MEASUREMENT OF ADVERSE RESPIRATORY EVENTS BY CAPNOGRAPHY AMONG HIGH-RISK PATIENTS IN THE RECOVERY ROOM AND 24 HOURS POST-OPERATIVELY
Substantial portion of postoperative cardiac arrest related to respiratory depression

Optimal monitoring poorly investigated

Pulse oximetry and clinical monitoring most commonly used
- Limited sensitivity

Capnography very sensitive but rarely used
DEFINITIONS

- Adverse respiratory events:
  - Moderate desaturation: < 93%
  - Severe desaturation: < 90%
  - Hypopnea: RR < 10
Capnography is superior to conventional means (clinical observation and pulse oximetry) in detecting adverse respiratory events on the ward
METHODS

- Multi-centre observational study

- **Population:** Adults at risk of adverse postoperative respiratory events undergoing GA
  - Established diagnosis of moderate or severe OSA
  - STOP BANG ≥ 5
  - Exclusion criteria

- **Intervention:** Postoperative capnography monitoring in the PACU and for the first 24 hours after surgery

- **Comparison:** Conventional monitoring (pulse oximetry and clinical observation).

- **Outcome:** Adverse respiratory events in the PACU and on the ward
METHODS

- Blinded data collection in PACU and for first 24 hours postop using Capnostream

- Relevant demographic and clinical data collected from patient chart and anesthetic record

- Conventional monitoring data (pulse oximetry records and clinical assessment notes) collected
ANALYSIS

- CO2 and SPO2 waveforms downloaded from Capnostream via USB; analysis using custom software
- Incidence of adverse respiratory events calculated and compared to same parameters obtained from nursing record
- Identification of predictors of adverse respiratory events
OBJECTIVES

1 – Feasibility. Do patients tolerate the device.

2 – International data collection

3 – Identification of predictors of adverse respiratory events
   > optimize bed utilization
QUESTIONS OR COMMENTS?