

Orientation Information for your Anesthesiology Rotation

Contact Information

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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 experience with technical skills such as advanced airway management and intravenous catheter insertion. More specific objectives are included in the file below.

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). Our staff do not expect clerks to know a significant amount about the specialty, but will expect clerks to take initiative to learn and provide patient care by reviewing cases ahead of time.

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.

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

Orientation Information for your Anesthesiology Rotation

Obstetrics and Acute Pain (APMS)

When available, you will be scheduled to do a day of obstetrics and half-day of acute pain (APMS). 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.

Chronic pain clinic

Our chronic pain specialists provide care at the Chronic Pain clinic, located on Jeanne Mance 3. You will be scheduled into a full day at the clinic (half-day if you are scheduled on the Monday of your orientation). Please arrive for 0815. Scrubs are optional.

Cardiac Anesthesia

As an optional experience, clerks who are particularly interested may request to be scheduled in the cardiac OR. Anesthesiology for cardiac surgery provides an interesting showcase of advanced anesthetic techniques including invasive monitoring such as central line access and transesophageal echocardiography, as well as hemodynamic support with vasopressors and inotropic agents, in critical care level patients. Please note that this is a busy OR with frequently multiple learners, and thus the clerk's active participation and one-on-one interaction with staff may be limited. If you would like to be scheduled, please ask Mrs. Sabrina Clark.

Pre-surgical screening clinic

You may be scheduled for a day in the pre-surgical screening clinic. More complex patients are referred to the clinic for assessment prior to surgery. The clinic is located on Brock 1 at HDH. Please arrive for 745am, and wear clinic attire or scrubs. Please review dictation instructions, as you are expected to dictate clinic notes.

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 on call resident at ext. 7080. 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.**

Orientation Information for your Anesthesiology Rotation

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 School of Medicine 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. 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 and also on Zoom, 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, 5th Floor, Room #JM5-002**. If you attend the round at HDH please e-mail Leslie MacLean (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
- Attendance at Grand Rounds and Case Management Rounds are mandatory, and you are required to sign the attendance sheet.

Learning Resources

Please find on Elentra and Queen's Anesthesia website:

- Anesthesia Clerkship module (**recommended**)
- Preoperative assessment guide (*supplementary*)
- Understanding Anesthesia: A learner's Handbook (1st ed.). Raymer, K. 2013 (*supplementary*)
- Anesthesiology Clerkship Handbook. Patterson, L. 2004 (*supplementary*)
- Acute pain management presentation (*supplementary*)
- Obstetrical anesthesia presentation (*supplementary*)
- Elentra Online modules (*supplementary*)

Daily Assessments

Please trigger a daily assessment for each staff, or resident, you work with. It is expected that you trigger one assessment each day.

Anesthesiology Case Assignments

Two Case Assignment worksheets are required to be handed in at the end of your rotation. Review the OR list you are assigned to the afternoon or evening prior and select one patient from

Orientation Information for your Anesthesiology Rotation

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—**the staff must sign off on your case assignment sheet.**

Please return the following items to the Anesthesiology departmental office (Victory 2A, Rm 3-2-105-0) ***the last Friday of your rotation.***

- ☐ Anesthesiology Case Assignment
- ☐ 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.

Mini-CEX

The completion of one mini-CEX by the end of the peri-op 1 rotation (***during either anesthesia OR surgical subspecialty***) is required in order to pass the rotation.

Logging

Completion of all mandatory encounters in the perioperative rotation as documented by the logging tool is required in order to pass the rotation.

Please review the course page on Elentra to ensure all requirements in order to pass the rotation are completed:

https://elentra.healthsci.queensu.ca/community/clerkshipperiop:assessment_for_meds_2021

Final Examination

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

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.

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.

Orientation Information for your Anesthesiology Rotation

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: *Revised Cardiac Risk Index*
 - 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 (β 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
 - 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

Orientation Information for your Anesthesiology Rotation

- c. Understand the principles and practice of routine intraoperative monitoring by:
 - Explain 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 anesthetic monitors
 - 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 while 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:
 - Local infiltration
 - Intravenous blocks (bier 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

Orientation Information for your Anesthesiology Rotation

- 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
 - 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 self-directed study and maximizing clinical experience