Anesthesiology Rotation - Medical Student Orientation

Students interested in a career in anesthesia may choose to follow the anesthesia-track which includes more reading and additional exposure to procedures. This is to help prepare students for success during potential away-rotations. Prior to the rotation, Elizabeth Wiant (788-3755, wiant.elizabeth@mhsil.com can help with locker assignments if you need one.

On the first day of the rotation please arrive no earlier than 7:30, as the anesthesiologists will be busy getting cases started prior to that. The anesthesiologists' office is in the main OR near OR 2 at the end of the hallway. Elizabeth Wiant or any OR personnel can direct you to the office if you need help. Once all the students arrive, you will get a brief tour of the OR including the front desk and preanesthesia holding area. Please watch the airway videos on the department website if you haven't already.

Daily Routine

Students are encouraged to set self-directed learning goals and to plan ahead for what you would like to accomplish each day. Arrive early enough to select a patient to see prior to surgery (which typically starts at 0715). If time allows, you are encouraged to perform a preanesthesia evaluation on a patient that you are interested in following. Present your findings to the anesthesiologist assigned to the case. Blank forms can be used during the patient interview and will not become part of the medical record (see below for more details). An anesthetic plan will be discussed and you can follow the patient to the OR. You are not obligated to stay in the OR during the entire surgery. Feel free to seek out new patients and learning opportunities.

In the OR, please introduce yourself to the CRNA and tell them what you'd like to accomplish (manage the airway, start an IV if needed, observe the entire case, etc.).

Speak to the anesthesiologist in charge (or any other available anesthesiologist) to determine which cases would be good for meeting your goals for the day (i.e. spinals, intubations, line placement, pediatric or OB exposure, etc). The in-charge anesthesiologist can be found on the main OR tracking board by the front desk and will be carrying phone #1 (see below). They can also help you look at the schedule for the next day to determine a good location for you to visit (main OR, Baylis day surgery, CVOR, etc).

If you have questions at any time during your rotation, feel free to contact Dr. Liberman (colin.liberman@gmail.com).

Textbook

Basics of Anesthesia, 7th edition by Pardo and Miller, available on Clinical Key

Course Requirements

1. Read the following chapters:
   - 9: Opioids
   - 10: Local Anesthetics
   - 13: Preoperative Evaluation and Medication
   - 16: Airway Management

   Anesthesia-track students should also read the following chapters:

   - 2: Learning Anesthesia
   - 8: Intravenous Anesthetics
   - 17: Spinal, Epidural, and Caudal Anesthesia
   - 20: Anesthetic Monitoring
   - 39: Postanesthesia Recovery

2. Airway Videos – These videos are found on the anesthesiology department website and should be watched early in (or even prior to) the rotation.

3. Introductory lecture – A PowerPoint presentation with audio is available on the department website. Please review this at your leisure and plan to meet with Dr. Liberman to go over any questions that you may have regarding it.

4. Procedure checklist – This list on the department website should serve as a reasonable goal for students to accomplish during their rotation (not graded, but encouraged).

5. Final Exam – Download from the department website and complete either individually or as a group. Meet as a group with Dr. Liberman or another faculty member to discuss the answers during the final week of your rotation.

Study Questions

Some optional self-directed study questions can be found on the department website. These can be discussed at your leisure with any attending anesthesiologist.

Hospital Locations

Besides working in the main operating room, students are welcome to rotate in different areas of the hospital. Each student should plan on going to ECT at least once during their rotation (available each M,W,F starting at 7:45 on the 5th floor). This is the best location to practice mask ventilation and to learn to start IVs (please one student at a time). Most pediatric cases are done at the Baylis outpatient center. The CVOR is the best location for invasive procedures such as central lines, arterial lines, and

double lumen endotracheal tubes. If you're looking for certain types of cases, any anesthesiologist should be able to help you view the upcoming schedule to help you plan when to visit other locations.

Procedures

Procedural checklists can be found on the department website. The checklists are not graded, but serve as a template for achieving a well-rounded experience in Anesthesiology. Students are welcome to participate in most procedures, but depending on the acuity of the case, patient factors, or timing of the procedure, you may be asked to observe or to assist in a minimal fashion.

Preanesthesia Evaluations

The final preanesthesia evaluation is performed by the attending anesthesiologist and entered into the electronic medical record. Blank paper forms are available in the preop-holding area for you to use when presenting to the anesthesiologist. One is attached for your reference. These forms do not become part of the medical record and are strictly used to help you present the case. The electronic forms automatically fill in vital signs, medications, allergies, and previous surgeries so you should not feel pressured to write all of these things down (but don't forget to mention them when pertinent!).

Strive to be brief when interviewing patients (around 10 minutes) and succinct when presenting. Our H&Ps are quite focused. You may need to look in the paper or electronic charts to find all pertinent information. High-yield areas for us include:

- Previous anesthetics and any complications
- Pertinent drug allergies
- Cardiac history along with any recent tests (stress tests, echo, cath reports, EKG)
- Pulmonary history, especially any history of recent illnesses or exacerbations
- Other major systemic diseases with anesthetic implications (e.g. ESRD, significant GERD, debilitating neuromuscular disease)
- Airway exam

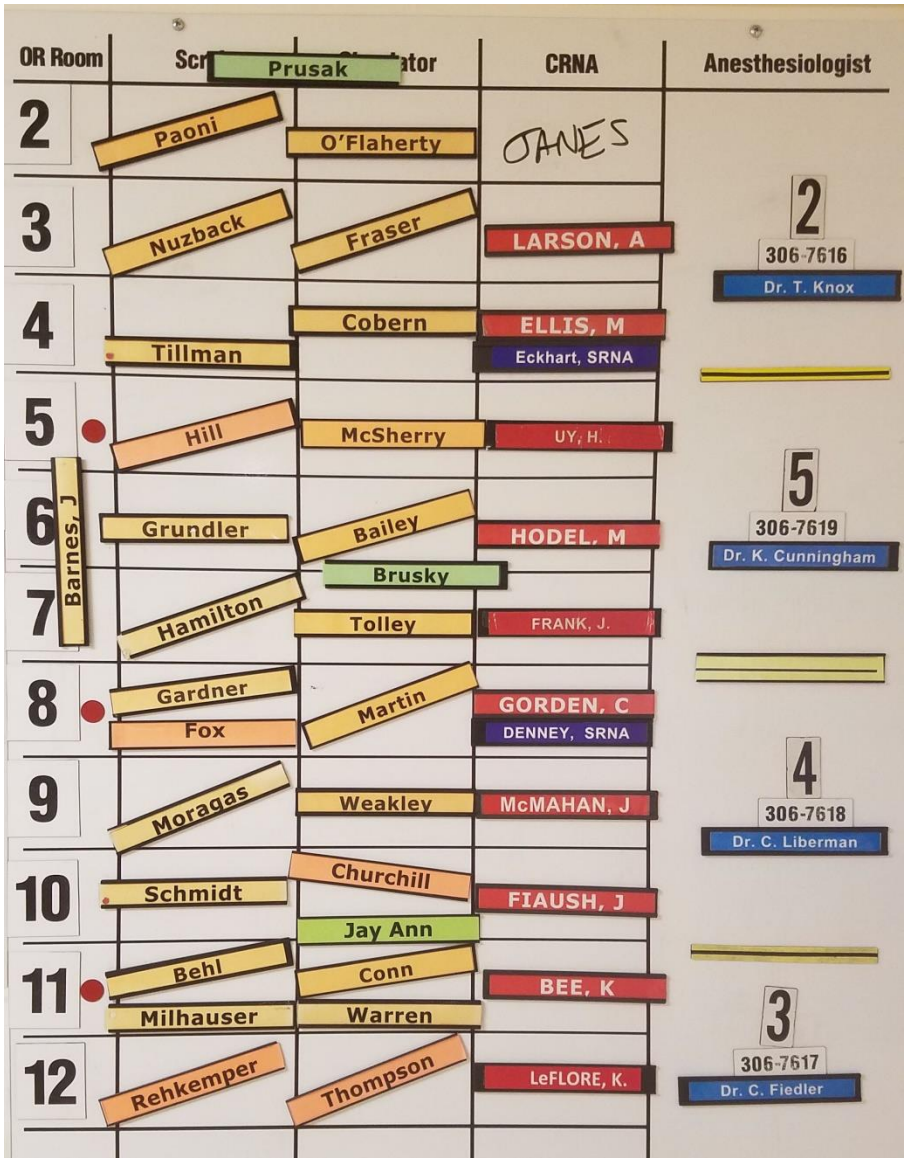
Tips for Success

This rotation is loosely organized to allow students the freedom to learn what they want to. It helps to be assertive if there are certain things that you want to see or do during the rotation. Keep in mind that we are a busy private practice group and occasionally don't have as much time as we'd like for teaching.

When looking for cases, avoid rooms with SRNAs (student nurse anesthetists). They get priority for airway management. They have purple magnets on the board by the main OR desk so you can tell which rooms they are working in (see picture). Very rarely they'll show up in ECT; if that's the case you'll have to find a different day to report.

Occasionally there may be competition for procedures from other sources (EM and orthopedic residents, EMT and paramedic students, RT students). They do not get priority over medical students (nor do you over them) so, again, it helps to be assertive.

Below is a picture of the OR assignments found by the front desk of the main OR. CRNAs are marked with red magnets for each room. In this instance, you can see that SRNAs have been assigned to OR rooms 4 and 8. You can also see the name of the anesthesiologist assigned to each group of rooms on the right side, along with phone numbers for each. In this example, Dr. Liberman is assigned to ORs 8,9, and 10 and is carrying phone #4 (306-7618). The in-charge anesthesiologist for the day will have phone #1 (306-7615). They are a good resource for finding cases when looking for something specific.



The next page shows an example of a blank pre-anesthetic evaluation that students can use as a template for presenting patients.

Memorial MEDICAL CENTER

PRE-ANESTHETIC EVALUATION

Name Room
Date Time
Proposed Procedure
Chief Complaint
Age: Sex: Ht: Wt: BP: HR: RR: Temp: SPO_2:

Previous Anesthesia History

Operations

Family Hx / Complications

Medications

B Blocker ❑ N/A
Last dose date/time
Contraindicated:

Allergies

SCIP Measures

DNR: Limited Full Code
DVT: Heparin Lovenox
Boot PSO
Glycemic Management ❑

Past Medical History / Review of Systems / Physical Exam

wnl	System	Comments / Exam
❑	**Airway/Neck Mouth/Teeth**	Mallampati classification: ❑ I ❑ II ❑ III ❑ IV
	❑ Known history of difficult airway	
	Neck Mobility: ❑ Full ROM ❑ Limited ROM	
	❑ Limited mouth opening	Comments:
	❑ Loose or missing teeth	
	❑ Caps/Crowns/Bridge/Partial/Dentures	
❑	**Respiratory**	❑ BBS
	❑ Asthma ❑ OSA/CPAP	
	❑ COPD ❑ Tobacco Use	
	❑ Home O_2	
❑	**Cardiovascular**	❑ S_1S_2
	❑ HTN ❑ PVD	
	❑ CAD	
	❑ MI	
	❑ CHF	
	❑ Dysrhythmias	
	❑ Valvular Disease	
	❑ Cardiac/Medical Clearance	Exercise tolerance
❑	**Gastrointestinal**	
	❑ Hepatitis	
	❑ Hiatal Hernia/GERD	NPO after
❑	**Neuromuscular**	
	❑ TIA / Stroke	
	❑ Arthritis	
	❑ Neuropathy	
	❑ Sz Disorder	
❑	**Renal / Endocrine**	
	❑ Diabetes	BG_____@_____
	❑ Renal Insuff'y / ESRD	
	❑ Thyroid	
❑	**Other**	
	❑ Malignancy	❑ Weight Loss
	❑ Steroids	❑ Morbid Obesity
	❑ Bleeding Disorder	❑ ETOH / Substance Abuse

CXR (Date_____)
EKG (Date_____)
Hgb / Hct (Date_____)
Electrolytes (Date_____)
T & C (Date_____)
Coags (Date_____)
Pregnancy Test (Date_____)
Other

Anesthetic Assessment and Plan

ASA PS I II III IV V E

Plan

Premed

Add'l Monitors

Postanesthesia Care Unit

❑ Discharge Criteria Met

_____ RN

_____ MD

Date:_____ Time:_____

Patient examined and available medical records reviewed. Any update or interval changes affecting the perioperative anesthestic care of the patient are included above.

I have discussed with the ❑ patient and/or ❑ other _____
the anesthetic plan, alternatives, pertinent risks, and complications.
He/she/they agree(s) to proceed. All questions answered.

_____ _____ _____
Physician Signature Date Time

Frequently Asked Questions

Q: If I'm looking for certain procedures, how do I know which cases to follow?

A: Some general ideas:

Intubations - Any surgery with the words "laparoscopic" or "robotic" in them, all gastric bypass cases, most ENT cases, all cases done in the prone position (such as lumbar spine surgery), all cervical spine surgeries, all CABG and heart valve surgeries.

Spinals – All total knee and hip replacements.

LMAs – Most non-laparoscopic and non-robotic gynecologic cases, many cystoscopies (ureteroscopies, holmium laser, TURPs), and many peripheral orthopedic cases (hand, wrist, foot, ankle).

IVs – All ECT patients prior to their treatment. Also, many patients will get a 2nd IV placed after induction, for example, all robotic surgeries, many larger abdominal surgeries (colon resection, whipple), and many multi-level spine cases.

Arterial Lines – All CABG and heart valve surgeries, all carotid endarterectomies, most intracranial surgeries, many thoracoscopy/thoracotomies.

Central Lines – All CABG and heart valve surgeries along with most kidney transplants. Other instances typically depend on patient comorbidities.

Peripheral Nerve Blocks – All total knee replacements get an adductor canal block. Most shoulder arthroscopies and all total shoulder replacements get an interscalene block. Most wrist fusions get a supraclavicular or infraclavicular block. Most ankle fusions and ORIFs get sciatic/popliteal blocks.

Q: Who can I talk to about trying to find specific cases or procedures?

A: Any available anesthesiologist and especially the in-charge anesthesiologist. When not seeing patients on 1E, we can usually be found in our office in the main OR near OR 2. We can also look ahead in the schedule to help you plan your week.

Q: What are some ideas to help me get started if I'm having trouble?

A: Watch the introductory PowerPoint – it describes many fundamental concepts of anesthesiology. Read some of the required chapters in the book and any others that interest you. Work on the final exam. Look at your procedure checklist and ask an anesthesiologist which cases would be good to help you complete it. Seek out Dr. Liberman – we can meet and discuss any topics that are interesting to you.