

<b>Faculty In Charge Of Course:</b>	Dr. Ana Lisa Ramirez-Chapman
<b>Participating Faculty:</b>	All Anesthesiology Faculty
<b>Location:</b>	Memorial Hermann Hospital, LBJ Hospital, Hermann Professional Building, LBJ Outpatient Surgery Center
<b>Offered:</b>	Blocks 1-11, and 13
<b>Max. # Students/Period:</b>	2

### Course Objective:

#### Material Covered:

This rotation is geared toward medical students who will work collaboratively with anesthesiologists in the future and wish to improve their understanding of various aspects of this important practice. The curriculum will include the basic science (physiology/pharmacology) of the specialty, the clinical practice in the inpatient and outpatient setting, the overall operating room flow and communication, and care of patients in the perioperative setting. The student, under the supervision of faculty and resident anesthesiologists, will evaluate patients preoperatively in various settings, administer anesthetics, and follow patients immediately postoperatively to treat symptoms associated with surgery and anesthesia provision. Depending on chosen career path, experience in anesthetic subspecialties will be arranged to supplement specialized learning. Students will learn airway management by all methods and intravenous line placement. Student may have the opportunity to place central and arterial lines and perform regional anesthetic procedures as deemed appropriate by the supervising faculty.

#### Skills Acquired:

By the end of the elective, the medical student should be able to:

##### Ethical/Legal goals:

- Describe the difference between capacity and competency and how it relates to proper patient consenting
- Explain the difference between in hospital and out of hospital code status and where each of these documents apply
- Describe the purpose of an advanced directive and how these apply to the peri-operative period
- Demonstrate appropriate consenting for various patients in various medical circumstances
- Identify correct surrogate medical decision makers for various types of patients in various peri-operative medical circumstances

##### Medical goals:

- Identify and utilize appropriate resources available to better understand optimal peri-operative care in your chosen specialty
- Review and recommend individualized medical treatments for patients with:
  - Uncontrolled perioperative pain, narcotic naïve and narcotic tolerant
  - Perioperative nausea and vomiting
  - Anxiety/Confusion
- Depending on your area of planned specialty, review and recommend individualized medical/anesthesiology plans for patients undergoing various medical and surgical procedures
- Improve communication skills in
  - Family communication in the perioperative period (providing bad news/communicating surgical or procedural outcomes with patient and family)
  - Discussion of appropriate peri-operative patient goals including code status with a patient and family
- Review the ERAS (early recovery after surgery) protocols most associated/related to your specialty of interest and identify ways these have been implemented in anesthesia care and how continued improvements can be made
- Review primary literature in your specialty or subspecialty of interest in regards to optimization of perioperative outcomes.
  - Perioperative temperature management
  - Glucose management
  - Medical co-morbidities that affect operative outcomes and how they can be best managed in the perioperative period
    - Renal disease
    - Pulmonary disease
    - Cardiovascular disease
    - DM
    - Chemotherapy and radiation therapy/other immunocompromising conditions
    - Surgical site management and surgical planning

##### Procedural Goals:

- In appropriate circumstances, students will gain hands on experience in
  - Airway management
  - IV line placement
  - Possible central line/arterial line placement
  - Possible assistance with regional blocks

### Activities of Elective:

**Number of New Patients/Student/Week:** 6-15

#### Responsibilities of Student for Assigned Patients:

Does history/physical:	Yes
Who critiques:	Attendings and Fellows
Follows patients, with appropriate notes as needed:	Yes
Who supervises:	Attendings, fellows, residents

Does student see ambulatory patients:	Yes (SADS and DSU patients pre-op)
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Procedures	Observe	Perform
Peri-operative patient and family communication	X	X
Code status discussion regarding the peri-operative period	X	X
Procedures	Observe	Perform
Assess patient capacity for consenting, perform patient consents	X	X
Identify correct surrogate decision maker and consent if patient unable to consent	X	X
Airway management	X	X
Endotracheal intubation	X	X
Peripheral IV placement	X	X
General Anesthesia	X	X
Regional Anesthesia	X	X
Arterial Catheterization	X	X
Central Line placement	X	X

#### Scheduled Duties of Student:

Frequency of rounds on patient:	Not applicable
Presents patients to preceptor or attending physician:	Yes
Weekly schedule of required teaching sessions:	See below no call or weekends unless special request depending on students' areas of interest. Consideration for surgical areas of interest and time of scheduled activities.

#### Describe Optional Rounds & Activities, If Any:

Each student will have 2 weeks of anesthesia in the operating room, 1 week of peri-operative assessment at various sites, and 1 week of acute pain and symptom management. One week of general anesthesia operating room time will be spent in provision of anesthesia in various sites including both inpatient and outpatient surgery center sites. The other week of operating room time will be spent in "specialty anesthesia" in their area of interest to become accustomed to care on the "other side of the drape" and learn about operating room flow and safe patient care. The other 2 weeks of general anesthesia time will be spent rounding with acute pain service, and seeing patients in various pre-operative settings including the clinic and, in the hospital, to become accustomed to the necessary work up and preparation required to provide safe anesthesia.

#### Other Required Activities:

Reading/Review of Current Literature:	Yes
Writing or Presenting A Paper:	Yes

#### Mandatory Attendance:

- Weekly medical student noon lectures with faculty
- Weekly Thursday morning Grand Rounds (with resident preceptors)

#### How Is Student Evaluated:

Students are evaluated by residents, faculty and staff with whom they have worked. In order to be evaluated, students must have the assigned resident or faculty scan the loaned QR code evaluation card and complete the online evaluation. A procedure log of both anesthesia and peri-operative care are due at the end of the elective. The final grade is based on performance, attendance and thoughtful reflective exercise completion.

#### Who Evaluates Student:

Attendings, fellows, residents

#### Unique Features Of This Elective:

This elective is intended to foster strong working relationships between anesthesiology and other specialties rather than focusing on medical students becoming residents in anesthesiology. Teaching/learning various aspects of anesthesiology and peri-operative management will be a one-on-one experience with anesthesia residents and faculty. The elective allows the medical student to be exposed to many different areas of anesthesiology and perioperative care as well as their specialty of interest. Students will also have the opportunity to combine physiology,

pharmacology, & clinical medicine with practical skills, and extensive hands on patient management.

“Basics of Anesthesiology” by Ronald Miller and Robert Stoelting is the elective’s suggested textbook electronically borrowed from the TMC Library. Other specialty specific resources will be the responsibility of the student.

Attendance Policy: The MS IV Elective attendance policy allows up to 4 days absence on an elective – for excused reasons, such as Residency Interview. These must be requested in advance of the actual absence. If the medical student does exceed the FOUR (4) absences, then the medical student is REQUIRED to take Saturday call (7-3). If the medical student exceeds FIVE (5) absences, then they will not receive a satisfactory completion of the elective.