

# **Orientation Information for your Anesthesiology Rotation**

## **Contact Information**

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Department location: Victory 2, office at Room 3-2-105-0

## **Aims, Objectives and Responsibilities of the Rotation**

This rotation provides an introduction to clinical anesthesia covering perioperative assessment and optimization, monitoring techniques, management of acute medical issues including resuscitation, acute pain management, application of basic sciences to clinical problems and provides exposure to, and experience with, technical skills such as basic and advanced airway management, intravenous catheter insertion, and possibly spinal anesthesia and arterial line insertion. (*N.B.: Department policy stipulates that clerks are not allowed to attempt placement of central venous lines and epidural catheters*). More specific objectives are included at the end of this document.

Unlike much of clerkship, the anesthesia rotation allows clerks the opportunity to be one-on-one with an attending staff every day when feasible. Please use this opportunity to experience as much as possible by taking appropriate ownership of cases, reading ahead of time, and asking questions (there is no such thing as a silly question). The staff anesthesiologists don't expect clerks to know a significant amount about the specialty, but will expect clerks to take initiative to learn and provide patient care. Staff are more than happy to let clerks attempt as much as possible, when appropriate, and will teach abundantly, but this will require the clerk to show interest, act professionally, prepare for the day by reviewing patients the day before, and read around cases. Not achieving these may exclude the clerk from being involved in the day's activities.

## **OR Start Time**

Please note that you should arrive by 0715 hrs when scheduled in the OR either at KGH or HDH as the OR start time is **0745 hrs.** (Monday, Tuesday, Thursday and Friday). On Wednesday the OR start time is 0815 hrs, as we have Grand Rounds from 0700-0800 hrs. Friday morning we have Case Management Rounds from 0700-0735 but the OR start time is still 0745 hrs. Staff and residents usually get their room set-up prior to rounds both Wednesday and Friday mornings. Please note that when scheduled for HDH-Eyes you are in the operating room at HDH covering the Eye Rooms and not at the Eye Clinic.

**Location of KGH Operating Rooms:** Connell 2; Access to scrubs and change rooms require your ID badge.

**Location of Same Day Admission Centre (SDAC):** Connell 2 between the ORs and the Anesthesia department. To enter the SDAC out of hours you will need your ID badge.

**Location of HDH Operating Rooms:** Take elevators up to 2nd floor, turn right and ORs are at the end of the corridor on the left through the large double doors; square button on left opens them. Scrub access requires your ID badge.

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## **Viewing OR Lists for next day**

**KGH:** Go to KHSC NOW → Clinical Tools → OR Schedules-Both Sites – KGH Site - Tomorrow

**HDH:** Go to KHSC NOW → Clinical Tools → OR Schedules-Both Sites – HDH Site - Tomorrow

## **Obstetrics and Pain**

When available, you will be scheduled to do a day of obstetrics and half-day of pain. The switch should be done at approximately 1200 hrs. For obstetrics (scheduled in the morning) please contact the resident at ext. 7080 at approximately 0730 hrs. They will instruct you on where to meet them. For pain, please go to recovery at 0730 hrs. and ask for the Acute Pain Nurse and/or the doctor on the pain service. If they are not there, contact them via the pain pager: 613-530-4404. In preparation for this day please review the *Acute Pain Management presentation* on the Queens Anesthesia website (<https://anesthesiology.queensu.ca/academics/undergraduate>), as well as reading pertinent sections of *Understanding Anesthesia: A Learner's Handbook* (pp. 77-79, 96-103, 44-55), also found on the website.

## **PAC** (Pre-Anesthetic Clinic)

Please go to Hotel Dieu Hospital, Brock 1, Pre-Admission Services. Please arrive by 0745 hrs.

## **On Call**

You will be required to do one evening of call, which runs 1530 – 2200 hrs. Please go to the OR at approximately 1530 hrs and contact the anesthesia OR manager at ext. 7071. Indicating that you are on call for the evening, and they will direct you on where you should go. If you have scheduled Perioperative teaching the day you are assigned to call, please attend the teaching session first then proceed to the OR as above. It is your responsibility to switch call dates with your peers should the day you are assigned be not suitable. **Please make sure you find a safe way home. Queen's Walkhome Service (533-WALK) is available until 2-3am.**

## **Mandatory Teaching**

- **Simulator Session:** The first morning of your rotation will be spent in the simulator lab starting at 0800hrs. This is located at the New Medical Building, Sim Lab 3, Room 234E. You will be assigned to an OR for the afternoon either at HDH or KGH. The simulator session will end in time for you to start in the OR by 12 noon at the latest. Attendance will be taken.
- **Anesthesia seminars for clerks:** includes Hypotension, Hypothermia, Electrolyte Abnormalities, Hyperthermia, Burns. Teaching schedule posted on the web for each individual block and on the weekly Anesthesiology rounds and meetings schedule on the website (<https://anesthesiology.queensu.ca/academics/rounds-and-meetings>). These are held in the department, Victory 2 either in the Library or in Room 3-283, please look for the signs indicating where the session is being held.
- **Grand Rounds:** Wednesday mornings at 0700 hrs located at KGH (Richardson Amphitheatre). Grand Rounds are video conferenced to HDH. They are held in **Jeanne Mance 5 Board Room, 5<sup>th</sup> Floor, Room #JM5-002**. If you attend the round at HDH please e-mail Leslie MacLean (<mailto:Leslie.MacLean@kingstonhsc.ca>), so your name can be added to the attendee list.
- **Case Management Rounds:** Friday mornings at 0700 hrs. KGH, Victory 2 Anesthesia library

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- Attendance at Grand Rounds and Case Management Rounds are mandatory, and you are required to sign the attendance sheet.

## **Resources**

Please find on Elentra and Queen's Anesthesia website

- Understanding Anesthesia: A learner's Handbook (1<sup>st</sup> ed.). Raymer, K. 2013
- Anesthesiology Clerkship Rotation Handbook. Patterson, L. 2004.
- Acute Pain Management Presentation 2013 powerpoint presentation

## **Online Modules**

You will be required to complete four online modules: ***Post-partum Hemorrhage, Preoperative Assessment, Intraoperative Management, Cardiac Physiology***. These can be completed when clinical duties allow during some days or can be done at home. Material from these modules will appear on the final multiple choice examination. The module links can be found on the anesthesia homepage.

## **Daily Assessments**

It is your responsibility to electronically distribute, and ensure completion of, the Clerkship Anesthesiology Clinical Daily Encounter Forms to your preceptors/resident. These are mandatory for your final assessment, and failure to submit these will result in receiving an "Incomplete" or "Fail" mark. Clerks on two-week rotations will require 12 assessments by the end of the rotation. This includes 11 assessments from clinical days (assuming 2 assessments from a split day), and 1 assessment from your evening call shift.

## **Anesthesiology Case Assignments**

If you are doing a two-week rotation a minimum of three Case Assignment worksheets are required to be handed in at the end of your rotation for days worked preferentially at KGH, and alternatively at HDH. Review the OR list you are assigned to the afternoon or evening prior and select one patient from your list to complete the sheet. All patient files (with the exception of inpatients) are located in Same Day Admission Centre (SDAC). Please bring your worksheet with you to the OR and present it to your staff for review.

Please ensure all anesthesia daily assessments have been completed on Elentra ***by the end of your rotation***. Please return the following items to the Anesthesiology departmental office (Victory 2A, Rm 3-2-104-0) ***the last Friday of your rotation***.

- ☐ Anesthesiology Case Assignment (see below)
- ☐ Evaluation of Resident Teaching and Assessment of Clinical Clerks

***Failure to do so will prevent you from receiving a "Complete" mark for your core rotation.***

## **Final Examination**

Last Thursday of the block. Check Elentra for time & location.

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## **Illness**

If you cannot attend your scheduled day due to illness, you must notify the Anesthesia office as soon as possible at 548-7827, as well as the UGME office by email. Any sick time must be made up and may include weekend call. There are no exceptions.

## **Letters of Reference**

As a guideline, it is best to request letters of reference from preceptors with whom you have personally worked, soon after your rotation to avoid clinicians forgetting their impressions. It is also advisable to provide ample time prior to CaRMS deadlines for the preceptor to provide a thoughtful letter of reference.

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## **Specific Objectives for Clerkship Anesthesia Rotation**

1. Preanesthetic assessment
  - a. Perform several preanesthetic assessments including:
    - Obtain and record pertinent history in an efficient and compassionate manner
    - Physically assess airway, cardiovascular system, respiratory system.
    - Review and interpret laboratory data
    - Assign appropriate ASA classification
    - Assign anesthetic management plan
  - b. Discuss how the following factors impact in the perioperative period:
    - Age
    - Surgery
    - CVS: coronary insufficiency, hypertension, myocardial failure, dysrhythmias
    - Resp: known/suspected difficult intubation, upper/lower resp. infections, asthma, COPD
    - CNS: increased ICP
    - GI: factors affecting pulmonary aspiration risk
    - Hematological: anemias, coagulopathies
    - Personal/family history of anesthetic reactions; malignant hyperthermia, pseudocholinesterase deficiency, awareness, postoperative nausea and vomiting
    - Lifestyle: obesity, smoking, alcohol, street drugs.
  - c. Discuss medication history:
    - Which drugs to discontinue or continue, and why ( $\beta$  blockers, ACE inhibitors, diabetic medications, anticoagulants)
    - Chronic pain medications
  - d. Demonstrate knowledge of objectives for premedication including:
    - Drugs for anxiety, amnesia, analgesia, sedation, reducing gastric volume and acidity
    - NPO guidelines
  - e. The clerk will be expected to devise a basic anaesthetic management plan
2. Operating Room
  - a. Demonstrate knowledge and observe induction of anesthesia including:
    - Being able to describe the pharmacology and side effects of intravenous agents, neuromuscular blocking agents, and volatile anesthetics
  - b. Demonstrate correct airway and ventilatory management:
    - Knowledge of basic upper airway anatomy
    - Risks/benefits of mask ventilation vs endotracheal intubation vs laryngeal mask airway

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- Identify and overcome upper airway obstruction with mask ventilation using various masks, jaw thrust, nasopharyngeal airway, oropharyngeal airway
  - Practice endotracheal intubation
  - Understand ventilatory requirements of an adult
  - Discuss effects of anesthesia and surgery on oxygenation and ventilation
  - c. Understand the principles and practice of routine intraoperative monitoring by:
    - Explain and demonstrate lead placement and selection to detect dysrhythmias and ischemia
    - Interpretation and potential errors in pulse oximetry
    - Interpretation of capnography
  - d. Prescribe and conduct appropriate intraoperative fluid and electrolyte therapy by:
    - Identify common sites for venous access including indications/contraindications
    - Predict how preoperative conditions alter perioperative fluid requirements for: NPO, Bowel prep, NGT suction, Fever
    - Discuss the intraoperative considerations of fluid replacement for: Blood loss, Third space losses, Temperature changes
    - Assess volume status and interpret data via the following monitors: Examination of the patient, Pulse and blood pressure measurement (NIBP/ arterial lines), Urine output, CVP, ECHO, etc.
    - Discuss the indications, risks, benefits and complications of crystalloids, colloids, blood products
  - e. Demonstrate skill at establishing intravenous access by:
    - Sterile technique and universal precautions
    - Successfully insert several peripheral catheters ideally of different sizes
    - Protect the site and immobilize the catheter
  - f. Discuss methods of recognizing and treating perioperatively:
    - Hypoxia
    - Hypercarbia
    - Hypertension
    - Endobronchial intubation
    - Esophageal intubation
  - g. Identify several position related injuries that a patient may sustain whilst unconscious.
  - h. Describe the drugs used for resuscitation, their indications, doses related to body size, and side effects.
3. Regional Anesthesia
- a. Demonstrate knowledge of local anesthetic pharmacology appropriate to the practice of general medicine by listing commonly used local anesthetics for:

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- Topical use
  - Local infiltration
  - Intravenous blocks (biers blocks)
  - Peripheral nerve blocks
  - Spinal anesthesia
  - Epidural analgesia/anesthesia
- b. Know the acceptable doses of at least two local anesthetic agents used for peripheral nerve blocks and epidural anesthesia
  - c. Describe and identify signs of impending local anesthetic toxicity
  - d. Describe the medical management of local anesthetic toxicity including preventative measures
  - e. Awareness of additives used with local anesthetic preparations, their purpose and toxicity
  - f. Risks, benefits and contraindications to spinal and epidural anesthesia
4. Ambulatory Anesthesia
- a. Demonstrate knowledge of the types of procedures and patients appropriate for ambulatory surgery
  - b. Assess the ambulatory patient with respect to:
    - ASA classification
    - NPO status
    - Appropriate lab work
    - Nausea and vomiting prophylaxis
    - Pain management
    - Discharge criteria
5. Postoperative Pain Management
- a. Demonstrate knowledge of the different types of pain management including the advantages, disadvantages and monitoring required for:
    - PCA
    - Epidural catheters
    - PRN medications
    - PO medications
  - b. Knowledge of assessment of postoperative pain via:
    - Pain scales
    - Visual analogue scales
6. Obstetrical Anaesthesia
- a. Demonstrate knowledge of:
    - Physiological changes of pregnancy and their implications for anaesthesia

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- Regional anaesthesia using local anesthetic and/or opioids for analgesia including the indications, contraindications, effects, problems, and relevant sensory pathways.
- The indications, contraindications, effects, and problems of general anaesthesia in the obstetrical population
- Other methods of pain control in labour

7. Attitudes of the clerk are assessed on a daily basis and include:

- a. Interaction with patients (and their families) with regards to respect, compassion and empathy
- b. Politeness and respect for other health care professionals
- c. Punctuality, reliability and the ability to take initiative and responsibility where appropriate
- d. Ability to work effectively as part of a team
- e. Motivation towards patient assessment, self-directed study and maximizing clinical experience