in matters related to inappropriate behaviour.

2.1.4 This protocol does not interfere with the rights and obligations specified in the collective agreements between Hamilton Health Sciences, unions, and medical staff.

2.1.5 This protocol does not interfere with the rights of individuals to seek alternative processes either through their union, Human Resources Department, Patient Relations/Risk Management, externally through the Ontario Human Rights Commission, through the Hamilton Police Service and/or the courts.

### 2.2 Accountabilities

2.2.1 **For everyone at HHS:**

All individuals at HHS are expected to maintain a work environment free from inappropriate behaviour. As such, each individual takes responsibility and is accountable for his/her behaviour.

It is the responsibility of each member of HHS to:

- (a) Acknowledge, read, and uphold the HHS Values-Based Code of Conduct.
- (b) Ensure that his/her attitudes and behaviours are consistent with the HHS Values-Based Code of Conduct.
- (c) Speak to colleagues when their behaviour is inconsistent with the HHS Values-Based Code of Conduct and address issues directly with the person in a confidential, positive and professional manner.
- (d) Not discuss workplace conduct, concerns and conflicts with or in front of patients, their families and friends, and customer groups.
- (e) Report continued inappropriate behaviours to your manager.
2.2.2 For the HHS manager:

Managers share responsibility with other leaders for providing a work environment that is free from inappropriate behaviour.

It is the responsibility of each HHS manager to:

(a) Ensure that each individual under his/her direction upholds and follows the HHS Values-Based Code of Conduct.

(b) Investigate reports of violations of the HHS Values-Based Code of Conduct, document and initiate appropriate action within one week. Appropriate action may include referral to counseling (e.g. Hurst Place-Employee Assistance Program, Employee Health), coaching, and mediation.

(c) Contact Human Resources associate when inappropriate behaviour persists and progressive disciplinary action is required.

3.0 Procedure

The HHS Values-Based Code of Conduct is a protocol for everyone at HHS. Each individual is accountable for adhering to the protocol and should always attempt to deal with issues immediately and professionally. Any individual who experiences or observes inappropriate behaviour in the workplace is empowered to address these behaviours that do not align with the HHS Values-Based Code of Conduct. The process for responding to inappropriate behaviour involves five stages. It may not be necessary to move through all five of the stages, as this will depend on the individuals involved and the situation. The recommended process for responding to inappropriate behaviour is outlined below.

3.1 Process for Dealing with Inappropriate Behaviour

An individual may choose to begin the process at Stage 1, 2 or 3 depending on the circumstances of his/her situation. In certain cases, for example, if the situation is more serious in nature, it may be necessary to move directly to Stage 4 or 5. Communicating with individuals about inappropriate behaviour should be done face-to-face, not by e-mail.

3.1.1 Stage 1-Direct Communication

The individual attempts to resolve the issue by communicating directly with the person in a confidential and professional manner. Ideally, this should be done face-to-face but if this is not possible, it could be done by telephone. If the individual is not comfortable communicating directly with the person about the behaviour, or if the issue cannot be resolved, assistance may be needed.

3.1.2 Stage 2-Seek Assistance

The individual seeks out a peer or co-worker that he/she trusts, to develop strategies for speaking with the person about his/her behaviour.
3.1.3 Stage 3-Seek Coaching from Manager, Chief of Professional Practice or Practice Leader
The individual seeks assistance from his/her manager, Chief of Professional Practice or Practice Leader. Coaching is provided to assist the individual in developing an approach for speaking with the person about his/her behaviour. If the person that the individual has an issue with is his/her own manager, then the individual should seek assistance from the individual who supervises his/her manager.

In order to promote a healthy work environment, if the issue remains unresolved, it is important to proceed to the next stage.

3.1.4 Stage 4-Manager Response
At this stage of the process the responsibility for resolution shifts from the individual to the manager. In cases involving health care professionals, this may occur in conjunction with the Chief of Professional Practice or Practice Leader. If the person that the individual has an issue with is his/her own manager, then the individual should seek assistance from the individual who supervises his/her manager. The manager initiates appropriate action within one week of being notified of the inappropriate behaviour. The manager meets with the individuals involved and any witnesses to gather the facts. If the individuals involved report to different managers, the managers work together to determine how to resolve the issue. The manager documents the investigation process, which includes statements from the individuals and the witnesses. The manager determines what needs to occur in order to resolve the issue and outlines what is expected of the individuals. The manager may decide to intervene using development strategies, negotiation and/or mediation, or referral to Hurst Place (Employee Assistance Program). The manager is responsible for ongoing communication with all parties involved regarding the resolution process.

3.1.5 Stage 5-Progressive Discipline
Before taking any steps towards progressive discipline, it is the responsibility of the manager to consult with Human Resources and the Chief of Professional Practice and/or Practice Leader regarding staff or the Vice President Medical regarding physicians.

(See Appendix: The Values-Based Code of Conduct Resolution Process)

4.0 Definitions
Assault - A violent physical or personal attack.

Contract Staff - anyone who enters into an agreement with HHS to perform work, but not an employee of HHS.

Harassment - conduct that would be considered, by a reasonable person, to interfere with the climate of understanding and mutual respect for the dignity or worth of each person (see Appendix A).
HHS Values are respect, caring, innovation, and accountability.

Respect - We will treat every person with dignity and courtesy.

Caring - We will act with concern for the well being of every person.

Innovation - We will be creative and open to new ideas and opportunities.

Accountability - We will create value and accept responsibility for our activities.

Hospital Affilates - students, learners, volunteers and contract staff.

Human Rights Specialist - the most responsible person for managing the HHS Harassment Protocol. This person approaches all human rights situations with an ‘arms length’ role, being unbiased and supportive to all parties involved.

Inappropriate Behaviour - conducting one self in a way that is undesirable, unsuitable, improper or incorrect. Inappropriate behaviour can be a subjective interpretation based on how an individual expects to be treated. Inappropriate behaviour may be written, verbal or behavioural.

Examples of inappropriate behaviour or conduct include:
- Comments that are insulting, hurtful, disrespectful or rude
- Threatening or abusive language directed at an individual
- Degrading or demeaning comments
- Profanity or similar offensive language
- Physical behaviour with another individual that is perceived as threatening, intimidating or unwelcome
- Body language that is irritating or offensive
- Discussing workplace conduct, concerns and conflicts in front of others
- Passive / aggressive behaviour (see definition below)

If the inappropriate behaviour and/or conduct involves any of the following:
- Harassment
- Assault
- Criminal conduct

Security and/or the Human Rights Specialist are contacted.

Manager - Managers include the CEO, vice presidents, assistant vice presidents, directors, managers, Chiefs of Professional Practice-Nursing, supervisors, and medical chiefs. For those individuals who are unsure of whom to report unresolved issues involving inappropriate behaviour to, Human Resources defines the most responsible person. For medical staff, unresolved inappropriate behaviour issues are reported to the Department Chief.

Passive-Aggressive Behaviour - describes behaviour that is passive in expression but is aggressive or malicious in intent. The purpose of passive-aggressive behaviour is to express anger without having to be responsible for that anger, so anger can be denied. Passive-aggressive behaviour may include non-verbal behaviour or body language that is irritating or offensive.
**Personal Harassment** - objectionable or unprofessional conduct or comment, directed towards a specific person, which serves no legitimate work purpose and has the effect of creating an intimidating, humiliating, hostile or offensive work environment and is not related to prohibited grounds (see Appendix A).

**Protocol** - is a document containing both a policy (i.e. principles, standards and responsibilities), procedure (i.e. a defined process for action or decision making framework) and/or guidelines. It is a written framework of procedures, principles and guidelines to follow in a given situation. Protocols include a statement of principles outlining the general philosophy behind the protocol and state the goals of the protocol.

**Respect** - To treat with dignity and courtesy.

**Sexual Assault** - Conduct of a sexual or indecent nature toward another person that is accompanied by actual or threatened physical force or that induces fear, shame, or mental suffering.

**Sexual Harassment** - one or a series of comments or conduct related to a person’s sex, sexual orientation that is known or ought reasonably be known to be unwelcome/unwanted, offensive, intimidating, hostile or inappropriate as defined in Section 7.1 of the Ontario Human Rights Code (see Appendix A).

**Witness** - a person identified by either the complainant or respondent who was present, observed, or heard the incident occurring.

### 5.0 Cross References
HHS HR-Harassment Protocol

### 6.0 External References

### 7.0 Developed By
HHS Values-Based Code of Conduct Steering Committee

### 8.0 In Consultation With
Representatives from the following stakeholder groups:

- C.U.P.E.
- Executive Team
- Operations Committee
- HHS lawyer
- HHS staff groups
- Leadership Forum
- MAC
- Medical Staff Association
This protocol is to be reviewed by the HHS Values-Based Code of Conduct Steering Committee consisting of representatives from the executive, medical staff, Organizational Effectiveness, Human Resources, all unions, and the Human Rights Specialist.

9.0 Approved By
HHS Board of Directors November 2005
Pronouncement of Death by Postgraduate Trainees

Definition:
Postgraduate trainee: Residents and Clinical Fellows.

Recommendations for Pronouncement of Death in Hamilton Hospitals

1. All health workers recognize that prompt pronouncement of death is an important part of care for patients and families.

2. Pronouncement of death is a medical act and must be completed by a physician. It is the ultimate responsibility care for patients and families of the patient's attending physician or the attending physician on-call.

3. Postgraduate trainees, while working, and when on-call on a teaching service have responsibilities which include the pronouncement of death.

4. As physicians present in the hospital after hours, Postgraduate trainees on-call should consider it a professional courtesy to perform the act of pronouncement of death on non-teaching services. It would be required for the non-teaching service attending physician to directly make the request of the Postgraduate trainee on-call to perform the act of pronouncement of death. It remains the responsibility of the attending to fill out the medical certificate of death, notify the coroner and make requests regarding post-mortem and or organ donation. It is also the responsibility of the deceased patient's attending physician, or the attending physician on call, to communicate with the bereaved family. If there are contentious situations or difficulties, the attending physician should be primarily responsible for these communications.

Approved Faculty Postgraduate Medical Education Committee
June 2013
(electronic approval)
supervising physician to determine whether or not the candidate may write orders. In addition, there may be hospital policies which require AVP candidates to have their orders co-signed throughout the AVP.

Licensure

The candidate must hold a valid certificate of registration (Pre-Entry Assessment Program Certificate of Registration) from the CPSO to participate in the AVP. The AVP candidate:

- Is to function at the assigned training level during the assessment
- May be assigned to several rotations during the assessment period
- Is assessed for 12 weeks in duration

Once the AVP is finished, the AVP certificate is not valid, and the candidate cannot continue training until the CPSO has issued the Postgraduate Certificate. The AVP form must be submitted to the CPSO 2 – 3 days prior to the identified end date to avoid a break in the license and/or allow processing time for the changeover in license.

Application for extension of AVP can be made to CPSO in exceptional circumstances. Extension is for up to 4 weeks to allow for adequate assessment of the candidate, but not for remediation. The Postgraduate Dean must submit the request to CPSO. The CPSO Registration staff have the authority to extend the certificate up to 4 weeks without referral to the Registration Committee.

Assessment/Evaluation Format:

Program Directors must ensure that candidates are evaluated and given written feedback on a regular basis during the AVP. Evaluations and meetings should be well-documented, and should take place at the end of the 2nd week, a mid-rotation evaluation by the end of the 8th week, and a final evaluation at week 12. Attached is a sample of a more detailed evaluation form (sample attached Appendix 3).

If the candidate has been assigned to one or more rotations, the evaluation form completed by the supervisor should be forwarded to the Program Director for compilation in the final AVP evaluation form.

The final evaluation at the 12-week mark is to be completed by the Program Director on the AVP form and forwarded to the PG Dean’s Office for authorization and further forwarding to the CPSO and CEHPEA.

Possible Outcomes:

1. Satisfactory
   AVP candidate continues in the postgraduate training program.
2. Unsatisfactory
A candidate with an unsatisfactory assessment has his/her appointment with the University terminated. The PG Office informs the CPSO and CEHPEA by forwarding copy of completed AVP form.

3. Withdrawal
An AVP candidate may choose to withdraw from the AVP at any time. Withdrawal may have an impact on the terms of the Ministry of Health and Long Term Care’s Return of Service Agreement. Candidates should consult the MOHLTC regarding their ROS obligations.


4. Other
Candidates should refer to individual school and hospital policy regarding suspension or other potential outcomes.

Appeals

AVP candidates may choose to appeal the Unsatisfactory evaluation based on process issues only. The candidate would refer to the individual school’s policy and procedures regarding appeals. If the appeal is upheld by the school, the candidate would repeat the AVP. The school would request that the CPSO extend the AVP certificate. For an extension of more than 4 weeks, approval of the CPSO Registration Committee would be required.

Reapplication of Failed/Withdrawn Candidates

a) A candidate in the PGY2 Advanced stream may request the Program Director for consideration at the PGY1 level. Re-Entry at this level is at the discretion of the Program Director and will require CPSO approval.

b) As a failed AVP is not creditable residency training, a candidate who failed an AVP (PGY1 or PGY2 level) may apply to the first iteration of CaRMS.

c) Restriction on the re-application of failures are:
   • Cannot apply to the same specialty at the same level of entry. They may apply to a lower level of entry in the same specialty, if applicable (see (a) above).
   • May apply to a different specialty.

Vacation Requests during the AVP

The AVP is a high stakes assessment over a short timeframe. As such, candidates are discouraged from taking vacation during the AVP, as it may put their assessment in jeopardy.
Return of Service

Candidates must contact the Ontario Ministry of Health and Long Term Care regarding arrangements for Return of Service contracts.

Reference documents:
1. Flowchart: AVP Process
2. AVP Form
ASSESSMENT VERIFICATION PERIOD for INTERNATIONAL MEDICAL GRADUATES:
FINAL ASSESSMENT FORM
Updated May 2010

The Assessment Verification Period (AVP) is an assessment process for international medical graduates (IMGs) who have been admitted into the Ministry of Health and Long Term Care funded postgraduate residency training programs. The purpose of the AVP is to ensure the IMG meets the competencies necessary to function at their designated training level. The AVP occurs concurrently with training and candidates will be exposed to the goals and objectives of the given specialty during the 12 week period. IMGs must pass the AVP in order to continue on in their postgraduate education program.

The AVP allows for appropriate, supervised clinical activity. Candidates are assessed in a multidisciplinary environment with patient input on an ongoing basis. The AVP will:

a) be twelve weeks in duration
b) be taken at a medical school in Ontario
c) provide assessment of the candidate’s clinical skills, knowledge and judgment in the discipline in which the candidate is seeking postgraduate education, as appropriate for practice in the chosen discipline
d) provide assessment in respect of whether the candidate,
   • is mentally competent to practice medicine
   • has the ability to practice with decency, integrity and honesty and in accordance with the law,
   • has sufficient knowledge, skills and judgment to engage in the kind of medical practice authorized by the certificate, and
   • can communicate effectively and displays an appropriately professional attitude.

Name of Candidate: ______________________________________________________________________
CPSO Registration # : ______________________ IMPORTANT ! Do not begin AVP without a valid CPSO Registration #
Obtained MD From: _____________________________ Year: ____________ Country : _____________________________
Ontario Medical School: ___________________________________________________________________
Supervisor: _____________________________________ Telephone: _______________________________

---------------------------------------------To be completed by the Assessors---------------------------------------------

Location and Dates of the Assessment Verification Period:
Level of the AVP (PGY1 or PGY2+):
Department: Hospital: Dates: Duration in Weeks:
_________________________________________ ______________________ ______________________
_________________________________________ ______________________ ______________________
_________________________________________ ______________________ ______________________
_________________________________________ ______________________ ______________________
_________________________________________ ______________________ ______________________

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Approved by PGE:COFM May 20, 2010
Cumulative Summary Observed Assessments:

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<th>BE</th>
<th>ME</th>
<th>AE</th>
<th>O</th>
<th>Legend</th>
</tr>
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<tbody>
<tr>
<td>Clinical Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U – Unsatisfactory</td>
</tr>
<tr>
<td>Technical Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BE – Below Expectations</td>
</tr>
<tr>
<td>Knowledge and Judgement</td>
<td></td>
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<td></td>
<td></td>
<td>ME – Meets Expectations</td>
</tr>
<tr>
<td>Communication Skills</td>
<td></td>
<td></td>
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<td></td>
<td>AE – Above Expectations</td>
</tr>
<tr>
<td>Professional Attitudes</td>
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<td></td>
<td>O – Outstanding</td>
</tr>
</tbody>
</table>

Has the assessment of the candidate included assessment of the candidate’s basic skills appropriate for practice in the discipline in which the candidate is seeking postgraduate education?

YES: _________________   NO: _________________

Has the assessment of the candidate included assessment of the candidate’s ability to demonstrate receptive and productive fluency in one of the official languages of Ontario sufficient for safe and effective medical practice in the residency program?

YES: _________________   NO: _________________

Has the candidate successfully completed the Assessment Verification Period?

YES: _________________   NO: _________________

Supervisor’s comments (please print clearly):

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

_______________________       ________________________________    ____________________
Name of Supervisor        Signature of Supervisor     Date

_______________________       ________________________________    ____________________
Name of Program Director   Signature of Program Director  Date

Signature of Dean of Postgraduate Education     Date
By providing my signature below, I attest that I have read this assessment and understand that the results will be distributed as follows. The Postgraduate Office should forward copies of this evaluation to the CPSO and CEHPEA.

My comments (please print clearly):

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

_________________________   __________________________
Candidate’s Signature           Date

Important notes to the assessors and the candidate:

1. Once completed, this form must be sent **immediately** to the Postgraduate Office for PG Dean’s signature. The Postgraduate Office will forward the form to the College for processing. To ensure the CPSO has sufficient time to process the change from AVP to the full Postgraduate license, the Program Director must postdate their sign-off by at least 7 days.

2. **Upon completion of the AVP or upon date of Program Director sign-off, the candidate must cease practicing.** The candidate may resume practice only when the College has issued a Postgraduate Education certificate of registration. Candidate must call the College’s Registration Department to confirm issuance of the certificate: (416) 967 – 2617, extension 221.

3. If the candidate is successful in the AVP, s/he will continue at the current level of postgraduate training.

4. If the candidate is not successful in the AVP, s/he will not be permitted to continue on and will be dismissed from the program.

5. Ensure all writing on form is legible. Illegible writing may result in delays in processing this form at all levels and therefore a delay in commencing and/or continuing training.

6. Before the candidate begins his or her AVP, s/he must have received from the College an educational certificate for AVP or been advised by the College’s Registration Department that a certificate has been issued. Upon successful completion of the AVP and submission of AVP Form to CPSO, the CPSO will process the educational certificate for AVP into a full certificate of registration for Postgraduate Education. This must occur prior to the candidate continuing training in his/her residency program.

It is an offence under the Regulated Health Professions Act for a person to practice medicine in Ontario until such time as the person is registered and authorized to practice medicine by the College of Physicians and Surgeons of Ontario.

A completed Assessment Report must be forwarded by the Postgraduate Office to the following:

Registration Department
College of Physicians and Surgeons of Ontario
80 College Street, Toronto, Ontario, M5G 2E2
Tel: (416) 967 – 2617   Fax: (416) 967 – 2623

CEHPEA
80 Bloor Street West, Suite 902
Toronto, ON, M5S 2V1
Tel: (416) 924 – 8622   Fax: (416) 924 – 8921
Name of Candidate: _______________________________________________________________________
Name of Assessor(s): _______________________________________________________________________
Program: __________________________________________ Date of Assessment: ________________

Note: This Detailed AVP Assessment Form is an internal program document to be used to assess IMG candidates seeking entry into Ontario postgraduate residency training programs. This form will be used to assess the candidates, including their communication skills: 1) at the end of the 2nd week of the AVP, and 2) at mid-rotation by the end of the 8th week, and 3) at the end of the 12 week AVP period. All assessments remain in the program/department files. This assessment information will be used to inform the summary AVP Evaluation Form, which the Program Director must sign and forward to the PGME Office at the end of the AVP to complete the registration and licensing process.

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1. CLINICAL SKILLS</td>
<td></td>
</tr>
<tr>
<td>Comprehensiveness</td>
<td>Explores leads, obtains relevant past, family and personal history, reviews all systems, those related to problem(s) in detail. Explores social history. Completes examination as appropriate for time and situation.</td>
</tr>
<tr>
<td>Problem Definition and Orientation</td>
<td>Obtains full description of main problem; picks up cues (verbal and non-verbal); directs examination towards problems elicited in history; examines relevant areas thoroughly.</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Is able to vary approach to history to adapt to physical and emotional state of parent or patient. Gets most out of time available for interview.</td>
</tr>
<tr>
<td>Technique</td>
<td>Procedure correct and efficient, but takes account of patient’s age, physical and emotional condition; interacts with patient. Appropriately drapes patient. Does not hurt patient. Washes hands before and after examination.</td>
</tr>
<tr>
<td>2. TECHNICAL SKILLS</td>
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<tr>
<td></td>
<td>Displays experience with and knowledge of technical skills compatible with reported level of training in the specialty.</td>
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<tr>
<td>3. KNOWLEDGE AND JUDGMENT</td>
<td></td>
</tr>
<tr>
<td>Synthesis</td>
<td>Accurately interprets history and physical findings.</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Establishes an appropriate problem list and differential diagnosis, based on information so far available.</td>
</tr>
<tr>
<td>Investigation</td>
<td>Appropriate, taking into account probable yield, risks, costs and whether it can be done as out-patient or in-patient.</td>
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Approved by PGE:COFM May 20, 2010
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<tr>
<th>CRITERIA</th>
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<th>BE</th>
<th>ME</th>
<th>AE</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapy</td>
<td>Appropriate for problems; involves health care team as necessary; patient education planned, emotional and socioeconomic considerations included; long term care considered.</td>
<td></td>
<td></td>
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<tr>
<td>4. COMMUNICATION SKILLS</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>Introduces self, uses patient’s name, makes sure patient is aware of reason for encounter.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>Uses vocabulary which is easily understood, avoids medical jargon, asks clarification of historian’s terms.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Technique</td>
<td>Expresses self clearly, mixes open and closed questions, controls interview, facilitates patient response, uses allotted time well.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>Gives appropriate attention and respect to patient, puts at ease, establishes a sensitive and compassionate relationship.</td>
<td></td>
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<td>Attentiveness</td>
<td>Listens attentively, picks up leads, avoids repetitious questions.</td>
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<tr>
<td>Patient’s</td>
<td>Understood the question, felt that they were being both listened to and understood, comfortable with professional relationship.</td>
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<td>Response</td>
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<td>5. PROFESSIONAL ATTITUDES</td>
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<tr>
<td>Management</td>
<td>Establishes priorities in approach to investigation and management as to urgency, or otherwise.</td>
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<td>Consultation</td>
<td>Utilizes consultants appropriately, after due consideration to difficulty of patient’s problems, own expertise and what is expected of consultant.</td>
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<td>Interpersonal</td>
<td>Maintains acceptable and workable co-worker relationships and respectful of roles of other team members.</td>
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<td>Relationships</td>
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<td>Sense of</td>
<td>Completes assigned tasks, dependable, appropriate patient follow-up.</td>
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<td>Responsibility</td>
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<td>Overall Assessment</td>
<td>Unsatisfactory, Below Expectations, Meets Expectations, Above Expectations, Outstanding.</td>
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<td>6. ASSESSOR’S COMMENTS:</td>
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<td>Signature Trainee:</td>
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<td>Signature Assessor:</td>
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Grading Legend: Please place checkmark or “x” in the appropriate box.
- **U** = Unsatisfactory
- **BE** = Below Expectation
- **ME** = Meets Expectation
- **AE** = Above Expectation
- **O** = Outstanding

Report performances rated Unsatisfactory of Below Expectation to the PGE Office.
RESIDENT SELECTION
Postgraduate Medical Education

Table of contents:

1. Policy & Procedure: Allocation of Residency Positions
2. McMaster’s position statement re Resident Selection
3. Guidelines for Conducting Interviews

1. Policy & Procedure: Allocation of Residency Positions

Background:

The Postgraduate Management Committee of the Council of Ontario Universities (PGM:COFM) is a committee that is comprised of the Postgraduate Deans from the Ontario medical schools, as well as representation from the Ministry of Health. This group provides oversight and direction for the allocation of residency positions within Ontario.

Main Principles:

(i) A provincial 60:40 ratio between RCPSC / CFPC PGY1 programs for Pool A and Pool B.
(ii) At minimum, the number of Pool A CaRMS PGY1 positions is 1:1.1, and linked to the annual provincial undergraduate output.
(iii) A minimum of 200 IMG positions must be accommodated in the province.
(iv) Allocations must now consider all streams of entry and at all levels.
(v) Allocations must consider the creation of new teaching capacity centrally, but also through distributed medical education, clinical simulation and other initiatives, as appropriate.
(vi) Allocations must protect the integrity of programs and address the Health Human Resource directives from government in a socially accountable and equitable way.
(vii) Allocations will consider the interdependence and impact of postgraduate and undergraduate medical education programs.

When reviewing the allocation the following criteria are to be considered:

(i) Human Health resource needs provincially and nationally, i.e., government initiatives, societal need, and job opportunities following the conclusion of residency provincially and nationally will be considered.
(ii) The ability of the program to successfully fill positions during the CaRMS process.
(iii) Projected pool of candidates in each specialty / subspecialty.
(iv) Ability to train residents i.e., resources
(v) CMG and IMG positions from the previous CaRMS cycle
(vi) Return-of-service opportunities available for IMG’s.
(vii) McMaster University, Faculty of Health Sciences Mission statement.
(viii) New initiatives within the Faculty of Health Sciences and Postgraduate Medical Education.

**Process for the allocation of positions at McMaster:**

(i) PGY1 entry positions are reviewed by the Faculty Postgraduate Medical Education Committee, on an annual basis, in May and June for the upcoming CaRMS match. This discussion includes all PGY1 Program Directors.

(ii) Each Program Director will provide a brief summary, either verbally at the meeting, or written, informing the Committee on the status of the specialty, in terms of the above criteria, particularly those programs wishing to reduce / increase their positions.

(iii) Consideration will be given to all other PGY positions for advanced training, re-entry, transfers, and visa trainees.

(iv) Subspecialty entry positions will be reviewed by the appropriate department in coordination with the Postgraduate Medical Education Office.

(v) All positions will be approved by the Faculty Postgraduate Medical Education Committee.

(vi) Once the quotas have been approved by the PGME Committee, they will be submitted to the PGM:COFM Committee to review overall provincial quotas – to ensure the provincial specialty to Family Medicine is maintained, as well as the balance between the various specialties within the province. The Ministry of Health and Long-Term Care reviews the provincial allocation and provides the final approval.

**Process for the allocation of positions for the Medical Education Campuses (MEC’s):**

(i) The designated lead individual(s) at each site will work with the Program Director of the specialty they wish to develop into a CaRMS based position. The site designated lead and / or Program Director will report to the Postgraduate Medical Education Committee on progress.

(ii) The Program Director and the Division / Department will ensure that the site is able to meet the standards of accreditation. For example, that there is sufficient clinical activity and resources (B4), that there is an academic environment (B3, B5).

(iii) If the program determines that the site is able to meet the standards of accreditation and is able to provide a sufficient portion of the training at the site (approximately 50% minimum), then the Program’s Residency Program committee should review the program’s quotas, in terms of reallocation of one of their positions to the site for a CaRMS based position.
Once approved and agreed to by the Program’s Residency Training Committee, this would come forward to the Faculty Postgraduate Medical Education Committee for approval.

(iv) If the program is unable to reallocate a position to the site, the Program may elect to bring forward a request to the Faculty Postgraduate Medical Education.

2. **Position Statement for Canadian Residency Matching Service (CaRMS) Selection Process**

At McMaster University, we believe the best residents are those who have been able to explore the breadth of the medical profession through suitable electives while enrolled in medical school. We do not preferentially interview or rank applicants who have only pursued electives in one discipline or sub-discipline or on the basis of having trained at, or done an elective at McMaster.

3. **Guidelines for Conducting Interviews**

Refer to the CaRMS website for Interview Guidelines for Programs:

- General match participation principles
- Applicant rights
- Preparing for interviews
- Interview tips
- Sample questions (i) Appropriate Questions  (ii) Inappropriate Questions

If a topic has been raised by the applicant and it is relevant to the issue under discussion, the interviewer may choose to pursue.

The Human Rights and Equity Services office of the University will review standardized interview questions. They can be reached at extension 27581 or at hres@mcmaster.ca

Reviewed and approved at PGEC January 21, 2015
Guidelines re Part-Time Residency Training

Preamble:

While in most instances residency training programs will be full-time, a part-time residency program may be necessary or desirable to accommodate family or personal responsibilities, or job sharing with a spouse for childcare etc. It is further understood that residents need to take responsibility for completing their residency training program in a reasonable length of time.

It is recognized that part-time training may be required for accommodation issues (disability, illness); and such cases will be managed separately and not covered under the Part-time guidelines. PGME recognizes that there is an obligation to make reasonable accommodations for these circumstances.

Considerations or challenges that may be encountered establishing part-time residency programs include:

- Scheduling problems for rotations
- Incomplete or inconsistent educational experiences
- Lack of peer group support
- Diminished responsibility to others in the training program
- Service needs not met
- Financial implications
- Administrative complexity, or
- Loss of appreciation of the disease process

Principles:

1. It is the expectation that all residents will start their residency program full-time. It is recognized that circumstances may change throughout the training program and that full-time training may not be the best option.

2. Part-time residency training should be made available in all training programs, if at all possible.

3. All requests for part-time training will be reviewed on an individual basis by the Residency Program Committee.
4. All part-time residents will remain registered with the Postgraduate Medical Education Office but will receive credit for the fraction of training for which they are registered.

5. Part-time training must be approved prior to the Resident moving to part-time status.

6. In all cases the regulations of the applicable national Colleges regarding part-time residency will apply.  Note current information is:

   RCPSC: total program length is mainly at the discretion of the Residency Program.  Please refer to item 4.2 Residency Training Requirements  

   CFPC: total program length cannot exceed 4 years.

   Both Colleges require that a resident be registered for a minimum of 50% of time in the program.  
   Please refer to links at the end of the document to check most current information.

Process:

1. The resident should make the request for part-time training, in writing, to their Program Director, outlining the reasons for wanting to train part-time.

2. The Program Director and Resident should meet to discuss the logistics of part-time training, taking into consideration the following aspects:

   a) Implications on achieving all components of the residency program, taking into consideration the educational training requirements of the program / or part of the program, as well as the continuity of care. There may be parts of a training program where part time training may significantly diminish the educational benefit (e.g., Chief Surgery resident role).

   b) Determination of the duration and percentage (e.g, 50%) of the part-time training period.

   c) Expected date of return to full-time training and if an incremental process might be beneficial to the Resident.

   d) Impact on the training program / resident peers.

   e) Other factors as determined by the Residency Program Committee.
3. The request should be reviewed by the Residency Program Committee.

4. The Resident / Program Director should complete ‘Request for Part-Time Residency Training’ form (available on medportal, www.medportal.ca under Forms and Manuals) and submit to the Assistant Dean, Postgraduate Medical Education for approval.

5. The Assistant Dean, PGME will review. On approval the request will be forwarded to the Royal College of Physicians and Surgeons of Canada or the College of Family Physicians for approval.

**Payroll status of Residents paid by Hamilton Health Sciences:**

1. In order for a resident to maintain their benefits they must be registered a minimum of 60% of the time.

   A resident’s part-time status will normally be reflected in their pay, for example, if a resident is completing 50% of their training program, their pay will normally be 50% of their usual salary.

**Related links:**

Royal College of Physicians and Surgeons of Canada, Fractional (Part-time) Residency Training policy

College of Family Physicians of Canada
http://www.cfpc.ca/La_formation_en_r%C3%A9sidence/

Request for Part-time Residency Training form – RCPSC – available on medportal: www.medportal.ca

Professional Association of Interns of Ontario
www.paro.org
1.0 Purpose
As technology advances, the use of Personal Mobile Electronic Devices (PMED) has grown and become a useful tool in some work environments. The purpose of this policy is to support professional and responsible behaviours that are expected while performing your duties and/or while in public areas of the Hospital related to the use of PMED. The use of personal mobile electronic devices should support effective communication, patient care delivery, the perception of patient care delivery, and enhance the overall patient experience.

Note: This document outlines the minimum expectations related to this subject. Programs may have department specific policies that exceed the expectations outlined in this document.

Note: Staff working in other facilities/locations, must adhere to this policy in addition to the specific facility policy where they are performing their duties.

2.0 Policy

2.1 Guiding Principles and Values
2.1.1 Patients, family members, and other team members deserve our full focus and attention when interacting with them.
2.1.2 Personal mobile electronic devices are to be used in a manner that does not interfere with or negatively impact patient care, the perception of patient care, the patient experience, and the responsibilities and duties of your position.
2.1.3 Maintaining confidentiality of personal health information (PHI), HHS business, and employee information is paramount whenever using personal mobile electronic devices.
2.1.4 Use of personal mobile electronic devices for personal reasons while providing direct patient care and/or interacting with patients is not permitted.

2.2 Safety
2.2.1 All users of PMEDs, are requested to be a distance of at least one meter from any medical device when in the hospital. Patients connected to medical instruments who are not in direct patient areas (in the cafeteria, elevators, hallways, etc.) are still at risk for electromagnetic interference (EMI) from radio frequency (RF) transmitting devices. An example is when a person using the device is near a patient who is mobile and has an infusion pump or other visible electronic apparatus. See BIOMED - Policy on the Safe Use of Cell Phones and Wireless Devices at HHS.
2.2.2 Any PMED that is charged within an HHS facility must use a CSA approved charger and only plugged into non-emergency power receptacles.
2.2.3 All users of PMED must follow HHS Infection Prevention & Control Routine Practices, which includes hand hygiene. See IC - Routine Practices Policy #: 041-MED
2.2.4 Persons using PMED are accountable for cleaning their devices following infection prevention and control policies.
2.2.5 The use of ear buds and/or headphones while performing your duties is prohibited, unless the use of the above is required for the primary function of your role, a safety device, and/or personal assistive device.

2.2.6 It is the responsibility of all persons to whom this policy applies, to ensure that you use mobile electronic devices safely. Staff are not to use mobile electronic devices while driving or operating powered or moving machinery.

2.3 Respect for Others

2.3.1 When using PMED while at work, devices must be placed on ‘vibrate’, ‘silent’, or ‘alerts off’ modes to minimize the level of noise and distractions in our environments.

When using PMED while at work, use of speaker phone capabilities should be minimized whenever possible. If speaker phone capabilities are used, you must comply with HHS Privacy and Confidentiality policies. See HR – Confidentiality Policy, HR – Employee Records & Confidentiality of Employee Information Policy, PRI – Privacy Policy.

2.3.2 When using PMED in front of patients, families, and/or colleagues, it is expected that you will provide an explanation about your use of the device.

2.3.3 Follow these three steps:
   a) Notify patient/family/colleague that you are going to access your PMED
   b) Explain what you are accessing.
   c) If appropriate, share the information.

2.3.4 When communicating using PMEDs, you must not violate HHS’ commitment to harassment free and violence free working environment. See CORP - Values Based Code of Conduct and HSW – Violence in the Workplace Policy.

2.4 Privacy & Confidentiality

2.4.1 All individuals using PMEDs while at work must comply with Personal Health Information Protection Act (PHIPA), the Freedom of Information and Protection of Privacy Act (FIPPA) and HHS Policies, specifically related to appropriate storage and safeguarding of confidential business, employee, and/or personal health information (PHI). See PRI – Privacy Policy, HR – Confidentiality Policy, HR – Employee Records & Confidentiality of Employee Information Policy.

2.4.2 Individuals using PMEDs at work must employ safe practices when sending personal health information by sending only to ‘secure’ email recipients as per guidelines in the Electronic Mail Policy. See ICT – Electronic Mail (email) Protocol.

2.4.3 Texting of personal health information is not permissible.

2.4.4 Individuals using PMEDs at work will not discuss or view confidential information near those who should not have access to the information in compliance with their confidentiality obligations as per the Privacy Policy.

2.4.5 Texting of employee information for the purposes of scheduling may be used if the employee has provided informed consent.
2.4.6 Regulated Health Professionals will also comply with their respective Regulatory College Standards of Practice regarding professional behaviours, use of social media, and any other applicable standards that may relate to PMED at work.

2.5 Accountability

2.5.1 All persons for whom this policy applies are accountable for meeting the minimum expectations outlined herein.

2.5.2 All persons for whom this policy applies are accountable to ensure that the use of PMEDs at work does not negatively impact the therapeutic relationship with patients and families.

2.5.3 Upholding the professional and responsible behaviours expected of all persons related to mobile electronic devices is everyone’s responsibility. When team members address compliance issues, you must apply the HHS Values Based Code of Conduct.

2.5.4 If accessing Information and Communication Technologies (ICT) resources on your PMED, you must follow ICT policies, including Bring Your Own Device (BYOD) and Wireless Network policies. See ICT – Bring Your Own Device (BYOD).

2.5.5 Leaders are accountable for enforcing this policy.

3.0 Definitions

Confidential Information - As an employee of HHS, all clinical or health related, personal, Human Resource, social and / or psychological information concerning patients, visitors and staff is held in strictest confidence; regardless of whether access to such information was verbal, documented, computerized or otherwise obtained. Employees divulge, obtain and/or use confidential information only as needed by them to perform legitimate duties of their job. Inappropriate access, disclosure, misuse or failure to safeguard confidential information is subject to severe disciplinary action up to and including termination.

Electro-magnetic Interference (EMI) - R.F. transmitting devices generate electro-magnetic interference (EMI) that may affect the normal use of other electronic equipment including medical devices used for diagnostic and therapeutic purposes. Such interference can cause devices to malfunction, under-perform or provide erroneous data, which may lead to substandard care, injury or even death. The risk of radio-frequency interference is a function of power, proximity of the transmitter, and susceptibility of certain pieces of equipment.

High-risk areas - Any area where a patient might be connected to electro-medical equipment (e.g. cardiac monitoring, hemodynamic monitoring and telemetry) and any highly instrumented area (e.g. clinical laboratories). This includes but is not limited to Emergency, ICU, CCU, PACU, ORs, L&D, NICU, Diagnostic Imaging, Medical Diagnostic Units, and Clinical Laboratories.

Medical Device (as defined in the Health Canada Food and Drugs Act) - Covers a wide range of health or medical instruments used in the treatment, mitigation, diagnosis or prevention of a disease or abnormal physical condition. Examples include ventilators, monitors, infusion pumps, etc.
Personal Health Information (PHI) – Personal Health Information is defined in PHIPA s.4 as identifying information about an individual in either oral or recorded form that relates to the physical or mental health of the individual; relates to the provision of healthcare to the individual, including the identification of a provider of healthcare to the individual.

Personal Mobile Electronic Devices (PMED) - Are portable electronic devices that are used for communication and accessing information. This includes but is not limited to the following: cell phones, laptops, tablets, SMART phones/watches, Personal Digital Assistants (PDA). This applies to both personal devices and those supplied by HHS.

Radiofrequency (RF) [abbreviated RF, rf, or r.f.] - A term that refers to alternating current (AC) having characteristics such that, if the current is input to an antenna, an electromagnetic (EM) field is generated suitable for wireless broadcasting and/or communications. These frequencies cover a significant portion of the electromagnetic radiation spectrum, extending from nine kilohertz (9 kHz), the lowest allocated wireless communications frequency (it's within the range of human hearing), to thousands of gigahertz (GHz). The frequency of an RF signal is inversely proportional to the wavelength of the EM field to which it corresponds. At 9 kHz, the free-space wavelength is approximately 33 kilometers (km) or 21 miles (mi). At the highest radio frequencies, the EM wavelengths measure approximately one millimeter (1 mm). As the frequency is increased beyond that of the RF spectrum, EM energy takes the form of infrared (IR), visible, ultraviolet (UV), X rays, and gamma rays.

4.0 Cross References

BIOMED - Policy on the Safe Use of Cell Phones and Wireless Devices at HHS
CORP – Harassment Protocol
HR – Confidentiality Policy
HR – Employee Records & Confidentiality of Employee Information Policy
IC - Additional Precautions Protocol
ICT – Routine Practices Policy #: 041-MED
ICT – Bring Your Own Device (BYOD)
ICT – Electronic Mail (email) Protocol
ICT – Encryption Policy
ICT - HHS Wireless (WiFi) Access Policy
ICT - Mobile Device Policy
PRI – Privacy Policy

5.0 Other HHS References

Admin HHS – Administrative & Professional Staff By-law 3
CORP - Values Based Code of Conduct
HSW – Violence in the Workplace Policy
PR&C - Social Media Policy
VOL – Volunteer Code of Ethics Policy
6.0 **External References**


Horizon Health Network – Appropriate Use of Wireless Communication Devices Policy – 2013

Royal Victoria Regional Health Care – Mobility – Bring Your Own Device (BYOD) Policy & Procedure - 2013

Waypoint Centre for Mental Health Care – Mobile Devices Policy - 2012

7.0 **Developed By**

Personal Mobile Electronic Device Working Group

8.0 **In Consultation With**

HHS Staff and Physicians

HHS Leaders

Office of Human Rights & Diversity

Privacy & Freedom of Information Office

9.0 **Approved By**

Joint Chief/Directors Forum – 2015

MAC – March 2015

Executive Council December 2015

**Keyword Assignment**

| Devices, electronic devices, etiquette, cell phones, tablets, blackberries, smart phones, mobile, personal, PMED, PMEDs, PMED’s |

**END OF DOCUMENT**

For internal use only at Hamilton Health Sciences (HHS). Persons reviewing a hard copy of this document should refer to the electronic version posted in the Policy and Document Library to ensure this copy is current.
1.0 **Purpose & Goals Description**
In the daily operations of HHS, personal health information is collected, retained, used, disclosed and eventually destroyed. This personal health information may include photographic images taken for patient care, teaching and administrative functions. The photographic images are considered personal health information, are part of the patient’s health record and are entitled to the same level of protection as any other type of confidential personal information.

2.0 **Equipment/Supplies**
Photographic Equipment

3.0 **Policy**
3.1 HHS understands the benefits that photographic images of patients bring to clinical care, and healthcare teaching. All photographic images of patients carried out within HHS must conform to the Personal Health Information Protection Act guidelines for the collection, use, storages, disclosure and disposition of personal health information. When photographic images of patients are taken at HHS, the integrity, accuracy, confidentiality and securing of that information is protected.

3.2 **Exclusions**
3.2.1 This Policy does not apply to the following:
- Images or photos which are taken in the ordinary course of treatment to be included in the patient’s health record, examples include but are not limited to the following:
  - Radiographic or ultrasound images including but not limited to x-rays and echocardiography
  - Macro/micro photography of pathology specimens
  - Ophthalmic or endoscopic images
- Photographic images taken within REB approved projects

3.2.2 The storage and security of the images listed as exclusions are addressed within other hospital processes and remain the responsibility of the individual department, or organization responsible for taking the image.

4.0 **Procedure**
4.1 **Consent for Taking Photographic Images of Patients**
4.1.1 Explicit (written) consent must be obtained from the patient or if the patient is incapable, their guardian or substitute decision maker. Such consent should be obtained prior to the taking of the photographic images. The consent to treatment principles and process should be used to determine the most appropriate person to give or refuse consent on a patient’s behalf for the taking of photographic images (i.e. patient or substitute decision-maker).

4.1.2 Photographic images must only be used for the purposes for which the original consent was provided. In the event the Hospital, department or health professional wishes to use the photographic image for another purpose, execution of another consent specific to that use is required.
4.1.3 The consent discussion is to include:
   • The intended purpose for the photographic image
   • Who is to have access to the photographic image
   • How the photographic image is to be stored or destroyed

4.1.4 This discussion is to be documented on the Consent for Photographs, Films, Sound Recording and any other Audio and or Visual Reproduction (recordings) Form #___ and in the Interdisciplinary Progress Notes or on a program specific photograph consent form (i.e. Domestic Violence and Sexual Assault Program).

4.1.5 Parents may take photographic images of their own child however they are prohibited from taking photographic images of other patients without express consent. In these situations, consent is to be obtained through an HHS staff member and documented in the health record of the patient who is being photographed.

4.1.6 In exceptional circumstances where it is not feasible to obtain the patient’s consent prior to the photographic image being taken, the photographic image may be taken. However, the photographic image may not be processed/released until after written consent has been received. Consent should be obtained at the first reasonable opportunity.

4.2 Withdrawal or Refusal of Consent
4.2.1 In the event a patient withdraws or refuses their consent to the taking or use of a photographic image after the photographic image has been taken, the photographic image(s) must be destroyed as soon as is reasonably possible following the withdrawal/refusal.

4.3 Access to Photographic Equipment
4.3.1 The use of PDA’s or cellular phone cameras for the purposes of taking photographic images is strictly prohibited. Where it is practicable, it is recommended that the hospital photographers be contacted to arrange for taking of a patient’s photographic image. The following information is required:
   • Patients name
   • Patient location
   • Area and medical condition to be photographed
   • Any precautionary information i.e. isolation
   • Name of requesting medical or health professional staff member

4.3.2 Where it is not practicable to use the hospital photography service, HHS medical or health professional staff /may take photos using their own photographic equipment which is intended for such use (excluding cell PDA’s and cell phone cameras). Photographic equipment used must be intended for such use only and not be used outside of the work environment.

4.4 Use of Photographic Images for Non-Clinical Purposes
4.4.1 A disclaimer should be used at the beginning of any presentations containing photographic images of patients. For example: “These photographs are being provided with explicit consent and should not be distributed or reproduced without permission.”

4.5 Use of Photographic Images from existing files
4.5.1 Existing photographic images for which there is no express patient consent for the photographic image or images to be used, may be used only if the following conditions have been met:
   • the patient is NOT identified or identifiable in the photographic image(s) and/or with the accompanying case report information.

4.6 Storage of Photographic Images
4.6.1 It is the responsibility of HHS and HHS staff to ensure the safe storage and security of
photographic images taken of patients. Where practicable, this should be facilitated through the HHS Audiovisual Department.

- All photographic images of patients should be stored in their original format without manipulation to preserve the integrity of the image.
- A copy of all photographic images should be retained in the patient’s health record.
- All images should be stored in a safe and secure location or medium to prevent accidental loss, theft, unauthorized viewing or damage.
- Digital photographic images of patients should be kept on a medium with password protected access (shared folder on intranet, patient health record in Sovera) or on a secured and clearly labelled disc.
- Photographic images of patients should not be emailed external to the hospital unless consented to by the patient/SDM or done on a previously approved and secured network.

4.6.2 Accidental disclosure, access, loss, or theft of photographic images of patients must be promptly reported to the Privacy Office:
Mary Bedek
Chief Privacy Officer
Hamilton Health Sciences
Chedoke Site Ewart Building Rm 311 559 Sanatorium Rd,
Hamilton Ontario L9C 7W8
905-521-2100 x. 75120 Fax 905-318-5571 email bedek@hhsc.ca

or Risk Management Office:
521-2100 extension 75240

For situations that this policy does not provide for, please contact the Privacy or Risk Management Offices for direction.

5.0 Definitions
Photographic Images: any still or moving image of a patient taken, regardless of the technology used to take the photographic image.

Photographic Equipment: equipment used to take a photographic image including but not limited to still cameras, video recorder, or photographic image scanning devices (personal digital assistants (PDA), cell phone cameras are excluded).

6.0 Cross References
Hamilton Health Sciences Consent for Photography and Audio or Visual Recordings Form (Form #TBA)
HHS Consent for Photography, Video/Audio Taping, Televising, Internet Imaging Form
MAC - Consent or Withdrawal or Refusal of Consent for Treatment Policy

7.0 Developed By
Director Corporate and Medical Affairs
V.P. Medical – Medical Affairs

8.0 In Consultation With
General Counsel – Corporate Affairs
Chief Privacy Officer

9.0 Approved By
MAC (April 2006), PAC (April 2006)

9.0 Posting Dates
Initial Posting Date: 2006-05-17
Posting Date History:

END OF DOCUMENT
For internal use only at HHS. Persons reviewing a hard copy of this document should refer to the electronic version posted in the Policy Library to ensure this copy is current.
8. CME organizers and their delegates must not be in a position of conflict by virtue of any affiliation with the company of companies that fund CME activities.

9. Involvement in industry sponsored research activities must be approved by Hamilton Integrated Research Ethics Board (HIREB).

10. While it is understood that these are the guidelines that will apply to all postgraduate programs, it is also understood that each program may need to adapt them to fit local circumstances.

At the Trainee Level

1. The trainee must disclose any situation where there may be a real or perceived connection with industry that could influence their judgment and independence.

2. The trainee should avoid interactions with industry which would put them in a position of potential conflict.

References


The College of Physicians and Surgeons of Ontario (CPSO) MD Relations with Drug Companies [http://www.cpso.on.ca/policies/policies/default.aspx?ID=1832]

Approved Faculty PGME: October 2013
SURGICAL SAFETY
CHECKLIST for surgery under one hour
www.safesurgerysaveslives.ca

BRIEFING – Before induction of anesthesia

Hand-off from ER, Nursing Unit or ICU
- All team members introduce themselves by name and role
- Anesthesia equipment safety check completed
- Patient information confirmed
  - Identity (2 identifiers)
  - Consent(s)
  - Site and procedure
  - Site, side and level marked
  - Clinical documentation
  - History, physical, labs, biopsy and x-rays
- Review final test results
- ASA Class
- Allergies
- Medications
  - Antibiotic prophylaxis: double dose?
  - Glycemic control
  - Beta blockers
  - Anticoagulant therapy (e.g., Warfarin)?
- Difficult Airway / Aspiration Risk
  - Confirm equipment and assistance available
- Surgeon(s) review(s)
  - Specific patient concerns, critical steps, and special instruments or implants
- Anesthesiologist(s) review(s)
  - Specific patient concerns and critical resuscitation plans
- Nurses(s) review(s)
  - Specific patient concerns, sterility indicator results and equipment / implant issues

BRIEFING (continued)
- Patient positioning and support / Warming devices
- Special precautions
- What is the patient’s weight?
- Is the patient properly grounded?

TIME OUT – Before skin incision
- Surgeon, Anesthesiologist, and Nurse verbally confirm
  - Patient
  - Site, side and level
  - Procedure
  - Antibiotic prophylaxis: repeat dose?
  - Final optimal positioning of patient
- “Does anyone have any other questions or concerns before proceeding?”

DEBRIEFING – Before patient leaves OR
- Surgeon reviews with entire team
  - Procedure
  - Important intra-operative events
  - Fluid balance / management
- Anesthesiologist reviews with entire team
  - Important intra-operative events
- Nurse(s) review(s) with entire team
  - Instrument / sponge / needle counts
  - Specimen labeling and management
  - Important intraoperative events (including equipment malfunction)
- Changes to post-operative destination?
- Could anything have been done to make this case safer or more efficient?
- Hand-off to PACU / RR, Nursing Unit or ICU

PATIENT INFORMATION
SURGICAL SAFETY
CHECKLIST for surgery 1 hour or longer
www.safesurgerysaveslives.ca

BRIEFING – Before induction of anesthesia

Hand-off from ER, Nursing Unit or ICU
☐ All team members introduce themselves by name and role
☐ Anesthesia equipment safety check completed
☐ Patient information confirmed
  - Identity (2 identifiers)
  - Consent(s)
  - Site and procedure
  - Site, side and level marked
  - Clinical documentation
  - History, physical, labs, biopsy and x-rays
☐ Review final test results
☐ Confirm essential imaging displayed
☐ ASA Class
☐ Allergies
☐ Medications
  - Antibiotic prophylaxis: double dose?
  - Glycemic control
  - Beta blockers
  - Anticoagulant therapy (e.g., Warfarin)?
☐ VTE Prophylaxis
  - Anticoagulant
  - Mechanical
☐ Difficult Airway / Aspiration Risk
  - Confirm equipment and assistance available
☐ Monitoring
  - Pulse oximetry, ECG, BP, arterial line, CVP, temperature and urine catheter

BRIEFING (continued)

☐ Blood loss
  - Anticipated to be more than 500 ml (adult) or more than 7 ml/kg (child)
  - Blood products required and available
  - Patient grouped, screened and cross matched
☐ Surgeon(s) review(s)
  - Specific patient concerns, critical steps, and special instruments or implants
☐ Anesthesiologist(s) review(s)
  - Specific patient concerns and critical resuscitation plans
☐ Nurses(s) review(s)
  - Specific patient concerns, sterility indicator results and equipment / implant issues
☐ Patient positioning and support / Warming devices
☐ Special precautions
☐ Expected procedure time / Postoperative destination
☐ What is the patient’s weight?
☐ Is the patient properly grounded?

TIME OUT – Before skin incision

☐ Surgeon, Anesthesiologist, and Nurse verbally confirm
  - Patient
  - Site, side and level
  - Procedure
  - Antibiotic prophylaxis: repeat dose?
  - Final optimal positioning of patient
☐ “Does anyone have any other questions or concerns before proceeding?”

DEBRIEFING – Before patient leaves OR

☐ Surgeon reviews with entire team
  - Procedure
  - Important intra-operative events
  - Fluid balance / management
☐ Anesthesiologist reviews with entire team
  - Important intra-operative events
  - Recovery plans (including postoperative ventilation, pain management, glucose and temperature)
☐ Nurse(s) review(s) with entire team
  - Instrument / sponge / needle counts
  - Specimen labeling and management
  - Important intraoperative events (including equipment malfunction)
☐ Changes to post-operative destination?
☐ What are the KEY concerns for this patient’s recovery and management?
☐ Could anything have been done to make this case safer or more efficient?

Hand-off to PACU / RR, Nursing Unit or ICU

PATIENT INFORMATION

Adapted from the WHO Surgical Safety Checklist, © World Health Organization, 2008
How does this statement differ from the 2013 Guidelines? A careful review has lead to additions to the guidelines that include (a) specific mention of special requirements for subspecialty pediatric anesthesia care (b) changes detailing the necessity for determining the presence of advanced care planning directives in appropriate cases, and (c) a section discussing the implications of clinician fatigue and ill health on clinical performance and patient safety, requiring that departments develop policies to address such issues and minimize the effect on patient care.

En quoi cet énoncé diffère-t-il du Guide d’exercice de 2013? Une révision minutieuse du Guide a mené à des ajouts, notamment à (a) une mention spécifique des exigences particulières à la surspécialité de l’anesthésie pédiatrique; (b) des changements détaillant la nécessité de déterminer s’il y a des directives de planification de soins avancés dans les cas appropriés; et (c) une section discutant des conséquences de la fatigue et de la mauvaise santé du clinicien sur sa performance clinique et la sécurité du patient, avec une obligation des départements de mettre au point des politiques afin de tenir compte de tels problèmes et de minimiser leurs effets sur les soins aux patients.
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Guidelines to the Practice of Anesthesia - Revised Edition 2014

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Overview
The Guidelines to the Practice of Anesthesia Revised Edition 2014 (the guidelines) were prepared by the Canadian Anesthesiologists’ Society (CAS), which reserves the right to determine their publication and distribution. Because the guidelines are subject to revision, updated versions are published annually. The Guidelines to the Practice of Anesthesia Revised Edition 2014 supersedes all previously published versions of this document. Although the CAS encourages Canadian anesthesiologists to adhere to its practice guidelines to ensure high-quality patient care, the society cannot guarantee any specific patient outcome. Each anesthesiologist should exercise his or her own professional judgement in determining the proper course of action for any patient’s circumstances. The CAS assumes no responsibility or liability for any error or omission arising from the use of any information contained in its Guidelines to the Practice of Anesthesia.

Preamble
Anesthesia is a dynamic specialty of medicine. Continuous progress is being made to improve anesthetic care for patients undergoing surgical and obstetric procedures in Canada. To reflect this progress in the delivery of anesthetic services, this document is reviewed annually and revised periodically.

The following recommendations are aimed at providing basic guidelines to anesthetic practice. They are intended to provide a framework for reasonable and acceptable patient care and should be so interpreted, allowing for some degree of flexibility in different circumstances. Each section of these guidelines is subject to revision as warranted by the evolution of technology and practice.

Basic Principles

In this document, the term anesthesiologist is used to designate all licensed medical practitioners with privileges to administer anesthetics. An anesthetic is any procedure that is deliberately performed to render a patient temporarily insensitive to pain or the external environment so that a diagnostic or therapeutic procedure can be performed.

The independent practice of anesthesia is a specialized field of medicine. As such, it should be practised by physicians with appropriate training in anesthesia. The only route to specialist recognition in anesthesia in Canada is through the certification process of the Royal College of Physicians and Surgeons of Canada. The Canadian Anesthesiologists’ Society (CAS) acknowledges the fact that remote communities often lack the population base to support a specialist anesthetic practice. In these communities, appropriately trained family physicians may be required to provide anesthesia services. All anesthesiologists should continue their education in the practice of anesthesia, pain management, perioperative care, and resuscitation. These guidelines are intended to apply to all anesthesiologists in Canada.
Organization of Anesthetic Services

The department of anesthesia should be properly organized, directed, and integrated with other departments in the organization or facility, and it should include all facility staff members who provide anesthetic services to patients for surgical, obstetric, diagnostic, and therapeutic purposes.

The department should be staffed appropriately, bearing in mind the scope and nature of the services provided, and it should strive to ensure that these services are available as required by the health care facility.

The chief of the department should be a physician who has obtained certification or appropriate training in anesthesia. This individual should be appointed in the same manner as other chiefs of clinical departments and should be a member of the senior medical administrative bodies for the facility.

Responsibilities of the Chief of Anesthesia

1. To be aware of the current CAS Guidelines to the Practice of Anesthesia, the requirements of the Canadian Council on Health Services Accreditation, and the requirements of the provincial licensing authority as they relate to anesthesia;
2. To ensure that written policies with respect to the practice of anesthesia are established and enforced;
3. To evaluate the qualifications and abilities of the physicians providing anesthetic care and other health professionals providing ancillary care—this includes (but is not restricted to) the recommendations of clinical privileges for physicians with anesthetic responsibilities and annual review of these privileges;
4. To monitor systematically the quality of anesthetic care provided throughout the health care facility—this should include chart reviews and internal audits or more detailed reviews when indicated;
5. To ensure that records are kept for all anesthetic procedures—these records should allow for evaluation of all anesthetic care in the facility;
6. To carry out such other duties as the governing body of the facility may delegate to ensure safe anesthetic care;
7. To promote institutional compliance with applicable Canadian Standards Association (CSA) Standards (Appendix 1); and
8. To coordinate liaison between the departments of anesthesiology, biomedical engineering, and information management services.

Privileges in Anesthesia

All physicians applying for privileges in anesthesia should demonstrate satisfactory completion of specialist postgraduate training in anesthesia. Such training in university programs approved by the Royal College of Physicians and Surgeons of Canada is the standard; international medical graduates approved for licensure by provincial regulatory bodies should demonstrate training equivalent to the Canadian standard. Family physicians practicing anesthesia should demonstrate satisfactory completion of a specific postgraduate training program of at least one year’s duration. Special areas of anesthesia care may have specific concerns. Privileges in pediatric anesthesia may be determined in each institution by the Department of Anesthesia according to the pediatric population they serve, the child’s age and the presence of comorbidities, the physician’s specific training and experience in pediatric anesthesia, and the complexity of the procedure involved.

Physicians with anesthetic privileges should possess the knowledge, technical, and non-technical skills necessary for the practice of anesthesia.

Technical/knowledge based skills include the ability:

- To provide pre-anesthetic evaluation of the patient and determine appropriate anesthetic management;
- To render the patient insensible to pain for the performance of diagnostic and therapeutic procedures, surgical operations and obstetric procedures;
- To monitor and support the vital organ systems during the perioperative period;
- To provide immediate post-anesthetic management of the patient;
- To provide resuscitation and intensive care when indicated;
- To provide relief from acute and chronic pain.

Non-technical skills include:

- Task management: planning and preparing, prioritising, providing and maintaining standards, identifying and utilising resources;
- Team working: co-ordinating activities with team members, exchanging information, using authority and assertiveness, assessing capabilities, supporting others, supporting the WHO Surgical Safety Checklist;
- Situation awareness: gathering information, recognising and understanding, anticipating;
- Decision making: identifying options, balancing risks and selecting options, re-evaluating.

Fitness to Practice

The provision of anesthesia care requires that anesthesiologists have a high level of expertise combined with sound judgment, as well as the ability to recognize and respond to changing clinical situations despite sometimes
adverse personal physical circumstance. Anesthesia departments must recognize that optimal care is provided by fit anesthesia practitioners. Anesthesia departments therefore have an obligation to develop policies, which, as far as possible, ensure that practitioners are healthy and fit to undertake their duties of practice.

Health and fitness for duty are impaired by a variety of factors, including adverse physical conditions, mental impairment, and fatigue. All of these factors impair fitness and the ability to recognize and respond appropriately to often rapidly changing clinical circumstances. Many studies have demonstrated that fatigue impairs judgment and psychomotor performance in a manner similar to drugs or alcohol. Shifting circadian rhythms, aging, and lack of sleep reinforce such problems; a fatigue-induced lack of recognition of these problems can compound the potential for errors in such circumstances. Physical impairment, illness and severe stress can have similar detrimental effects on performance.

Anesthesia departments and individual anesthesiologists have a responsibility to organize their working duties in such a fashion that ensures illness and fatigue do not regularly affect clinical duties. Individual rosters must allow adequate rest between working shifts and daily rosters should allow appropriate breaks for physiological needs, nutrition and mental fitness. Operating room scheduling processes should avoid requiring anesthesiologists to undertake non-emergency procedures during unfavourable hours.

No specific prescription for working shifts and daily roster can be defined that is appropriate for every working situation; large departments have flexibility to incorporate short shifts and individual leave while small departments may not have such freedom. Nevertheless this important area of professional practice must receive ongoing consideration and attention.

Residents

Residents in anesthesia are registered medical practitioners who participate in the provision of anesthesia services both inside and outside of the operating room as part of their training. All resident activities must be supervised by the responsible attending staff anesthesiologist, as required by the Royal College of Physicians and Surgeons of Canada and the provincial and local regulatory authorities. The degree of this supervision must take into account the condition of each patient, the nature of the anesthesia service, and the experience and capabilities of the resident (increasing professional responsibility). At the discretion of the supervising staff anesthesiologist, residents may provide a range of anesthesia care with minimal supervision. In all cases, the supervising attending anesthesiologist must remain readily available to give advice or assist the resident with urgent or routine patient care. Whether supervision is direct or indirect, close communication between the resident and the responsible supervising staff anesthesiologist is essential for safe patient care. Each anesthesia department teaching anesthesia residents should have policies regarding their activities and supervision.

Ancillary Help

The health care facility must ensure that ancillary personnel are available as assistants to the anesthesiologist. Such assistants must be available at all times and places where anesthesia services are provided. Ancillary help should have the competencies to meet the specific needs of subspecialty areas of anesthesia, reflecting on the need for specific skills in areas such as specialty pediatric anesthesia.

It is preferred that a facility will have a formally designated “Anesthesia Assistant” (AA). Such personnel must have completed specific training in anesthesia assistance. The scope of practice for AA’s working in a specific institution must be approved by the Department of Anesthesia and the appropriate administrative bodies. Furthermore, AA’s, like other facility employed health professionals, must be covered by the facility liability insurance. Duties and tasks delegated to AA’s must be consistent with existing governmental regulations, the policies and guidelines established by professional regulatory agencies, and the policies of the local facility.

An institution without formal AA’s must provide other paramedical personnel to assist the anesthesiologist. The tasks that these assistants may perform must be clearly defined. An anesthesiologist must only delegate or assign to such personnel those tasks for which they have approval or accreditation.

Anesthetic Equipment and Anesthetizing Location

An anesthetic must be administered in an appropriate facility. All necessary equipment, including emergency equipment and life support systems, medications and supplies must be readily available.

The healthcare facility, in consultation with the Department of Anesthesia, is responsible for the design and maintenance of preoperative, postoperative care and anesthetising locations, as well as the purchase, maintenance and disposal of anaesthetic and ancillary equipment and supplies. The Canadian Standards Association (CSA) and other standards development organizations have published standards and guidance documents for the design, construction and renovation of healthcare facilities, and for
the risk management, basic safety and essential performance of medical equipment. (Appendix 1)

The healthcare facility must ensure that:

1. The operating rooms, anesthetising locations and perioperative care locations comply to at least the minimum design and construction requirements of the national, provincial and local building, plumbing, HVAC, fire, security and electrical codes at the time of construction or renovation.

2. Medical gas and vacuum and waste anesthetic gas scavenging pipelines systems, terminal units, head walls, low pressure connecting assemblies and pressure regulators must meet the requirements of the CSA and must be certified by a CSA approved testing agency.

3. Oxygen concentrators, complying with CSA requirements are an acceptable substitute for bulk oxygen supply systems. When such concentrators are installed, users must be aware that:
   a. The fraction of inspired oxygen (FiO₂) delivered by the facility medical oxygen supply may vary from 0.93 to 0.99;
   b. Oxygen analyzers must be calibrated against 100% O₂ (FiO₂ 0.99) and room air or equivalent (FiO₂ 0.21);
   c. The use of low-flow (less than 1 L total fresh gas flow) anesthetic techniques may result in the accumulation of inert gas (argon) and the dilution of nitrous oxide and oxygen in the circuit.

4. There is compliance with all safety regulations with respect to the storage, preparation, identification, labelling, disposal and use of medical gases, medications and related materials.

5. If general anesthesia is provided, electronic anesthetic systems should comply with CAN/CSA-C22.2 No. 60601-2-13. An alternate means of ventilation (eg manual bag and mask resuscitator) must be immediately available with each anesthesia system. The workstations shall at least be equipped with an oxygen analyser, an airway pressure monitor, waste anesthetic gas scavenging system and a high vacuum tracheal suction system with a backup means of suction. If vaporizers are used, they must use an agent-specific filling system to ensure filling with the correct agent. If a ventilator is provided, it shall have a low-pressure or disconnect alarm.

6. The equipment, supplies, and appropriate assistance necessary for the safe performance of invasive procedures are provided. Diagnostic equipment, such as, but not limited to nerve stimulators, ultrasound, image intensifiers, and x-ray should be available to the anesthesiologist as required. For the placement of central venous catheters, dedicated ultrasound capability must be provided.

7. An “Arrest Cart” containing emergency resuscitation equipment including a manual resuscitator, defibrillator complying with current Canadian Heart and Stroke Association Guidelines, and appropriate medications and intravenous equipment shall be immediately available. A “Pediatric Arrest Cart” containing pediatric resuscitation equipment must be immediately available in any location where sedation, anesthesia or resuscitation of children is performed. A length-based pediatric emergency tape kit (“Broselow™”) may facilitate the conduct of the resuscitation process.

8. If MH-triggering agents are used, a “Malignant Hyperthermia” kit complying with the recommendations of the Malignant Hyperthermia Association of the United States shall be immediately available (Appendix 4).

9. A “Difficult Intubation Kit” for difficult or failed intubations shall be immediately available. Facilities that care for children must have specialized pediatric equipment immediately available.

10. Facilities that care for children should have specialized pediatric equipment. Wherever obstetric anesthesia is performed, a separate area for newborn assessment and resuscitation, including designated oxygen, suction apparatus, electrical outlets, source of radiant heat, and equipment for neonatal airway management and resuscitation, shall be provided.

11. Personal protection devices, including N95 masks, facemasks and means of disposal of hazardous and infectious wastes and sharps are provided. Plume scavenging systems complying with CSA Z305.13-09 Plume scavenging in surgical, diagnostic, therapeutic, and esthetic settings shall be provided.

12. All anesthetic and ancillary equipment undergoes regular inspection and maintenance by qualified personnel. Records indicating conformity to regulations and inspection and maintenance must be retained by the facility administration and the department of anesthesia.

Anesthesia providers ensure that potentially infectious materials or agents are not transferred from one patient to another. Special attention in this regard should be given to syringes, infusion pump administration sets, and multidose drug vials.

Training on the safe use of new anesthesia equipment should be provided to all anesthesia department members prior to use. Attendance at these sessions should be
documented. These training sessions should be repeated as necessary for new or established department members.

Recommendations for reducing occupational exposure to waste anesthetic gases:

1. Dilution ventilation at the rate of 20 exchanges/hr should be provided in all anesthetising locations where volatile anesthetic gases or N₂O are used.
2. Recirculation of exhaust air shall not be permitted during the hours when operations may be in progress, and it is not recommended at any other time.
3. Wherever an anesthetic delivery system is used, a scavenger shall be provided to capture anesthetic gases that might be released from the anesthetic circuit or ventilator.
4. A maintenance program shall be established in each health care facility to detect and repair leakage from the anesthetic delivery system and to maintain the effectiveness of the waste anesthetic scavenging unit.
5. The health care facility shall be responsible for conducting regular monitoring of exposure to waste anesthetic gases. The monitoring protocol should include individuals and the air flow patterns of the rooms being assessed. When N₂O is used in the operating room, N₂O monitoring is a suitable representation for the assessment of adequacy of scavenging.

The Pre-anesthetic Period

Policies regarding pre-anesthetic assessment should be established by the department of anesthesia.

The primary goal of pre-anesthetic assessment is to obtain the information required to plan anesthetic management. Accordingly, all aspects of the patient’s medical and surgical history, findings on physical examination, and laboratory investigations that are relevant to anesthetic management should be documented by a physician who is knowledgeable about anesthetic management for the proposed diagnostic or therapeutic procedure. The patient’s history should include past and current medical problems, current and recent drug therapy, unusual reactions or responses to drugs, and any problems or complications associated with previous anesthetics. A family history of adverse reactions associated with anesthesia should also be obtained. Information about the anesthetic that the patient considers relevant should also be documented. An American Society of Anesthesiologists’ physical status classification (Appendix 2) should be recorded for each patient.

In appropriate cases, the availability of an “Advance Care Plan” (representation agreement, advanced directive, ‘living will’, ‘do not resuscitate’ directive, etc.) should be ascertained and its applicability to the proposed intervention determined and documented on the anesthetic assessment record.

The surgeon may request consultation with an anesthesiologist. Medical consultations should be obtained when indicated.

Preoperative anesthetic assessment or consultation may take place in an outpatient clinic before admission for the operative procedure. Indications for pre-admission assessment include the presence of significant medical problems (co-morbidities), the nature of the proposed diagnostic or therapeutic procedure, and patient request. The presence of a parent/guardian is required if the patient is a child or not competent to provide informed consent. All patients should be informed that arrangements will be made if they wish to discuss anesthetic management with an anesthesiologist before admission to the facility. The preoperative assessment clinic should also allow for assessment of the patient by nursing and other health care personnel. The attending anesthesiologist is responsible for performing a final pre-anesthetic assessment in the immediate preoperative period.

Laboratory investigations should be ordered only when indicated by the patient’s medical status, drug therapy, or the nature of the proposed procedure. Investigations should not be ordered on a routine basis.

Suggested indications for specific tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Indications</th>
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<tbody>
<tr>
<td>Complete blood count</td>
<td>• Major surgery requiring group and screen or group and match</td>
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<td></td>
<td>• Chronic cardiovascular, pulmonary, renal, or hepatic disease</td>
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<td></td>
<td>• Malignancy</td>
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<td></td>
<td>• Known or suspected anemia, bleeding diathesis, or myelo-suppression</td>
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<td></td>
<td>• Patient less than 1 year of age</td>
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<tr>
<td>Sickle cell screen</td>
<td>• Genetically predisposed patient (hemoglobin electrophoresis if screen is positive)</td>
</tr>
<tr>
<td>International normalized ratio</td>
<td>• Anticoagulant therapy</td>
</tr>
<tr>
<td>(INR), activated partial</td>
<td>• Bleeding diathesis</td>
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<tr>
<td>thromboplastin time</td>
<td>• Liver disease</td>
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<tr>
<td>Electrolytes and creatinine levels</td>
<td>• Hypertension</td>
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<td>• Renal disease</td>
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<td>• Diabetes</td>
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<td>• Pituitary or adrenal disease</td>
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<td></td>
<td>• Digoxin or diuretic therapy or other drug therapies affecting electrolytes</td>
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</table>
Fasting policies should vary to take into account age and pre-existing medical conditions and should apply to all forms of anesthesia, including monitored anesthesia care. Emergent or urgent procedures should be undertaken after considering the risk of delaying surgery vs the risk of aspiration of gastric contents. The type and amount of food ingested should be considered in determining the duration of fasting. Before elective procedures, the minimum duration of fasting should be

- 8 hr after a meal that includes meat, fried or fatty foods;
- 6 hr after a light meal (such as toast and a clear fluid) or after ingestion of infant formula or non-human milk;
- 4 hr after ingestion of breast milk (no additions are allowed to pumped breast milk);
- 2 hr after clear fluids.

Premedication, when indicated, should be ordered by the anesthesiologist. Orders should be specific as to dose, time, and route of administration.

Additional regulations governing the conduct of anesthesia may be dictated by provincial legislation or facility by-laws.

### The Anesthetic Period

Before beginning an anesthetic, the anesthesiologist must ensure that

1. An explanation of the planned anesthetic procedure has been provided;
2. An adequate review of the patient’s condition has been performed;
3. All equipment that is expected to be required is available and in working order;
4. A reserve source of oxygen under pressure is available;
5. All drugs and agents that are expected to be required are correctly identified—user-applied drug labels should conform to the CSA Standard CAN/CSA-Z264.3-98 (R2005) (Appendix 1);
6. Until a specific connection system is devised for neuraxial use, both sides of all Luer connections are labelled; and
7. The manufacturers’ recommendations concerning the use, handling, and disposal of anesthetic equipment and supplies have been considered.

**The anesthesiologist’s primary responsibility is to the patient receiving care.** The anesthesiologist or an anesthesia assistant supervised by the anesthesiologist shall remain with the patient at all times throughout the conduct of all general, major regional, and monitored intravenous anesthetics until the patient is transferred to the care of personnel in an appropriate care unit.

If the attending anesthesiologist leaves the operating room temporarily, he/she must delegate care of the patient to another anesthesiologist, a resident in anesthesia, or an anesthesia assistant. When the attending anesthesiologist delegates care to a resident in anesthesia or an anesthesia assistant, the attending anesthesiologist remains responsible for the anesthetic management of the patient. Before delegating care of the patient to an anesthesia assistant, the attending anesthesiologist must ensure that the patient’s condition is stable and that the anesthesia assistant is familiar with the operative procedure and the operating room environment and equipment. When care is delegated to an anesthesia assistant, the attending anesthesiologist must remain immediately available.

Only under the most exceptional circumstances, e.g., to provide life-saving emergency care to another patient, may an anesthesiologist briefly delegate routine care of a stable patient to a competent person who is not an anesthesia assistant. That person’s only responsibility would be to monitor the patient during the anesthesiologist’s absence and to keep the anesthesiologist informed until he/she returns. In this situation, the anesthesiologist remains responsible for the care of the patient and must inform the operating team.

Simultaneous administration of general, spinal, epidural, or other major regional anesthesia, or sedation level 4-6 (Ramsay Sedation Scale, see Appendix 6), by one anesthesiologist for concurrent diagnostic or therapeutic procedures on more than one patient is unacceptable. However, it may be appropriate in specific circumstances for one anesthesiologist to supervise more than one case wherein solely RSS 1-3 sedation is administered, provided that an appropriately trained, qualified, and accredited individual, approved by the health care institution, is in constant attendance with each patient receiving care. However, in an obstetric unit, it is acceptable to supervise more than one patient receiving regional analgesia for labour. Due care must be taken to ensure that each patient is adequately observed by a suitably
trained person following an established protocol. When an anesthesiologist is providing anesthetic care for an obstetric delivery, a second appropriately trained person should be available to provide neonatal resuscitation.

Simultaneous administration of an anesthetic and performance of a diagnostic or therapeutic procedure by a single physician is unacceptable, except for procedures done with only infiltration of local anesthetic.

Records

All monitored physiologic variables should be charted at intervals appropriate to the clinical circumstances. Heart rate and blood pressure should be recorded at least every 5 min. Oxygen saturation should be monitored continuously and recorded at frequent intervals. For every patient receiving inhalational, major regional, or monitored intravenous anesthesia, oxygen saturation should be monitored continuously, and end-tidal carbon dioxide concentration should be monitored continuously if the trachea is intubated. Reasons for deviation from these charting guidelines should be documented in the anesthetic record. Monitors, equipment, and techniques, as well as time, dose, and route of all drugs and fluids should be recorded. Intraoperative care should be recorded.

The anesthesia record should include the patient’s level of consciousness, heart rate, blood pressure, oxygen saturation, and respiratory rate as first determined in the post-anesthesia care unit (PACU).

Patient Monitoring

The only indispensable monitor is the presence, at all times, of a physician or an anesthesia assistant who is under the immediate supervision of an anesthesiologist and has appropriate training and experience. Mechanical and electronic monitors are, at best, aids to vigilance. Such devices assist the anesthesiologist to ensure the integrity of the vital organs and, in particular, the adequacy of tissue perfusion and oxygenation.

The health care facility is responsible for the provision and maintenance of monitoring equipment that meets current published equipment standards.

The chief of anesthesia is responsible for advising the health care facility on the procurement of monitoring equipment and for establishing policies for monitoring to help ensure patient safety.

The anesthesiologist is responsible for monitoring the patient receiving care and ensuring that appropriate monitoring equipment is available and working correctly.

A pre-anesthetic checklist (Appendix 3 or equivalent) shall be completed prior to initiation of anesthesia.

Monitoring guidelines for standard patient care apply to all patients receiving general anesthesia, regional anesthesia, or intravenous sedation.

Monitoring equipment is classified as one of the following:

- **Required:** These monitors must be in continuous use throughout the administration of all anesthetics.
- **Exclusively available for each patient:** These monitors must be available at each anesthetic work station so that they can be applied without any delay.
- **Immediately available:** These monitors must be available so that they can be applied without undue delay.

The following are required:

- Pulse oximeter;
- Apparatus to measure blood pressure, either directly or non-invasively;
- Electrocardiography;
- Capnography for general anesthesia and sedation (RSS 4-6); and
- Agent-specific anesthetic gas monitor, when inhalation anesthetic agents are used.

The following shall be exclusively available for each patient:

- Apparatus to measure temperature;
- Peripheral nerve stimulator, when neuromuscular blocking drugs are used;
- Stethoscope—either precordial, esophageal, or paratracheal; and
- Appropriate lighting to visualize an exposed portion of the patient.

The following shall be immediately available:

- Spirometer for measurement of tidal volume.

It is recognized that brief interruptions of continuous monitoring may be unavoidable. Furthermore, there are certain circumstances in which a monitor may fail and, therefore, continuous vigilance by the anesthesiologist is essential.

Audible and visual alarms for oximetry and capnography should not be indefinitely disabled during the conduct of an anesthetic except during unusual circumstances. The variable pitch, pulse tone, and low-threshold alarm of the pulse oximeter and the capnograph apnea alarm must give an audible and visual warning.

Respiratory monitoring should be considered in non-OR locations (PACU and elsewhere) for sedated patients and those at risk of respiratory depression.
**The Post-anesthetic Period**

**Recovery Facility**

In any facility providing anesthetic services, a PACU must be available. Administrative policies in accordance with facility by-laws shall be enforced to coordinate medical and nursing care responsibilities.

The department of anesthesia should have overall medical administrative responsibility for the PACU. There should be a policy manual for the PACU, which has been approved by medical, nursing, and administrative authorities.

The anesthesiologist should accompany the patient to the PACU, communicate necessary information, and write appropriate orders. If clinically indicated, supplemental oxygen and appropriate monitoring devices should be applied during transport. Care should not be delegated to the PACU nurse until the anesthesiologist is assured that the patient may be safely observed and cared for by the nursing staff. The anesthesiologist or designated alternate is responsible for providing anesthetic-related care in the PACU. Discharge from the PACU is the responsibility of the anesthesiologist. This responsibility may be delegated in accordance with facility policy.

Supplemental oxygen and suction must be available for every patient in the PACU. Emergency equipment for resuscitation and life support must be available in the PACU. The monitoring used in the PACU should be appropriate to the patient’s condition and a full range of monitoring devices should be available. The use of pulse oximetry in the initial phase of recovery is required. An apnea monitor is recommended for a preterm infant of less than 50 weeks of gestational age.

An accurate record of the immediate recovery period shall be maintained. This must include a record of vital signs together with other aspects of treatment and observation. The recovery record shall form a part of the permanent medical record. Any complications that bear any relation to the anesthetic should be recorded either on the recovery record or on the progress notes on the patient’s chart.

In some circumstances, it may be considered acceptable to transfer a patient directly to other care units or to bypass the PACU if the appropriate level of care is available in another unit in the facility and the suitability of the patient for this transfer is documented on the anesthetic record.

**Discharge of Patients After Day Surgery**

Discharge of patients after day surgery must be through the application of a formal care plan approved by the institution and documented in the patient care notes. Specific written instructions should include management of pain, postoperative complications, and routine and emergency follow up. The patient should be advised regarding the additive effects of alcohol and other sedative drugs, the danger of driving or the operation of other hazardous machinery during the postoperative period (most commonly 24 hr postoperatively), and the necessity for attention by a competent adult for the postoperative period (most commonly 24 hr postoperatively).

**Guidelines for Obstetric Regional Analgesia**

Anesthesia services to parturients include obstetric analgesia for labour, for both uncomplicated and complicated deliveries, or for operative deliveries. All guidelines regarding provision of anesthesia for other diagnostic or therapeutic procedures also apply to provision of obstetric anesthesia. The guidelines in this section pertain to epidural and spinal analgesia during labour. The term “regional analgesia” includes epidural, spinal, and combined spinal-epidural analgesia.

These guidelines will be reviewed annually by the Section of Obstetric Anesthesia of the Canadian Anesthesiologists’ Society and updated as indicated. Each facility may wish to develop additional guidelines or policies for specific situations in which obstetric regional analgesia is provided.

Under the direction of an anesthesiologist, some aspects of monitoring and management of obstetric regional analgesia may be delegated to other health care personnel. Each facility should ensure that these personnel receive the same training, certification, continuing education, and recertification in obstetric regional analgesia.

**Initiation of Obstetric Regional Analgesia**

1. Before introducing obstetric regional analgesia, the facility should have appropriate monitoring protocols in place. These protocols should outline the types of monitoring required and the frequency of monitoring. In addition, they should clearly state how to manage common problems and emergencies and indicate who to contact if assistance is required.

2. Obstetric regional analgesia should only be provided by physicians with training, facility privileges, and licence to provide these services. This includes trainees with appropriate supervision.

3. Regional analgesia should only be initiated and maintained in locations where appropriate resuscitation equipment and drugs are immediately available.

4. Informed consent should be obtained and documented in the medical record.

5. Intravenous access must be established before initiating regional analgesia. The intravenous access
should be maintained as long as regional analgesia is administered.

6. The anesthesiologist should be immediately available until analgesia is established and the patient’s vital signs are stable.

Maintenance of Regional Analgesia During Labour

Continuous infusions of low-dose (diluted) epidural local anesthetics, with or without other adjuncts, are associated with a very low incidence of significant complications. Consequently, it is not necessary for an anesthesiologist to remain present or immediately available during maintenance of continuous epidural infusion analgesia provided that

• There are appropriate protocols for management of patients receiving patient-controlled epidural analgesia (PCEA).
• The anesthesiologist can be contacted for the purpose of obtaining advice and direction.

A bolus dose of local anesthetic through the epidural catheter or through a catheter or needle presumed to be in the epidural space can cause immediate life-threatening complications. For this reason, an anesthesiologist must be available to intervene appropriately should any complications occur when a bolus dose of local anesthetic is injected through the epidural catheter (except PCEA). The intent of the phrase “available to intervene appropriately” is that individual departments of anesthesiology should establish their own policies regarding the availability of an anesthesiologist to manage any complications of regional analgesia. In developing these policies, each department should consider the possible risk of bolus injection of local anesthetics and the methods of dealing with emergency situations.

Oral Intake During Labour

Gastric emptying of solids is delayed during labour. Opioid analgesics may further delay gastric emptying. Therefore, parturients should not eat solid foods once they are in established labour. In contrast to solid food, clear liquids are relatively rapidly emptied from the stomach and absorbed in the proximal small bowel, including during labour. Therefore, individual facilities should develop protocols regarding the intake of clear liquids by women in established labour.

Guidelines for Acute Pain Management Using Neuraxial Analgesia

When neuraxial analgesia is managed by anesthesiologists, the incidence of side effects is no higher than when alternative techniques of pain management are used. Accordingly, when its use is appropriate, neuraxial analgesia should be managed by anesthesiologists.

For the purposes of these guidelines, neuraxial analgesia is defined as intrathecal or epidural administration of opioids and/or local anesthetics for treatment of postoperative pain or other acute pain problems. The purpose of these guidelines is to provide principles of management for anesthesiologists so that neuraxial analgesia is provided in a fashion that maximizes its benefit–risk ratio.

Administrative and Educational Policies

The department of anesthesia should establish an acute pain service that is responsible for

1. Developing policies and procedures for neuraxial analgesia. Participation of other departments, such as nursing, pharmacy, surgery, and materials management should be sought as needed.
2. Liaison with the surgical departments. Surgeons need to understand the criteria for patient selection, the effects of neuraxial analgesia on the normal postoperative course and on the presentation of postoperative complications, and the implications of other therapies, such as prophylactic anticoagulation, on neuraxial analgesia.
3. Education and certification of nurses. A standardized educational program that includes initial training, certification, and ongoing maintenance of competence should be established for nurses caring for patients receiving neuraxial analgesia. Nursing personnel should understand

• The risk of respiratory depression, including delayed respiratory depression when hydrophilic opioids are used;
• Assessment and management of respiratory depression;
• Assessment of motor and sensory blockade;
• Assessment and management of hypotension in patients receiving neuraxial analgesia; and
• Signs and symptoms of the rare but catastrophic complications of epidural hematoma or abscess.

Policies for Drug Administration

Each facility should use a limited number of standard solutions. Preprinted order sheets listing the standard solutions are strongly recommended. Before dispensing any solution that is not standard in the facility, the anesthesiologist should verify the order with nursing and pharmacy personnel and discuss its indications and all
concerns relating to its use with the nurses responsible for administering the drug and monitoring the patient.

The risk of errors due to incorrect route of drug injection must be minimized. For continuous infusions or PCEA, the use of unique tamper-proof pumps that are distinct from the pumps used for intravenous fluid or drug administration is strongly recommended. The tubing between neuraxial analgesia infusion pumps and catheters should not have ports that could permit unintentional injection of intravenous drugs.

Preparation of solutions should follow a standardized procedure. All analgesic drug solutions should be labelled with the composition of the solution (opioid, local anesthetic, or both) and its intended route of administration (epidural or intravenous).

Patient Monitoring and Management of Adverse Events

Patients receiving neuraxial analgesia should be in a room equipped with oxygen and suction. Resuscitation drugs and equipment must be immediately available. Before initiating neuraxial analgesia, intravenous access must be secured, and after discontinuing neuraxial analgesia, intravenous access must be maintained for the expected duration of drug effects.

Epidural catheter dressings should permit examination for catheter movement and daily inspection of the catheter entry site for any signs of infection.

Standardized policies for patient management should be established. The parameters to be assessed, frequency of assessments, documentation, and procedures for management of complications should be specified. Adequate nursing personnel must be available to assess and manage patients receiving neuraxial analgesia. Monitoring should continue after discontinuation of neuraxial analgesia until its effects have dissipated.

An anesthesiologist must be readily available to advise nursing personnel on such issues as dose titration and management of adverse effects. Each facility with an acute pain service should ensure that an anesthesiologist is available to attend directly to patients receiving neuraxial analgesia within an appropriate time depending on the clinical situation. Each facility should also specify procedures for emergent management of any life-threatening complications.

Other drugs, particularly benzodiazepines or parenteral opioids, may cause severe respiratory depression in patients receiving neuraxial analgesia. For this reason, other physicians should not order sedatives or analgesics for any patient receiving neuraxial analgesia. The acute pain service should direct analgesic and sedative therapy until the effects of neuraxial analgesia have dissipated.

Patients with epidural catheters may receive prophylactic low-dose anticoagulant therapy if appropriate precautions are taken.

- To minimize the risk of epidural hematoma, catheter insertion and removal and the timing of anticoagulant administration must be coordinated so that no clinically significant anticoagulant effect is present at these times.
- Use of nonsteroidal anti-inflammatory drugs in patients receiving neuraxial analgesia is appropriate, but concurrent administration of these drugs or other antiplatelet medication and an anticoagulant may increase the risk of epidural hematoma.
- Where neuraxial analgesia is used for prolonged postoperative pain management, every effort should be made to avoid lower extremity motor blockade.
- Nursing staff should be aware of the signs and symptoms of epidural hematoma. Any change in neurologic status or new-onset back pain must be investigated immediately.

If full anticoagulation is indicated in a patient with an epidural catheter, the anesthesiologist should be consulted so that catheter removal and initiation of alternative analgesic management are accomplished before anticoagulation.

Guidelines for the Practice of Anesthesia Outside a Hospital Facility

The basic principles, training requirements, techniques, equipment, and drugs used for the practice of anesthesia are noted in other sections of these guidelines. The following are guidelines for certain aspects particular to anesthetic practice outside a hospital facility.

Patient Selection

Patients should be classified as to physical status in a manner similar to that in use by the American Society of Anesthesiologists (Appendix 2). Usually, only patients in ASA classifications I and II should be considered for an anesthetic outside a hospital facility. Patients in classification III may be accepted under certain circumstances.

Preoperative Considerations

The patient must have had a recent recorded history, physical examination, and appropriate laboratory
investigations. These may be carried out by another physician or anesthesiologist. The duration of fasting before anesthesia should conform to the previously stated guidelines. The patient should be given an information sheet with instructions for pre- and post-anesthetic periods.

**Conduct of Anesthesia**

The anesthetic and recovery facilities shall conform to facility standards published by the CSA as defined in other sections. The standards of care and monitoring shall be the same in all anesthetizing locations.

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**Appendix 1: Canadian Standards Association—Standards for Equipment**

Available as Electronic Supplementary Material.

**Appendix 2: American Society of Anesthesiologists’ Classification of Physical Status**

Available as Electronic Supplementary Material.

**Appendix 3: Pre-Anesthetic Checklist**

Available as Electronic Supplementary Material.

**Appendix 4: Guidelines, Standards, and Other Official Statements Available on the Internet**

Appendix 4 (available at: [http://www.cas.ca/English/Guidelines](http://www.cas.ca/English/Guidelines)) provides a non-exhaustive list of sites with official statements promulgated by other related medical organizations, Canadian and worldwide. This list is provided solely for the convenience of CAS members. The CAS is not responsible for the accuracy, currency, or reliability of the content. The CAS does not offer any guarantee in this regard and is not responsible for the information found through these links, nor does it necessarily endorse the sites or their content. This list includes sites that are updated periodically.


Available as Electronic Supplementary Material.


Available as Electronic Supplementary Material.
Guide d’exercice de l’anesthésie
Édition révisée 2014


Préambule
L’anesthésie est une spécialité dynamique de la médecine. Des progrès constants sont apportés afin d’améliorer les soins anesthésiques offerts aux patients subissant des interventions chirurgicales et obstétricales au Canada. Reflet des progrès accomplis dans le domaine, le présent guide est revu annuellement et révisé de façon périodique.

Les recommandations qu’il comprend sont des lignes directrices de base touchant l’exercice de l’anesthésie dont on se servira pour établir des normes raisonnables et acceptables quant aux soins à donner aux patients. Leur but est de fournir un cadre de soins aux patients qui soit à la fois raisonnable et acceptable, et c’est ainsi qu’elles devraient être interprétées - tout en permettant une certaine flexibilité selon les circonstances. Chaque partie du guide peut être révisée au besoin, si l’évolution de la technologie ou de la pratique le justifie.

Principes de base
Dans le présent document, le mot anesthésiologiste désigne toute personne qui a un permis d’exercer la médecine avec privilège d’administrer l’anesthésie. L’anesthésie désigne tout procédé qui est appliqué délibérément pour rendre le patient temporairement insensible à la douleur ou à l’environnement extérieur dans le but d’exécuter une intervention diagnostique ou thérapeutique.

L’exercice indépendant de l’anesthésie est une spécialité médicale qui, à ce titre, doit être exercée par des médecins ayant une formation appropriée en anesthésie. La seule voie de reconnaissance comme spécialiste en anesthésie au Canada est par le biais du processus de certification du Collège royal des médecins et chirurgiens du Canada. La Société canadienne des anesthésiologistes (SCA) reconnaît que certaines collectivités éloignées n’ont pas une population suffisamment nombreuse pour maintenir un spécialiste certifié en anesthésie en exercice. Afin de dispenser les services d’anesthésie dans ces collectivités, on pourrait devoir recourir à des médecins de famille ayant reçu une formation adéquate. Tous les anesthésiologistes devraient poursuivre leur formation dans la pratique de l’anesthésie, de la prise en charge de la douleur, des soins périopératoires et de la réanimation.

Le présent guide s’adresse à tous les anesthésiologistes du Canada.

Organisation des services d’anesthésie
Le département d’anesthésie devrait être, de façon appropriée, organisé, dirigé et intégré aux autres départements de l’organisme ou de l’établissement. Le département d’anesthésie devrait regrouper tous les membres du personnel de l’établissement qui assurent les soins anesthésiques aux patients, aussi bien à des fins chirurgicales et obstétricales que pour des procédures diagnostiques ou thérapeutiques.

Compte tenu de l’ampleur et de la nature des services offerts, le département d’anesthésie devrait pouvoir compter sur le personnel nécessaire pour assurer les services requis par l’établissement.

Le chef du département devrait être un médecin certifié en anesthésie ou encore possédant une formation adéquate en anesthésie. Cette personne devrait être nommée de la même manière que les autres chefs de départements cliniques et devrait faire partie des entités administratives supérieures des soins de santé de l’établissement.

Responsabilités du chef du département d’anesthésie


2. Veiller à ce que, en matière d’exercice de l’anesthésie, des directives écrites soient établies et suivies.
3. Évaluer la compétence et les capacités des médecins qui dispensent les soins anesthésiques, ainsi que celles des autres professionnels de la santé qui assurent les services de soutien — ce qui comprend, sans cependant s’y limiter, les recommandations touchant les privilèges accordés aux médecins qui exercent l’anesthésie et leur révision annuelle.

4. Surveiller systématiquement la qualité des soins anesthésiques à la grandeur de l’établissement de soins de santé. Ceci doit comprendre la révision des dossiers des patients et des vérifications internes du département ou encore un processus d’examen plus détaillé lorsque indiqué.


6. S’acquitter de toute autre tâche que la direction de l’établissement pourrait lui confier pour assurer des soins anesthésiques sécuritaires.

7. Promouvoir la conformité aux normes applicables de la CSA (Annexe 1) au sein de l’établissement.

8. Coordonner la liaison entre le département d’anesthésiologie et les services de génie biomédical et de gestion de l’information.

Privilèges d’exercice en anesthésie

Tous les médecins qui demandent le privilège d’exercer l’anesthésie devraient avoir complété avec succès une formation postdoctorale spécialisée en anesthésie. Une telle formation est la norme dans les programmes universitaires approuvés par le Collège royal des médecins et chirurgiens du Canada; les diplômés en médecine en provenance d’autres pays et dont la licence a été approuvée par les organismes provinciaux de réglementation devraient avoir complété une formation équivalente à la norme canadienne. Les médecins de famille pratiquant l’anesthésie doivent avoir complété avec succès un programme de formation postdoctorale spécifique d’une durée d’au moins un an. Certains domaines spécifiques des soins en anesthésie peuvent avoir des problèmes qui leur sont propres. Les privilèges en anesthésie pédiatrique peuvent être définis, dans chaque institution, par le département d’anesthésie, selon la population pédiatrique que l’institution dessert, l’âge de l’enfant et la présence de comorbidités, la formation spécifique du médecin et son expérience en anesthésie pédiatrique, et la complexité de l’intervention en question.

Les médecins qui obtiennent le privilège d’exercer l’anesthésie devraient posséder les connaissances ainsi que les habiletés techniques et non techniques indispensables à la pratique de l’anesthésie.

Ces compétences techniques / fondées sur les connaissances comprennent la capacité de:

- Effectuer une évaluation pranaesthésique du patient et décider de la conduite anesthésique appropriée;
- Rendre le patient insensible à la douleur pour la pratique des interventions diagnostiques et thérapeutiques ainsi que pour les interventions chirurgicales et obstétricales;
- Monitorer et soutenir les fonctions vitales des organes en période périopératoire;
- Assurer la prise en charge des soins postanesthésiques immédiats aux patients;
- Pratiquer des manœuvres de réanimation et procurer des soins intensifs lorsqu’il est indiqué;
- Procurer le soulagement de la douleur aiguë et chronique.

Les compétences non techniques comprennent:

- La gestion des tâches: planification et préparation, priorisation, prestation et maintien des normes, identification et utilisation des ressources;
- Le travail en équipe: coordination des activités avec les membres de l’équipe, échange des informations, utilisation de l’autorité et de l’affirmation de soi, évaluation des capacités, soutien aux autres, appui de la Liste de contrôle de la sécurité chirurgicale de l’OMS;
- La prise de conscience de la situation: récolte des informations, identification et compréhension, anticipation;
- La prise de décision: identification des options, évaluation des risques et choix des options, réévaluation.

Aptitude à la pratique

La prestation de soins anesthésiques requiert que l’anesthésiologiste possède un niveau élevé d’expertise combiné à un bon jugement, ainsi que la capacité de reconnaître des situations cliniques changeantes et d’y réagir et ce, malgré des circonstances physiques personnelles parfois défavorables. Les départements d’anesthésie doivent être conscients que pour fournir des soins optimaux, les praticiens en anesthésie doivent être en santé. Par conséquent, les départements d’anesthésie ont l’obligation de mettre au point des politiques qui, dans la mesure du possible, garantissent que les praticiens soient en bonne santé et aptes à remplir les obligations liées à leur pratique.

La santé et l’aptitude au travail peuvent être négativement affectées par divers facteurs, notamment les maladies physiques, les troubles mentaux et la fatigue. Tous ces facteurs altèrent l’aptitude à reconnaître des circonstances cliniques évoluant souvent très rapidement et à y réagir de façon adaptée. De nombreuses études ont démontré que la fatigue altérait le jugement et la
performance psychomotrice d’une façon semblable aux drogues ou à l’alcool. Des rythmes circadiens irréguliers, le vieillissement et le manque de sommeil aggravent de tels problèmes; une non-reconnaissance de ces problèmes, causée par la fatigue, peut augmenter la probabilité de commettre des erreurs dans de telles circonstances. Un handicap physique, la maladie et le stress important peuvent avoir des effets néfastes semblables sur la performance.

La responsabilité incombe aux départements d’anesthésie et aux anesthésiologistes en tant qu’individus d’organiser leurs tâches professionnelles de telle sorte que la maladie et la fatigue n’affectent pas régulièrement leurs tâches cliniques. Les listes de garde de chacun doivent permettre un repos adapté entre les quarts de travail et les listes quotidiennes doivent allouer des pauses adaptées afin de respecter les besoins physiologiques, la nutrition et l’aptitude mentale de chaque anesthésiologiste. Les procédures de planification des salles d’opération devraient éviter d’exiger que les anesthésiologistes entreprennent des interventions non urgentes pendant des heures ‘défavorables’.

Aucune recommandation spécifique ne peut être faite concernant les quarts de travail et la liste de garde quotidienne, car une telle recommandation ne serait pas adaptée à toutes les situations de travail. Les grands départements disposent de la flexibilité nécessaire à intégrer des quarts de travail courts et des congés personnels, alors que les départements plus petits pourraient ne pas avoir cette liberté. Toutefois, ce domaine important de l’exercice professionnel doit faire l’objet d’une attention et d’une considération constantes.

Résidents

Les résidents en anesthésie sont des médecins autorisés qui, dans le cadre de leur formation, participent à la prestation des soins anesthésiques tant en salle d’opération qu’à l’extérieur de celle-ci. Toutes les activités des résidents doivent être supervisées par l’anesthésiologiste responsable, tel que requis par le Collège royal des médecins et chirurgiens du Canada, et les organismes de réglementation provinciaux et locaux. Le degré de supervision doit prendre en considération l’état de chaque patient, la nature des soins anesthésiques, ainsi que l’expérience et les capacités du résident (responsabilité professionnelle croissante). À la discrétion de l’anesthésiologiste superviseur, les résidents peuvent fournir une gamme de soins anesthésiques sous un minimum de supervision. Dans tous les cas, l’anesthésiologiste superviseur doit demeurer promptement disponible afin de prodiguer des conseils ou d’assister le résident lors de soins urgents ou de routine. Que la supervision soit directe ou indirecte, une communication étroite entre le résident et l’anesthésiologiste superviseur est essentielle pour des soins sécuritaires aux patients. Chaque département d’anesthésie qui enseigne aux résidents en anesthésie doit avoir des politiques en place concernant leurs activités et leur supervision.

Personnel de soutien

L’établissement de santé doit s’assurer de la disponibilité de personnel de soutien pour remplir un rôle d’assistance auprès de l’anesthésiologiste. Cette assistance doit être disponible en tout temps et en tout lieu où des services d’anesthésie sont offerts. Le personnel de soutien doit posséder les compétences nécessaires à répondre aux besoins spécifiques des domaines de surspécialité de l’anesthésie, ce qui se répercute sur le besoin de compétences spécifiques dans des domaines tels que l’anesthésie spécialisée en pédiatrie.


Un établissement ne disposant pas d’AA en bonne et due forme doit mettre à la disposition de l’anesthésiologiste d’autres employés pour l’assister. Les fonctions qui incombent à ces assistants doivent être clairement définies. L’anesthésiologiste ne doit leur déléguer ou impacter que les tâches pour lesquelles ils ont été autorisés ou accrédités.

Matériel d’anesthésie et lieux convenant à l’anesthésie

L’anesthésie doit se pratiquer dans un local approprié. Tout le matériel, y compris le matériel d’urgence et les systèmes de soutien des fonctions vitales, les médicaments et les autres fournitures, doit être à portée de main.

L’établissement de santé, en consultation avec le département d’anesthésie, est responsable de l’aménagement et de l’entretien des lieux servant aux soins préopératoires, postopératoires et anesthésiques, ainsi que de l’achat, de l’entretien et du traitement après utilisation du
matériel et des fournitures servant à l’anesthésie et aux autres fonctions connexes. L’Association canadienne de normalisation (CSA) et d’autres organismes d’élaboration de normes ont publié des normes et des recommandations se rapportant à la conception, la construction et la rénovation des établissements de santé, ainsi que concernant la gestion du risque, les mesures de sécurité de base et les performances essentielles du matériel médical. (Annexe 1)

Il incombe à l’établissement de santé de veiller à l’application des mesures suivantes:

1. Les salles d’opération, d’anesthésie et de soins périopératoires doivent respecter au minimum les exigences minimales de conception et de construction des codes nationaux, provinciaux et locaux concernant la charpente, la plomberie, le chauffage, la ventilation et la climatisation, la protection incendie et l’électricité, au moment de leur construction ou de leur rénovation.

2. Les systèmes d’évacuation des gaz médicaux, de vidange et de récupération des gaz anesthésiques résiduels, les unités terminales, les murs de soutien, les raccordements à basse pression et les régulateurs de pression doivent être conformes aux exigences de la CSA et porter le sceau d’approbation d’une agence de vérification reconnue par la CSA.

3. Les concentrateurs d’oxygène peuvent constituer un substitut acceptable à l’oxygène fourni par un système central en autant qu’ils sont conformes aux normes de la CSA. Lorsque de tels concentrateurs sont installés, il faut savoir:
   a. que la fraction d’oxygène inspirée (FiO₂) dispensée par l’approvisionnement d’oxygène médical de l’établissement peut varier entre 0,93 et 0,99;
   b. que les analyseurs d’oxygène doivent être calibrés avec de l’O₂ à 100 % (soit FiO₂ 0,99) et à l’air ambiant ou l’équivalent (soit FiO₂ 0,21);
   c. que l’utilisation de techniques anesthésiques à faible débit (moins de 1 L de gaz frais total) peut entraîner une accumulation de gaz inerte (argon) et la dilution du protoxyde d’azote et de l’oxygène dans le circuit.

4. L’entreposage, la préparation, l’identification, l’étiquetage, l’élimination et l’utilisation des gaz médicaux, des médicaments et du matériel afférent doivent être conformes à toutes les règles de sécurité.

5. En cas d’anesthésie générale, les systèmes d’anesthésie électroniques doivent répondre à la norme CAN/CSA- C22.2 No. 60601-2-13. Une autre méthode de ventilation (par ex. un ballon manuel et un masque de réanimation) doivent être à portée de main à côté de chaque appareil d’anesthésie. Les stations disposeront au moins d’un analyseur d’oxygène, d’un moniteur de la pression des voies aériennes, d’un système d’évacuation des gaz anesthésiques résiduels et d’un puissant appareil de succion trachéale. En cas d’utilisation de vaporisateurs, ceux-ci doivent utiliser un dispositif de remplissage spécifique à chaque agent afin de garantir le remplissage par le bon agent. S’il y a un ventilateur, il sera muni d’une alarme de basse pression ou de déconnexion.


7. Un « chariot de réanimation » comprenant le matériel nécessaire à une réanimation d’urgence, y compris un dispositif de réanimation manuelle, un défibrillateur respectant les Lignes directrices actuelles de la Fondation canadienne des maladies du cœur, les médicaments adaptés et les dispositifs intraveineux, doit être à portée de main. Un « chariot de réanimation pédiatrique » contenant du matériel de réanimation pédiatrique doit être immédiatement disponible dans tout endroit où la sédation, l’anesthésie ou la réanimation d’enfants est réalisée. Une trousse d’urgence pédiatrique comprenant un ruban de Broselow™ pourrait faciliter la bonne conduite du processus de réanimation.


10. Les établissements qui prennent soin d’enfants doivent disposer d’équipements pédiatiques spécialisés. Dans tous les endroits où l’on pratique l’anesthésie obstétricale, un endroit spécifique réservé à l’évaluation et à la réanimation du nouveau-né doit être prévu; cet endroit doit être pourvu de sources d’oxygène, de succion et de prises de courant qui lui
sont propres, d’une source de chaleur radiante et de matériel nécessaire à la prise en charge des voies aériennes et à la réanimation néonatale.


Le personnel qui administre l’anesthésie doit s’assurer qu’on ne transmet pas de substances ou d’agents potentiellement infectieux d’un patient à un autre. À cet égard, une attention particulière doit être portée aux seringues, aux tubulures des pompes à perfusion et aux fioles de médicaments multidoses.

Avant d’introduire un nouvel appareil en anesthésie, les membres du département d’anesthésie doivent recevoir une formation concernant son utilisation sécuritaire. La participation à ces séances doit être documentée. Ces séances de formation doivent être répétées aussi souvent que nécessaire pour les nouveaux et anciens membres du département.

Recommandations visant à diminuer l’exposition professionnelle aux gaz anesthésiques résiduels:

1. Une ventilation par dilution assurant 20 renouvellements par heure doit être disponible dans toutes les salles d’anesthésie dans lesquelles des gaz anesthésiques volatils ou du N₂O sont utilisés.

2. La recirculation de l’air vicié ne devrait pas être permise durant les heures d’activité de la salle d’opération et n’est pas recommandée en toute autre période.

3. Partout où un système d’administration de gaz anesthésiques est utilisé, un système d’évacuation doit être mis en place afin de recueillir les gaz anesthésiques qui peuvent s’échapper du circuit d’anesthésie ou du ventilateur.

4. Un programme d’entretien doit être mis en place dans tous les établissements de santé afin de détecter et de réparer toute fuite du système de distribution des gaz anesthésiques et de veiller au bon fonctionnement du système d’évacuation des gaz anesthésiques résiduels.


La période préanesthésique

Il incombe au département d’anesthésie de formuler les politiques concernant l’évaluation préanesthésique.

Le principal objet de l’évaluation préanesthésique est d’obtenir les renseignements requis pour planifier la prise en charge anesthésique. En conséquence, tous les aspects des antécédents médico-chirurgicaux du patient, le bilan de l’examen physique et les résultats des analyses de laboratoire qui se rapportent à la prise en charge anesthésique devraient être évalués par un médecin bien informé des pratiques anesthésiques courantes face à la procédure diagnostique ou thérapeutique proposée. L’histoire de cas devrait inclure les problèmes médicaux passés et actuels, la prise de médicaments récente et actuelle, les réactions ou réponses inhabituelles aux médicaments et tous les problèmes et complications associés aux anesthésies administrées antérieurement. Il y a lieu de connaître également les antécédents familiaux de réactions indésirables associées à l’anesthésie et de noter toute information concernant l’anesthésie que le patient juge pertinent de signaler. Il convient enfin d’inscrire au dossier médical de chaque patient le code de classification de l’American Society of Anesthesiologists (Annexe 2).

Dans les cas adaptés, la disponibilité d’un « Plan de soins avancés » (accord de représentation, recommandation avancée, ‘testament biologique’, directive ‘ne pas réanimer’, etc.) doit être vérifiée et son applicabilité à l’intervention proposée doit être déterminée et documentée au dossier d’évaluation anesthésique.

Le chirurgien peut solliciter une consultation avec un anesthésiologiste. Toutes les consultations médicales indiquées doivent être obtenues.

Le bilan ou la consultation anesthésique préopératoire peut avoir lieu en clinique externe avant l’admission pour l’opération. Les indications concernant l’évaluation préalable à l’admission comprennent l’existence de problèmes médicaux importants (comorbidités), la nature de la procédure diagnostique ou thérapeutique proposée et la demande du patient. La présence d’un parent / tuteur légal est nécessaire si le patient est un enfant ou n’est pas apte à fournir un consentement éclairé. Il faut informer tous les patients que s’ils souhaitent s’entretenir, avant l’admission à
l’établissement, de leur anesthésie avec un anesthésiologiste, des dispositions peuvent être prises en ce sens. La clinique d’évaluation préopératoire devrait également permettre au personnel infirmier et aux autres membres du personnel de santé d’évaluer le patient. L’anesthésiologiste en charge du patient est responsable de l’évaluation finale durant la période préopératoire immédiate.

Des analyses de laboratoire ne devraient être requises que lorsque l’état du patient, la pharmacothérapie ou la nature de la procédure proposée le dictent. Il ne convient pas de prescrire de routine des analyses et des tests.

Voici quelques tests et leurs indications:

<table>
<thead>
<tr>
<th>Test</th>
<th>Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hémogramme complet</td>
<td>• Chirurgie lourde exigeant la détermination du groupe sanguin et un test de dépistage d'anticoagulants ou un test de compatibilité</td>
</tr>
<tr>
<td></td>
<td>• Affection cardiovasculaire, pulmonaire, rénale ou hépatique chronique</td>
</tr>
<tr>
<td></td>
<td>• Tumeur maligne</td>
</tr>
<tr>
<td></td>
<td>• Anémie connue ou soupçonnée, diathèse hémorragique ou aplasie médullaire</td>
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<td></td>
<td>• Patient de moins d’un an</td>
</tr>
<tr>
<td>Test de falciformation</td>
<td>• Patients ayant une prédisposition génétique (électrophorèse de l’hémoglobine si le test est positif)</td>
</tr>
<tr>
<td>Rapport international normalisé (INR), temps de céphaline activée</td>
<td>• Traitement aux anticoagulants</td>
</tr>
<tr>
<td></td>
<td>• Diathèse hémorragique</td>
</tr>
<tr>
<td></td>
<td>• Maladie hépatique</td>
</tr>
<tr>
<td>Électrolytes et créatinine</td>
<td>• Hypertension</td>
</tr>
<tr>
<td></td>
<td>• Néphropathie</td>
</tr>
<tr>
<td></td>
<td>• Diabète</td>
</tr>
<tr>
<td></td>
<td>• Maladie hypophysaire ou surrenalienne</td>
</tr>
<tr>
<td></td>
<td>• Traitement avec diurétiques ou digoxine, ou autres médicaments affectant les électrolytes</td>
</tr>
<tr>
<td>Glycémie à jeun</td>
<td>• Diabète (doit être répété le jour de l’intervention chirurgicale)</td>
</tr>
<tr>
<td>Grossesse (β-HCG)</td>
<td>• Toute femme susceptible d’être enceinte</td>
</tr>
<tr>
<td>Électrocardiogramme</td>
<td>• Maladie cardiaque, diabète, autres facteurs de risque de maladie cardiaque</td>
</tr>
<tr>
<td></td>
<td>• Hémorragie sous-arachnoidienne ou intracrânienne, accident vasculaire cérébral, traumatisme crânien</td>
</tr>
</tbody>
</table>

Les règles concernant le jeûne devraient varier en fonction de l’âge du patient et de ses antécédents médicaux et s’appliquer à toutes les formes d’anesthésie, y compris les soins anesthésiques monitorés. Les interventions très urgentes ou urgentes doivent être réalisées après avoir examiné les risques qu’entraînerait leur report comparativement au risque d’aspiration du contenu de l’estomac. Le type et la quantité de nourriture absorbée doivent être pris en considération pour déterminer la durée du jeûne. La durée minimale du jeûne précédant une chirurgie non urgente (élective) doit être:

- de huit heures après un repas composé de viande ou d’aliments frits ou gras;
- de six heures après un repas léger (pain grillé et liquides clairs, par exemple) ou après l’ingestion de préparations pour nourrissons ou de lait non humain;
- de quatre heures après l’ingestion de lait maternel (aucun ajout n’est permis au lait maternel titré);
- de deux heures après l’ingestion de liquides clairs.

Il incombe à l’anesthésiologiste de prescrire la prémédication lorsque celle-ci est indiquée. L’ordonnance doit en préciser la dose, le moment et la voie d’administration.

L’administration de l’anesthésie peut aussi faire l’objet d’autres directives prescrites par les lois provinciales ou la réglementation de l’établissement.

La période anesthésique

Avant le début de l’anesthésie, l’anesthésiologiste doit vérifier les points suivants:

1. la procédure anesthésique a été expliquée au patient;
2. on a fait le point sur l’état du patient;
3. tout l’équipement qu’on prévoit nécessaire est accessible et en bon état de fonctionnement;
4. on a accès à une source de réserve d’oxygène sous pression;
5. tous les médicaments et agents qu’on prévoit nécessaires sont correctement identifiés. Les étiquettes de médicament apposées par l’usager doivent être conformes à la norme CAN/CSA-Z264.3-98 (R2005) (Annexe 1);
6. jusqu’à ce qu’un système de connexion spécifique soit créé pour utilisation neuraxiale, les deux côtés de toutes les connexions de type Luer devraient être étiquetés;

7. on a tenu compte des indications du fabricant quant à l’utilisation, à la manipulation et à la disposition de l’équipement et du matériel d’anesthésie.

L’anesthésiologiste est avant tout responsable du patient qu’il a sous ses soins. L’anesthésiologiste ou un assistant en anesthésie supervisé par l’anesthésiologiste doit demeurer constamment aux côtés du patient pour toute la durée d’une anesthésie générale, loco-régionale majeure et intraveineuse monitrée, jusqu’à ce que le patient ait été confié aux soins du personnel de l’unité de soins compétente.

Si l’anesthésiologiste traitant doit quitter temporairement la salle d’opération, il doit confier les soins du patient à un autre anesthésiologiste, à un résident en anesthésie ou à un assistant en anesthésie. Dans les cas où il délègue les soins à un résident ou à un assistant en anesthésie, l’anesthésiologiste traitant demeure responsable de la prise en charge anesthésique du patient. Avant de déléguer les soins du patient à un assistant en anesthésie, l’anesthésiologiste doit s’assurer que ce dernier est familier avec le type d’intervention chirurgicale, l’environnement et le matériel de la salle d’opération, et que l’état du patient est stable. Lorsque les soins sont délégués à un assistant en anesthésie, l’anesthésiologiste traitant doit demeurer immédiatement disponible.

Ce n’est qu’en de très rares exceptions, pour se porter par exemple au secours d’un autre patient dont la vie est en danger, qu’un anesthésiologiste pourra brièvement confier les soins courants d’un patient dont l’état est stable à une personne compétente qui n’est pas un assistant en anesthésie, la responsabilité de cette dernière devant se limiter à surveiller le patient en son absence et à tenir l’anesthésiologiste informé jusqu’à son retour. Dans de telles circonstances, l’anesthésiologiste demeure responsable des soins prodigués au patient et se doit de tenir l’équipe chirurgicale au courant.

L’administration simultanée d’une anesthésie générale, rachiidienne, péridurale ou autre anesthésie loco-régionale majeure ou d’une sédation de niveau 4-6 sur l’échelle de sédation de Ramsay (RSS – Annexe 6) par un anesthésiologiste pour des interventions diagnostiques ou thérapeutiques pratiquées sur plus d’un patient à la fois est inacceptable. Toutefois, il peut être admis, dans des circonstances particulières, qu’un anesthésiologiste supervise plus d’un cas dans lesquels seulement une sédation de 1-3 sur l’échelle de Ramsay est administrée, à condition qu’un individu ayant reçu une formation adéquate, qualifié, accrédité et approuvé par l’établissement de santé, soit constamment présent auprès de chaque patient recevant des soins. Il sera par contre admis, dans un service d’obstétrique, de surveiller simultanément plus d’une patiente à laquelle est administrée une analgésie loco-régionale pendant le travail. Chaque parturiente devra cependant être surveillée adéquatement par une personne compétente, suivant un protocole établi. Lorsque l’anesthésiologiste dispose des soins anesthésiques en vue d’un accouchement, une deuxième personne dûment formée doit se tenir prête à intervenir pour pratiquer au besoin la réanimation néonatale.

L’administration d’une anesthésie simultanément à la réalisation d’une procédure diagnostique ou thérapeutique par un seul médecin est inacceptable, exception faite des interventions réalisées par seule infiltration d’anesthésiques locaux.

**Dossiers**

Toutes les variables physiologiques monitorées doivent être enregistrées à intervalles réguliers, en fonction des circonstances cliniques. La fréquence cardiaque et la tension artérielle doivent être enregistrées au moins à toutes les cinq minutes. La saturation en oxygène doit être monitorée constamment et enregistrée à intervalles fréquents. Il faut montrer la saturation en oxygène de tout patient recevant une anesthésie par inhalation, une anesthésie régionale majeure ou une anesthésie intraveineuse monitorée et de plus, si la trachée est intubée, il faut montrer continuellement la PCO₂ télé-expiratoire. On doit documenter au dossier anesthésique toute raison pour laquelle on déroge à cette directive pour la tenue du dossier. Les types de moniteurs, l’équipement et les techniques utilisés doivent être notés aussi bien que l’heure, la dose et la voie d’administration de tout médicament et de tout liquide. L’ensemble des soins peropératoires devrait être noté.

Le dossier anesthésique doit aussi comprendre le niveau de conscience du patient, sa fréquence cardiaque, sa tension artérielle, sa saturation en oxygène et sa fréquence respiratoire à l’arrivée en salle de réveil.

**Monitorage du patient**

Le seul moniteur indispensable est la présence, à tous les instants, d’un médecin ou d’un assistant en anesthésie placé sous la supervision immédiate d’un anesthésiologiste et déttenant la formation et l’expérience appropriées. Les moniteurs mécaniques et électroniques ne sont, au mieux, que des aides à la
vigilance. Ces appareils aident l’anesthésiologiste à s’assurer de l’intégrité des organes vitaux et notamment de la perfusion et de l’oxygénation satisfaisantes des tissus.

Il incombe à l’établissement de fournir et d’entretenir un équipement de monitorage qui répond aux normes en vigueur.

Il incombe au chef du département d’anesthésie de conseiller l’établissement au sujet de l’acquisition de l’équipement de monitorage et d’établir les normes de monitorage qui aideront à assurer la sécurité du patient.

L’anesthésiologiste est responsable du monitorage du patient qui est sous ses soins et il doit s’assurer que l’équipement de monitorage approprié soit disponible et fonctionne correctement. Une feuille de vérification préanesthésique doit être remplie avant d’initier une anesthésie (Annexe 3 ou équivalent).

Les directives de monitorage pour les soins routiniers s’appliquent à tous les patients recevant une anesthésie générale, une anesthésie régionale ou une séduction intraveineuse.

On peut classer l’équipement de monitorage comme suit:

- **Requis:** ces moniteurs doivent être utilisés sans interruption pendant toute la durée de l’administration de toute anesthésie.
- **Accessible en exclusivité pour chaque patient:** ces moniteurs doivent être accessibles à chaque poste de travail d’anesthésie, de sorte qu’on puisse y avoir recours sans délai.
- **Immédiatement disponible:** ces moniteurs doivent être accessibles de sorte qu’on puisse y avoir recours sans délai indu.

**Les équipements requis sont:**

- un saturomètre;
- un appareil permettant de mesurer la tension artérielle, directement ou sans effraction;
- un électrocardiographe;
- un capnographe, pour l’anesthésie générale et la séduction (RSS 4-6);
- un moniteur de gaz anesthésiques capable d’identifier et de mesurer chaque agent, lorsque des gaz anesthésiques sont utilisés.

**Les équipements suivants doivent être accessibles en exclusivité:**

- un appareil pour mesurer la température;
- un stimulateur des nerfs périphériques, lorsqu’on a recours à des bloqueurs neuromusculaires;
- un stéthoscope précordial, œsophagien ou paratrachéal;
- un éclairage suffisant pour bien voir une partie exposée du patient.

**Les équipements suivants devront être immédiatement disponibles:**

- un spiromètre pour mesurer le volume respiratoire.

Il est inévitable que le monitorage continu soit parfois brièvement interrompu. De plus, la possibilité existe qu’un moniteur fasse défaut, ce qui rend essentielle la vigilance soutenue de l’anesthésiologiste.

Les alarmes audibles et visuelles du saturomètre et du capnographe ne devraient pas être désactivées indéfiniment durant le déroulement d’une anesthésie, sauf en cas de circonstances inhabituelles. Le son à tonalité variable des pulsations cardiaques et l’alarme de seuil inférieur du saturomètre et du capnographe doivent émettre un signal audible et visible.

Le monitorage de la respiration doit être envisagé en dehors de la salle d’opération (en salle de réveil et ailleurs) pour les patients sous séduction et pour ceux présentant un risque de dépression respiratoire.

**La période postanesthésique**

La salle de réveil

Tous les établissements qui offrent des services d’anesthésie doivent avoir une salle de réveil. Des politiques administratives conformes aux règlements de l’établissement devront être appliquées de façon à coordonner les responsabilités des soins médicaux et infirmiers.

L’ensemble de la responsabilité administrative médicale pour la salle de réveil devrait revenir au département d’anesthésie. Il devrait exister un manuel des politiques de la salle de réveil, préalablement approuvé par les autorités médicales, infirmières et administratives de l’établissement.

L’anesthésiologiste devrait accompagner le patient à la salle de réveil, transmettre les renseignements nécessaires et rédiger les ordonnances appropriées. Un supplément d’oxygène et des appareils de monitorage appropriés doivent être utilisés durant le transport si indiqué cliniquement. Le soin du patient ne devrait pas être confié à l’infirmière de la salle de réveil tant que l’anesthésiologiste n’est pas assuré que le personnel infirmier pourra observer et traiter adéquatement le patient. L’anesthésiologiste lui-même ou un anesthésiologiste remplaçant désigné est responsable des soins postanesthésiques à la salle de réveil. Le congé de la salle de réveil est sous la responsabilité de
l’anesthésiologiste. Cette responsabilité peut être déléguée, en accord avec les politiques de l’établissement.

Une source d’oxygène et une succion doivent être disponibles pour chaque patient à la salle de réveil. L’équipement d’urgence nécessaire pour procéder à la réanimation et au support vital doit se trouver dans la salle de réveil. Le monitorage utilisé à la salle de réveil doit être adapté à l’état du patient et un assortiment complet de moniteurs doit être disponible. L’utilisation d’un saturomètre durant la phase initiale du réveil est requise. Un moniteur d’apnée est recommandé chez les nourrissons nés avant terme de moins de 50 semaines d’âge gestationnel.


Dans certaines situations, il peut être acceptable de transférer un patient directement à d’autres services de soins ou de passer outre la salle de réveil si un niveau de soins adapté est disponible dans un autre service de l’établissement, et le fait que le patient est jugé apte à ce transfert est documenté dans le dossier anesthésique.

Congé des patients après chirurgie d’un jour

Le congé des patients après une chirurgie ambulatoire doit se faire par le biais de l’application d’un plan formel de soins approuvé par l’institution et documenté dans les notes de soins prodigués aux patients. La prise en charge de la douleur, les complications postopératoires ainsi que le suivi de routine et d’urgence doivent tous faire l’objet d’instructions écrites spécifiques. Le patient doit être averti au sujet des synergies additives qu’il existe entre l’alcool et d’autres sédatifs, au sujet du danger de conduire ou d’utiliser des machines dangereuses dans la période postopératoire (dans la plupart des cas durant les 24 heures suivant l’opération), et au sujet de la nécessité d’attention de la part d’un adulte compétent dans la période postopératoire (dans la plupart des cas durant les 24 heures suivant l’opération).

**Lignes directrices pour l’analgésie régionale en obstétrique**


Sous la direction d’un anesthésiologiste, certains aspects du monitorage et de l’administration de l’analgésie régionale en obstétrique peuvent être délégués à d’autres membres du personnel de santé. Chaque établissement doit s’assurer que ces personnes reçoivent les mêmes formation, certification, formation continue et recertification en analgésie régionale en obstétrique.

**Éléments requis pour l’utilisation de l’analgésie régionale en obstétrique**

1. Avant d’offrir l’analgésie régionale en obstétrique, l’établissement doit disposer de protocoles de monitorage appropriés. Ces protocoles précisenteront les types de monitorage requis et leur fréquence. En outre, ils préciseraient clairement la manière de gérer les problèmes et les urgences communément rencontrés et à qui faire appel en cas de besoin d’assistance.

2. Seuls les médecins ayant la formation et la certification voulues ainsi que les privilèges hospitaliers requis peuvent pratiquer l’analgésie régionale en obstétrique. Cela vaut aussi pour les stagiaires travaillant sous supervision.

3. L’analgésie régionale ne doit être amorcée et maintenue qu’aux endroits qui disposent du matériel et des médicaments de réanimation appropriés et immédiatement accessibles.

4. Le consentement éclairé doit être obtenu et noté dans le dossier médical.

5. Un accès intraveineux doit être établi avant d’amorcer l’analgésie régionale et maintenu pendant toute la durée de cette analgésie.

6. L’anesthésiologiste doit être immédiatement disponible jusqu’à ce que l’analgésie soit établie et que les signes vitaux de la patiente se soient stabilisés.
Maintien de l’analgésie régionale pendant le travail

L’administration continue, sous perfusion, d’une faible dose d’anesthésiques locaux (dilués) par voie péridurale, avec ou sans ajouts, est associée à une incidence très faible de complications significatives. Par conséquent, il n’est pas nécessaire que l’anesthésiologiste reste présent ou soit immédiatement disponible pendant le maintien de la perfusion péridurale à condition que:

- l’on dispose de protocoles de soins appropriés pour les patientes recevant une analgésie péridurale;
- l’on puisse joindre l’anesthésiologiste pour obtenir conseils et instructions.

Un bolus d’anesthésiques locaux administré par cathéter péridural, ou par cathéter ou aiguille présumé être dans l’espace péridural, peut entraîner des complications immédiates mettant la vie en danger. C’est pourquoi, lorsqu’un bolus d’anesthésiques locaux est administré par cathéter péridural (sauf pour l’APCP), un anesthésiologiste doit être disponible pour intervenir comme il se doit en cas de complications. L’expression “disponible pour intervenir comme il se doit” est employée intentionnellement pour indiquer que les départements d’anesthésie devraient établir individuellement leurs propres politiques concernant la disponibilité d’un anesthésiologiste pour gérer les complications de l’analgésie régionale. Chaque département devrait considérer, au moment d’élaborer ses politiques, le risque possible que présente l’injection d’un bolus d’anesthésiques locaux et les méthodes d’intervention en cas d’urgence.

Absorption orale pendant le travail

La vidange gastrique des aliments solides est retardée durant le travail. Les analgésiques opioïdes peuvent la retarder davantage. Par conséquent, les parturientes ne devraient pas absorber d’aliments solides une fois le travail actif débuté. Comparativement aux aliments solides, les liquides clairs sont rapidement évacués de l’estomac et absorbés par l’intestin grêle proximal même pendant le travail. Par conséquent, les hôpitaux devraient élaborer leur propre protocole concernant l’absorption de liquides clairs par les femmes en travail actif.

Lignes directrices pour la prise en charge de la douleur aiguë à l’aide de l’analgésie neuraxiale

Lorsque l’analgésie neuraxiale est prise en charge par des anesthésiologistes, l’incidence des effets secondaires n’est pas plus élevée que lorsque des techniques alternatives de contrôle de la douleur sont utilisées. En conséquence, lorsque son utilisation est indiquée, l’analgésie neuraxiale devrait être prise en charge par les anesthésiologistes.

Aux fins de ce guide, l’analgésie neuraxiale se définit comme étant l’administration intrathécale ou péridurale d’opioïdes et/ou d’anesthésiques locaux en vue du traitement de la douleur postopératoire ou d’autres problèmes de douleur aiguë. L’objet de ce guide est de fournir aux anesthésiologistes des principes de prise en charge afin que l’analgésie neuraxiale soit pratiquée de manière à en maximiser les avantages et minimiser les risques.

Politiques administratives et éducatives

Le département d’anesthésie devrait mettre sur pied un service de traitement de la douleur aiguë responsable des activités suivantes:

1. **Élaboration des politiques et procédures en matière d’analgésie neuraxiale.** La collaboration d’autres départements dont ceux des soins infirmiers, de pharmacie, de chirurgie et de gestion du matériel doit être sollicitée au besoin.

2. **Liaison avec les départements de chirurgie.** Les chirurgiens doivent comprendre les critères de sélection des patients, les effets de l’analgésie neuraxiale sur l’évolution postopératoire normale et sur le mode de présentation des complications postopératoires, ainsi que les implications d’autres thérapeutiques (par exemple l’anticoagulothérapie prophylactique) sur l’analgésie neuraxiale.

3. **Éducation et certification des infirmiers et infirmières.** Un programme éducatif standard devrait être établi pour la formation initiale, la certification et le maintien de la compétence des infirmiers et infirmières qui dispensent des soins aux patients auxquels est administrée une analgésie neuraxiale. Le personnel infirmier doit connaître:
   - le risque de dépression respiratoire, y compris la dépression respiratoire tardive lors de l’utilisation d’opioïdes hydrophiles;
   - l’évaluation et le traitement de la dépression respiratoire;
   - l’évaluation d’un bloc sensoriel et moteur;
   - l’évaluation et le traitement de l’hypotension chez le patient recevant une analgésie neuraxiale;
   - les signes et symptômes des complications rares mais catastrophiques que sont l’hématome ou l’abcès péridural.

Politiques en matière d’administration de médicaments

Chaque établissement devrait employer un nombre limité de solutions standard. Il est vivement recommandé...

Le risque d’erreurs attribuables à une voie impropre d’injection du médicament doit être minimisé. Pour des perfusions continues ou une analgésie péridurale sous le contrôle du patient (APCP), l’emploi de pompes inviolables distinctes de celles qui sont utilisées pour l’administration de solutés ou de médicaments par voie intraveineuse est vivement recommandé. La tubulure entre les pompes de perfusion de l’analgésie neuraxiale et les cathéters ne devrait comporter aucun orifice susceptible de permettre une injection non intentionnelle de médicaments intraveineux.

La préparation des solutions devrait suivre une procédure standard. Toutes les solutions analgésiques devraient porter une étiquette indiquant la composition de la solution (opioïde, anesthésique local ou les deux) ainsi que la voie d’administration appropriée (péridurale ou intraveineuse).

Monitorage des patients et prise en charge des événements indésirables

Les patients auxquels est administrée une analgésie neuraxiale devraient être placés dans une chambre équipée d’oxygène et de succion. Des médicaments et un équipement de réanimation doivent être accessibles immédiatement. L’accès intraveineux doit être établi avant d’amorcer l’analgésie neuraxiale et maintenu pendant toute la durée prévue des effets médicamenteux après cessation de l’analgésie neuraxiale.

Le pansement qui maintient en place le cathéter péridural doit permettre l’examen du cathéter pour détecter tout mouvement et permettre l’inspection quotidienne du point d’entrée afin de déceler tout signe d’infection.

L’adoption de politiques standard au chapitre de la prise en charge du patient est préconisée. Les paramètres qu’il convient d’évaluer, la fréquence des évaluations, la documentation et les procédures de prise en charge des complications doivent être précisés. Un personnel de soins infirmiers en nombre suffisant doit être présent pour évaluer et contrôler l’état des patients qui reçoivent une analgésie neuraxiale. Le monitorage doit se poursuivre après cessation de l’analgésie neuraxiale jusqu’à ce que ses effets se soient dissipés.

Un anesthésiologiste doit être immédiatement disponible afin de conseiller le personnel infirmier sur des aspects tels que le titrage de la dose et la prise en charge des réactions adverses. Chaque centre hospitalier doté d’un service de douleur aiguë doit veiller à ce qu’un anesthésiologiste soit disponible pour s’occuper directement des patients recevant une analgésie neuraxiale et ce dans un délai approprié à la situation clinique. Chaque centre hospitalier devrait également déterminer les procédures en vue d’une prise en charge urgente de toutes les complications menaçant le pronostic vital.

D’autres médicaments, notamment les benzodiazépines ou les opioïdes parentéraux, peuvent causer une dépression respiratoire grave chez les patients recevant une analgésie neuraxiale. Pour cette raison, les autres médecins ne devraient pas prescrire de sédatifs ou d’analgésiques chez tout patient recevant une analgésie neuraxiale. Le service de traitement de la douleur aiguë devrait demeurer en charge de la thérapeutique analgésique et sédative jusqu’à cessation des effets de l’analgésie neuraxiale.

Les patients porteurs d’un cathéter péridural peuvent recevoir un traitement prophylactique par des anticoagulants administrés à faible dose, sous réserve des précautions suivantes:

- Afin de minimiser le risque d’un hématome péridural, l’horaire de l’administration de l’anticoagulant doit être coordonné à l’installation et au retrait du cathéter de telle sorte qu’aucun effet anticoagulant clinique significatif ne soit présent à ces moments.
- L’emploi de médicaments anti-inflammatoires non stéroïdiens chez des patients auxquels est administrée une analgésie neuraxiale s’avère approprié, mais l’administration concomitante de ces médicaments ou d’autres antiagréants plaquettaires et d’un anticoagulant peut accroître le risque d’un hématome péridural.
- Le blocage moteur des membres inférieurs devrait être évité autant que possible chez les patients recevant une analgésie neuraxiale pour le contrôle prolongé de la douleur postopératoire.
- Le personnel infirmier doit connaître les signes et les symptômes d’un hématome péridural. La cause de toute altération de l’état neurologique ou apparition soudaine d’une douleur dorsale doit être recherchée immédiatement.

Si une anticoagulothérapie complète est indiquée chez un patient porteur d’un cathéter péridural, l’anesthésiologiste devrait être consulté afin que le retrait du cathéter et l’amorçage d’un traitement analgésique substitutif puissent être effectués avant le début de l’anticoagulothérapie.
Lignes directrices pour l’exercice de l’anesthésie hors du milieu hospitalier


 Sélection des patients

On devrait s’inspirer du code de classification de l’American Society of Anesthesiologists (voir Annexe 2) pour faire l’évaluation des patients, et ne retenir, pour l’anesthésie hors du milieu hospitalier, que ceux des classes I et II. On ne devrait accepter ceux de la classe III qu’à certaines conditions.

Considérations préopératoires

Une histoire de cas et un examen physique récents devraient paraître au dossier, ainsi que les résultats des examens de laboratoire appropriés. Ceci peut être fait par un autre médecin ou par un autre anesthésiologiste. La durée du jeûne préanesthésique devrait respecter les directives émises précédemment. Le patient devrait recevoir un feuillet d’information contenant toutes les directives relatives aux périodes pré- et postanesthésiques.

Conduite de l’anesthésie

Les installations des salles d’anesthésie et de réveil doivent répondre aux normes hospitalières de l’Association canadienne de normalisation telles qu’indiquées dans les autres parties du présent guide. Les normes de soins et de monitorage doivent être les mêmes, quel que soit l’endroit où est administrée l’anesthésie.

Remerciements Nous tenons à remercier les anciens membres du comité des Normes de pratique de l’anesthésie qui ont apporté leurs contributions à des versions antérieures de ce guide.

Conflicts d’intérêt Tous les auteurs de cet article font partie du comité des Normes de pratique de l’anesthésie de la Société canadienne des anesthésiologistes (SCA). Aucun des auteurs n’a un quelconque intérêt financier ou commercial lié aux sociétés ou fabricants d’appareils médicaux dont il est fait mention dans cet article ou dans les annexes associées. Dr Richard Merchant est président du comité des Normes de pratique de la SCA.

Annexe 1: Normes de l’Association canadienne de normalisation (CSA) au sujet de l’équipement

(disponible en matériel électronique supplémentaire – Annexe 1)

Annexe 2: Classification de l’état de santé des patients, selon l’American Society of Anesthesiologists

(disponible en matériel électronique supplémentaire – Annexe 2)

Annexe 3: Liste de vérification préanesthésique

(disponible en matériel électronique supplémentaire – Annexe 3)

Annexe 4: Lignes directrices, normes et autres énoncés officiels disponibles sur l’internet

L’annexe 4 offre une liste non exhaustive de sites contenant des déclarations officielles promulguées par d’autres associations médicales, au Canada et ailleurs dans le monde. Cette liste est fournie aux membres de la SCA uniquement pour des raisons pratiques. La SCA n’est pas responsable de l’exactitude, de la mise à jour et de la fiabilité du contenu de ces sites. La SCA n’offre aucune garantie à cet effet et se dégage de toute responsabilité concernant l’information trouvée par le biais de ces liens. Elle n’endosse pas non plus nécessairement les sites ou leur contenu. Cette liste contient l’adresse de sites qui sera mise à jour de façon périodique. Afin que vous puissiez maintenir une liste à jour, elle est disponible à l’adresse suivante: http://www.cas.ca/Francais/Guide-d-exercice.

Annexe 5: Exposé de principe sur les assistants en anesthésie: exposé de principe officiel de la Société canadienne des anesthésiologistes

(disponible en matériel électronique supplémentaire – Annexe 5)

Annexe 6: Exposé de principe sur la sédation consciente: exposé de principe officiel de la Société canadienne des anesthésiologistes

(disponible en matériel électronique supplémentaire – Annexe 6)
Guide for Canadian medical school educators

- Downloadable videos and teaching aids
- Media rich cases with trigger questions
- Group activities that support PBLs/CBLs
- Just-in-time aids
FOR TRAINING PURPOSES ONLY: The CMPA Good Practices Guide learning materials are intended to draw attention to the various patient safety and medico-legal risks that can arise in the course of clinical practice and the strategies for minimizing such risks; they should not be considered to reflect common clinical care. Text cases, videos, and scenarios may intentionally portray examples of poor patient and provider interactions or contain incorrect medical information to demonstrate how lapses in medical judgment and poor communication might negatively affect patient outcomes.

The sole purpose of the CMPA Good Practices Guide, including its supporting faculty assets, is to provide a training resource for use by trainees and professors at the faculties of medicine in Canada and for health professional training programs at post-secondary institutions in Canada.

The information contained in this learning material is for general educational purposes only and is not intended to provide specific professional medical or legal advice, or to constitute a “standard of care” for Canadian healthcare professionals. The use of CMPA learning resources is subject to the foregoing as well as the CMPA’s Terms of use.

Your feedback is important
If you have suggestions for improving this resource or questions about faculty development, please contact us at education@cmpa.org.

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Introducing the CMPA Good Practices Guide

The *CMPA Good Practices Guide* is an online resource intended to contribute to safer medical practice and reduce medico-legal risks.

The Guide has been developed for:

- medical students
- residents
- teaching faculty

Other healthcare professionals may also find its content useful.

This resource is designed as a self-study tool to assist medical trainees in preparing for their medical examinations while also helping them to comprehend the medico-legal implications of medical practice. The content of the Guide is organized in 7 themes: Patient safety, Teams, Communications, Managing risk, Human factors, Adverse events, and Professionalism. The *CMPA Good Practices Guide* is interactive and features 124 case studies drawing from the Association’s research and analysis of cases. It includes over 40 downloadable videos and animations, numerous quizzes, as well as 150 good practices. Over 115 concepts are also included to help illustrate key processes leading to good practices.

The companion Faculty guide explains the *CMPA Good Practices Guide* and provides suggestions on how medical educators can effectively use the resources available within it.

The Guide is available to all Canadian educators who are responsible for teaching medical trainees. Medical schools are encouraged to contact the CMPA to learn more about how faculty can use the Guide to teach patient safety and risk management.
Teaching patient safety and risk management

Good practices begin in training. Canadian medical schools and accrediting bodies recognize the importance of improving education in patient safety and risk management. Such teaching should weave throughout course work and clinical rotations. Much of medicine is taught at the bedside or point of care. When possible, these ‘teachable moments’ should include discussions of safer care and reduction of risk.

Some clinical exposure is required to understand the relevance of certain patient safety and risk management topics. More training should be provided as clinical experience increases. For example, students on a clinical rotation will better appreciate the importance of learning about handovers of care.

The following suggestions may help faculty to introduce patient safety and risk management.

- Introduce risk management into everyday clinical teaching at the point of care or bedside by:
  - pointing out vulnerabilities in the processes of care
  - discussing pitfalls in diagnosis, including the role of cognitive and affective biases
- Test for knowledge, skills, and attitudes related to the topics of the Guide.
- Make time to debrief individual and team activities after a clinical case or at the end of a shift or the day. Highlight what was done well, what was learned, and what could be done differently next time.
- Create or participate in inter-professional patient safety rounds.
- Teach how to constructively participate in protected quality improvement reviews.
- During an academic half day, discuss some of the relevant case studies available in the Faculty section (text cases, videos, role-plays, and simulations).
- Encourage trainees to explore the CMPA Good Practices Guide. Assign completion of the eLearning activities included in the Guide.
- Regularly review a patient safety article from the Guide at a journal club.
- Provide acknowledgement for the best quality improvement suggestion.
- Encourage or mandate trainees to complete a quality improvement project with faculty support.
- Incorporate more patient safety and risk management topics, including consent for treatment and documentation of care, into scenarios in simulation centres.
The teachable moment — Bedside and point-of-care teaching

Much of medicine is taught during student-trainees’ encounters with real patients.

Teachers can use these moments to expand on the presentation and management of the patient in more detail. This is an opportunity to demonstrate professional behaviour and communication skills, and to provide insight gained from knowledge and experience of patient safety and risk management.

Principles in bedside and point-of-care teaching:
- Consider patient comfort a priority.
- Include the patient in the discussion if possible.
- Respect patients’ privacy.
- Focus safety teaching on 1 or 2 key points.
- In the presence of a patient, explain any medical terms and jargon.
- Conduct debriefs related to care away from the patient.
How the CMPA Good Practices Guide is organized

Domains and topics

The CMPA Good Practices Guide is organized using the framework of The Safety Competencies from the Canadian Patient Safety Institute. The topics of the Guide also align with the CanMEDS and CanMEDS-FM frameworks. An additional domain on professionalism has been added to this resource recognizing the importance of this subject in risk management. The Appendix provides additional information on how the Guide is mapped to CanMEDS roles.

1 Competencies: Enhancing Patient Safety Across the Health Professions. Ottawa, ON: Canadian Patient Safety Institute; 2008. (see www.patientsafetyinstitute.ca)
Navigating the Guide
The CMPA Good Practices Guide has two sections: one for medical trainees, the other for faculty.

Toggle between the faculty and student content by clicking on the tabs.

Each domain is accessed using the tabs at the top of the page – Patient safety, Teams, Communication, Managing risk, Human factors, Adverse events, and Professionalism.

Searching the Guide
Review the topics for each domain by rolling over the applicable tab in the navigation bar, displaying a menu of topics for that domain.

The Guide can be searched by domain, topic, CanMEDS or CanMEDS-FM role, type of specialty, and by key words.
**Student section**

Rolling over the tab of each domain shows the contents of that domain. Each domain or topic includes the following information to reinforce learning:

- rollovers for definitions of key medico-legal terms and references, as well as a complete glossary
- “Key concepts” and “Good practices” for each topic
- links to the section “Want to learn more” for viewing additional material

Students can review many case examples as stand-alone content. The learning tool includes animations and audio. Each domain includes quiz questions which provide immediate feedback on key learning points.

Several CMPA eLearning modules are linked to the Guide. These contain more case studies and content. Statements of completion for trainees are available after completing a quiz found in these modules.

Landmark Canadian legal cases highlight important court decisions that have influenced how medicine is practised in Canada.

**Faculty section**

The Faculty section of the Guide provides a range of educational materials and activities to teach the core content found in the Student section. Activities are designed for students with different learning styles and at different levels of training.

- All materials are available for use directly from the website or can be downloaded to Apple or PC computers.
- Links from the Faculty section back to core content for students are clearly labeled.
- Resources enable group interactivity, problem-solving, and case-based learning.
- Each activity can be adapted to allow trainees to complete more research, interact through online activities, and review additional material as necessary.
- Activities can be used in different types of group sessions. These include role-plays and narrative exercises.
- “Quick activities” can be used for just-in-time teaching or point-of-care teaching at the bedside.
The following is a screenshot of a portion of the resources available in the Faculty section of the Communications domain.

**Team communication**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Content Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student prep - Core content</td>
<td>Student content</td>
</tr>
<tr>
<td>Team miscommunication</td>
<td>Video / Transcript</td>
</tr>
<tr>
<td>Speaking up on obstetrics rotation</td>
<td>Role play scenario (pdf)</td>
</tr>
<tr>
<td>Speaking up in surgery</td>
<td>Role play scenario (pdf)</td>
</tr>
<tr>
<td>Speaking up in an office</td>
<td>Role play scenario (pdf)</td>
</tr>
</tbody>
</table>

**Handovers**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Content Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student prep - Core content</td>
<td>Student content</td>
</tr>
<tr>
<td>Office based handover</td>
<td>Video / Transcript</td>
</tr>
<tr>
<td>Hospital handover by resident</td>
<td>Trigger questions (pdf)</td>
</tr>
</tbody>
</table>

Icons and a text label identify the types of activities for each domain.

- **Short video vignettes of real cases engage learners.**
- **Quick activities prompt just-in-time discussion.**
- **Trigger questions accompany each video, stimulate discussion, and facilitate reflective learning.**
- **Role-play scenarios encourage students to explore strategies for dealing with complex situations.**
- **Text cases and trigger questions allow students to consider real-life cases.**
- **Narrative exercises provide students with opportunities to reflect on, and learn from, their experiences.**
Activity sheets

The Faculty section of the CMPA Good Practices Guide provides activity sheets in ready-to-use PDF format to enhance teaching by providing additional information and instructions. Each activity sheet includes content related to a domain and topic area, and if appropriate, other domains and topics. Keywords are available for use as metadata if activities are downloaded to a school’s Learning Management System (LMS). The activity summary, trigger questions, and suggestions for faculty provide a brief description of the activity.

<table>
<thead>
<tr>
<th>TITLE</th>
<th>DOMAIN AND TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger questions for “Hospital handover by resident”</td>
<td>Communication&gt;Handovers</td>
</tr>
</tbody>
</table>

**KEYWORDS** handovers, resident, internal medicine, intra-professionalism

**ACTIVITY SUMMARY**
The short video “Hospital handover by resident” portrays a poorly performed handover between shifts. These supporting trigger questions and suggestions to faculty focus on helping students to identify what went wrong, and how to improve the handover.

**TRIGGER QUESTIONS**
1. What factors contributed to this poorly performed handover?
2. What measures could the residents have taken to prevent this adverse event?
3. How could a poor handover contribute to an adverse event?
4. How would you feel if you received this information on handover?

**SUGGESTIONS TO FACULTY**
In small groups, have students re-write the handover script to make it more effective using a structured communication tool and interactive questioning. Have one group act out their script for the rest of the group.
Using the resources in the CMPA Good Practices Guide

About the use of case studies

The Guide contains several types of resources for teaching, including case studies. The use of case studies is recognized as essential in developing knowledge, skills, and proper attitudes. Case studies in risk management expose trainees to real-world clinical situations, challenges, and dilemmas they will eventually face in practice.

The CMPA Good Practices Guide includes many case studies. These are considered valuable teaching aids.

- Case selection is more effective if customized to the practice type, level of training, and the care environment.
- Discuss cases involving a range of health professionals to underscore issues related to teamwork.
- Consider system-team-provider-patient factors that contribute to events.
- Cases involving residents and medical students are more engaging for trainees.
- Address issues of delegation and supervision.
- The complexity of the case should increase along with the clinical experience of the trainee.

**USING CASES FROM CLINICAL EXPERIENCE**

Whether clinical cases are being used by a faculty member or a trainee in presentations and workshops, the following are important:

- Never use open medico-legal cases, meaning cases which are still active.
- Carefully mask the identity of patients and other providers to protect everyone’s privacy. This includes removing demographic information from diagnostic imaging and laboratory test reports.
- If a case is being used to teach medical or surgical disease and management, consider adding safety and risk management principles and pitfalls. This could also include how to appropriately document the care provided in the medical record.
- Include success stories related to patient safety and risk management, as well as cases of near misses (termed “incidents” in Québec) that have resulted in improvements in care.
Videos and trigger questions

It is often said “If a picture is worth a thousand words, a video is worth a million.”

VIDEOS
эконом  reflection and discussion
• can illustrate potentially stressful, emotionally charged healthcare communications
• can build on clinical experiences by including ethical dilemmas

TEACHING TIPS
• Review the appropriate student core content in the Guide.
• Describe the main theme of the video to be viewed.
• Ask the students to watch the video specifically identifying points of interest or reflections (e.g. identify what you think went well in this physician/patient interaction, what could be done better, etc.).
• Discuss the trigger questions, adding your own, to prompt reflection and discussion.

ADDITIONAL SUGGESTIONS
• Encourage discussion from all those attending.
• Reserve your own reflections until after the trainees have commented.
• Have the trainees re-write the scripts of the video scenario.
• Involve the trainees in role-play based on the video scenario.

TECHNICAL

The short video vignettes can be run directly from the Internet or downloaded. Each is accompanied with a set of suggested trigger questions to facilitate discussion. All are available in a ready-to-use PDF format suitable for downloading and printing.

CAUTION

The CMPA Good Practices Guide learning materials are intended to draw attention to patient safety and medico-legal risks that can arise in the course of clinical practice and to the strategies for minimizing such risks; they should not be considered to reflect common clinical care.

Text cases, videos, and scenarios may intentionally portray examples of poor patient and provider interactions, or contain incorrect medical information to demonstrate how lapses in medical judgment and poor communication might negatively affect patient outcomes.
Working with a large group?

The think-pair-share technique allows individuals to share their ideas no matter how large the group. The facilitator poses an open-ended question to the audience and provides time for individual reflection. After a minute, learners are asked to pair with a second individual in close proximity and discuss their responses. The facilitator provides several minutes for these pair discussions and then asks for volunteers to share their ideas with the larger group.

Text case and trigger questions

Text cases with trigger questions address clinical scenarios based on real medico-legal cases from the CMPA. They vary in complexity and may cover several domains or topics. Cases may be used to illustrate:

- specific patient safety or medico-legal risk management lessons
- system failures
- provider performance issues

TEACHING TIPS

- Review the appropriate medical trainee core content.
- Develop the educational objectives for your session.
- Review the key content.
- Distribute the text cases to small groups of learners.
- Ask each group to designate a scribe and a reporter.
- Provide sufficient time for each group to address the case(s) and the trigger questions.
- Bring the groups together and have each group’s reporter discuss their observations and possible solutions.
- Review the take-home messages.

TECHNICAL

Text scenarios and trigger questions are available in a ready-to-use PDF format suitable for downloading and printing.
Role-play scenarios

Role-playing is a facilitation technique in which learners assume different roles in scenarios conducted in a controlled learning environment. Role-plays can be scripted or unscripted depending on the learners’ knowledge of the subject matter and the educational objective of the role-play.

TEACHING TIPS

Role-plays can be uncomfortable for learners, particularly when they previously have not known each other. To increase learner comfort, role-play is usually best used later in a teaching session after rapport has been developed between the facilitator and learners. Here are a few more tips:

- Define the objectives and goals of the role-play. Goals may be facilitator-driven or based on suggestions from the learners related to specific skills or interventions they wish to practice.
- Introduce the requirements of role-play, including the need for respectful and constructive comments at all times amongst the participants.
- Describe the clinical situation and issues. Videos can also be used to help establish a scenario.
- Demonstrate the relevant technique. A facilitator’s willingness to “go first” can reduce anxiety.
- Assign roles. Possibilities include:
  - patient and family
  - clinician or medical trainee
  - other health professional
  - observer (if there are large numbers of learners have them work in groups of 3)
- Conduct the role-play.
- Provide feedback.
  - Usually the clinician or trainee starts. Have the trainees explain what they thought went well and why.
  - The patient goes second. What did the patient think went well? What was it like to be the patient?
  - The observer comments last. Have the observer begin with what went well.
  - Each player should discuss what they found difficult or challenging.
  - Obtain player feedback as to what role players would do differently next time, if faced with a similar situation.
  - Finally, if time allows, replay the scenario using the new strategies or skills.
CHALLENGES

Scenario taking a different direction

Even though a scenario appears tightly controlled, the players may take a different path or direction than intended. Guide the players back on track or end the activity and debrief the group.

Players not understanding the situation

In some cases the role is not understood by the player. This may lead to difficulties for all participants. Support the player who is having the challenge and attempt to guide the role-play to an end. If this cannot be done, then end the role-play and begin the debriefing.

Narrative and storytelling

Writing from a personal point of view about an experience one has lived through is increasingly recognized as a way to encourage reflection, improve self-awareness, and learn from experience. Accordingly, the CMPA Good Practices Guide includes a narrative exercise in each domain.

FUNDAMENTAL STRUCTURE

The use of narrative essays and journaling is used to explore and reflect on many of the themes and concepts introduced in the Guide. Narrative exercises ask students to recall and think about an event they experienced or witnessed. Each narrative should include:

- a description of the event
- an explanation of how this event relates to the theme or topic assigned
- the student’s reflections on the event

<table>
<thead>
<tr>
<th>VARIATIONS</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Variation 1</td>
<td>This role-play leads to an enhanced understanding of the challenges faced by others on the team.</td>
</tr>
<tr>
<td>If the group is an existing team, have the participants take on each other’s responsibility during the role-play.</td>
<td></td>
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<tr>
<td>Variation 2</td>
<td>The trainees practice with an individual who fully understands the scenario and what is expected. Coaching can happen immediately and then the play continues with the implementation of the feedback.</td>
</tr>
<tr>
<td>Use a professional actor, or a standardized patient.</td>
<td></td>
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**Variation 3**  
Repetitive role-play  
(Groundhog Play!)

Continually repeat the role-play with new actors. Often the scenario is very brief (e.g. lasting 1 to 2 minutes to allow multiple repetitions). This type of role-play is often used in professional training or to explore emotionally charged scenarios. Repeating the same role-play enables the learners to observe a wide range of responses to the same situation. At the end of the exercise the group discusses the different approaches and identifies what worked best.

**Variation 4**  
Fishbowl

A fishbowl is simulated by creating a “bowl” for the actors and an area for observers. The audience observes and then comments.

**TECHNICAL**

Role-play text case scenarios, accompanied by specific information for each role in the role-play, are available in a ready-to-use PDF format suitable for downloading and printing.
Appendix —

Mapping the CMPA Good Practices Guide to CanMEDS Roles and CanMEDS-FM Roles

MEDICAL EXPERT
Domain 4: Managing risk
The diagnostic process
Diagnostic tips
Reducing risk in surgery
Medication risks

Domain 5: Human factors
Defining human factors
Challenge to diagnosing
Cognitive biases
Situational awareness
Equipment and technology

COLLABORATOR
Domain 2: Teams
Healthcare teams
Safe teamwork
Delegation and supervision
Medico-legal lessons

Domain 3: Communication
Team communication
Handovers
Consultations and referrals

Domain 5: Human factors
Situational awareness

MANAGER
Domain 1: Patient safety
Understanding harm
Systems
Accountability
Quality and safety improvement
Governance

Domain 2: Teams
Safe teamwork
Delegation and supervision

Domain 3: Communication
Privacy and confidentiality

Domain 4: Managing risk
Medication risks

Domain 5: Human factors
Other workplace factors
Human factors engineering

Domain 6: Adverse events
Errors and matters of judgment
Disclosure
Quality improvement

Domain 7: Professionalism
Behaviour

HEALTH ADVOCATE
Domain 1: Patient safety
Understanding harm
Just culture
Systems

SCHOLAR
Domain 2: Teams
Safe teamwork

Domain 6: Adverse events
Quality improvement

PROFESSIONAL
Domain 1: Patient safety
Accountability
Legal liability

Domain 2: Teams
Healthcare teams

Domain 6: Adverse events
Errors and matters of judgment
Disclosure
Managing stress

Domain 7: Professionalism
Professionalism in practice
Being honest
Being respectful
Behaviour
Respecting boundaries
Supporting colleagues

COMMUNICATOR
Domain 2: Teams
Safe teamwork
Medico-legal lessons

Domain 3: Communication
Patient-centred communication
Privacy and confidentiality
Informed consent
Informed discharge
Team communication
Handovers
Consultations and referrals
Documentation

Domain 6: Adverse events
Disclosure
Acknowledgements

The CMPA appreciates the significant contribution to this resource made by faculty and trainees of Canadian medical schools, health professionals, and legal counsel.

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The Canadian Medical Protective Association

The CMPA provides its physician members with medico-legal advice, legal assistance related to clinical practice, and risk management education. The CMPA is funded and operated on a not-for-profit basis for physicians, by physicians. Its membership includes most practising physicians in Canada. The Association also provides physicians with an extensive, evidence-based education program on managing risk in practice and providing safer patient care.
June 30th, 2016

Dear Faculty members,

As Program Director, I am responsible to ensure that all residents and faculty are aware of the important policies, structure and functioning of the residency program. These are contained in this Residency Program Manual which is now able to be viewed and/or downloaded from the McMaster Department of Anesthesia website

To navigate the manual, please ensure that you have your “bookmarks” turned on, which functions as a click-able table of contents, allowing you to easily find and move directly to a given Chapter. The bookmark icon is located in the upper left of the screen.

Much of the document is for reference purposes, however there are several areas that I would ask you to ensure that you read. Please review the manual, especially the areas indicated below, and sign and return the second page of this document. Thank you very much in advance.

Sincerely,
Karen Raymer, Program Director, Anesthesia
Required Faculty Reading:

- Faculty and Resident Commitments statements
- Chapter 1:
  - Message from the PD and Chair
- Chapter 3:
  - Orientation letters for the site(s) at which you work
  - Residents in the Clinic
- Chapter 4:
  - Summary of Resident Responsibilities
  - Pre-op assessment of In-patients
- Chapter 7:
  - Rotation Goals and Objectives for rotations that you supervise
- Chapter 8:
  - Faculty evaluation forms for Clinical and Academic sessions
  - Appeal Process
- Chapter 11
  - On-Call Learning Objectives
  - Buddy Call
  - Peds/OB call: NB for all anesthesiologists who do Peds or OB
- Chapter 15
  - Resident Well Being
- Chapter 16:
  - Resident Supervision
  - Anesthesia Safety Policy
  - Harassment Policy
- Chapter 17:
  - Dispute resolution
- Chapter 18:
  - Medicolegal guidelines for residents

☐ I have received a copy of the Resident/ Faculty Manual and have read the required sections as indicated above.

Print Name: ________________________  Date: ______________________

Signature: ________________________

Please return signed copy to Candice Stroud at stroude@mcmaster.ca; HSC 2V6 or Fax 905 523 1224
June 30th, 2016

Dear Residents,

As Program Director, I am responsible to ensure that all residents and faculty are aware of the important policies, structure and functioning of the residency program. These are contained in this Residency Program Manual which is now able to be viewed and/or downloaded from the McMaster Department of Anesthesia website.

To navigate the manual, please ensure that you have your “bookmarks” turned on, which functions as a click-able table of contents, allowing you to easily find and move directly to a given Chapter. The bookmark icon is located in the upper left of the screen.

Much of the document is for reference, however there are several areas that I would ask you to ensure that you read. Please review the manual, especially the areas indicated below, and sign and return the final two pages of this document. For your reference, this letter is contained at the end of the manual (digitally). Thank you very much in advance.

Sincerely,
Karen Raymer, Program Director, Anesthesia
Please read and ensure you understand all of the following documents within the manual.

- Faculty and Resident Commitments statements
- Chapter 1:
  - Messages from the PD and Chair
  - Program Overview
- Chapter 2:
  - Anesthesia Ombudsman Terms of Reference
  - Duties of the Chief Resident
  - RTC and RAC Terms of Reference
  - Admin resident handbook if you are PGY2/4
- Chapter 3:
  - Up to date Orientation letters are sent at the beginning of each rotation- please read
  - PGY1 Book of Secrets if you are PGY1
  - Residents in the Clinic
- Chapter 4:
  - Summary of Resident Responsibilities
  - Promotions doc for your PGY year
  - Resident Log Book
  - Pre-op assessment of In-patients
- Chapter 6:
  - Resident Room Assignments
- Chapter 7:
  - Rotation Goals and Objectives and ITERs for rotations as you go through them
- Chapter 8:
  - Evaluation overview letter
  - Learning Contracts
  - PGME policy on evaluation
  - Appeals
  - 360 evaluations
  - In-house MCQ’s
- Chapter 9:
  - Simulation Overview
- Chapter 10:
  - Professionalism policy of PGME
  - Moonlighting policy of Anesthesia Residency Program
• Chapter 11
  o Call Distribution
  o Buddy Call
  o Peds/OB call
  o Emergency Call coverage

• Chapter 13
  o Research Overview- if planning a research elective, please read the appropriate section on research elective requirement
  o Clerkship Teaching
  o Academic support

• Chapter 14
  o Vacation policies

• Chapter 15
  o Resident Well Being “Take Care of Yourself”
  o Mentorship
  o Resident Retreats and Business Meetings

• Chapter 16:
  o Resident Supervision
  o Anesthesia Safety Policy
  o Harassment Policy

• Chapter 17: You should know all these policies- they come up frequently.
  o Program Oral Exam Attendance
  o Practice Oral Exam Policy
  o Out of sync Guidelines
  o Dispute resolution

• Chapter 18:
  o Guidelines for Interaction with Pharmaceutical Industry
  o Medicolegal guidelines for residents

☐ I have received a copy of the Resident/ Faculty Manual and have read and agree with the required sections as indicated above.

Print Name: ________________________ Date: ______________________

Signature: ___________________________

Please return signed copy to Candice Stroud at stroudc@mcmaster.ca; HSC 2V6 or Fax 905 523 1224