Anesthesiology Clerkship Goals and Objectives

(last revised November 20, 2014)

At the conclusion of the Anesthesiology Clerkship, students will be able to:

1. Practice placement of intravenous angiocatheters.
2. Demonstrate recognition of the impact of surgical stress, anesthetic agents, and related drugs on normal cardiac and pulmonary physiology.
3. Demonstrate proficiency in mask ventilation and use of airway adjuncts.
4. List multiple modalities for treating acute post-operative pain.
5. Apply principles of medical knowledge to perioperative ventilator management.
6. Practice formulating an appropriate anesthetic plan for the defined surgical procedure and patient with and without comorbidities.
7. Demonstrate appropriate professional and ethical behaviors related to perioperative patients and other healthcare professionals.
8. Demonstrate the ability to present a case in an oral format.
9. Perform a focused history and physical exam.
10. Demonstrate effective communication with patients and families.
11. Identify life-threatening conditions in the perioperative period.
Anesthesiology 302 – Introduction to Anesthesia

Curriculum and Syllabus

I. Preoperative Evaluation
   a. Review of prior records
   b. Anesthesia-oriented history
      i. Prior anesthetics and outcomes (including family problems)
      ii. Allergies
      iii. Medications
      iv. Focused review of systems
      v. NPO status
   c. Physical exam
      i. Airway
      ii. Cardiac
      iii. Pulmonary
   d. Studies
      i. Appropriate Use
      ii. Interpretation

II. Technical Skills
   a. Airway Management
      i. Mask ventilation
         1. Maintaining an airway
         2. Airway adjuncts
      ii. LMA
      iii. Introduction to Intubation
   b. IV Placement

III. Physiology
   a. Pulmonary
      i. Normal
         1. Oxygenation support
         2. Ventilatory support
   b. Cardiovascular
      i. MAP = CO x SVR
      ii. Determinants of myocardial oxygen consumption and delivery
   c. Aspiration Risk
   d. Physiologic monitoring
      i. Cardiovascular
         1. Electrocardiogram
         2. Blood pressure
      ii. Respiratory
         1. Pulse oximetry
         2. End tidal carbon dioxide
         3. Ventilatory

IV. Pharmacology
   a. The primary goal is to understand the physiological effects, indications, and contraindications for the following medications
i. Inhaled
   1. Volatile Agents
   2. Nitrous Oxide

ii. IV Anesthetics
   1. Propofol
   2. Etomidate
   3. Midazolam

iii. Muscle Relaxants
   1. Succinylcholine
   2. Rocuronium
   3. Vecuronium
   4. Reversal Agents
      a. Neostigmine
      b. Glycopyrrolate

iv. Opioids
   1. Fentanyl
   2. Morphine

v. Hemodynamic Agents
   1. Ephedrine
   2. Phenylephrine
   3. Esmolol
   4. Labetalol

vi. Aspiration Prophylaxis
   1. Metoclopramide
   2. H₂ Blockers
   3. Sodium Citrate (Bicitra)

V. Postoperative Pain Management
   a. Intravenous
   b. Neuraxial
   c. Regional
Rotation Structure

The rotation is structured as follows:

**Day 1**

There are five lectures:

- Ventilatory Management
- Preoperative Evaluation
- Anesthesia Pharmacology
- Introduction to Acute Pain
- Airway Management and Simulation

Attendance is expected at all lectures. Following the last lecture, report to the Operating Room, locate the anesthesia schedule for the next day, and sign up for a room based on your resident assignment. Before leaving, perform a preoperative evaluation of your patients through chart review and locate your residents to discuss the cases. Patient charts are available in the Preoperative Registration in the first floor of the hospital.

**Days 2 through 9**

You should show up at 0645 in scrubs to help set up your operating room. Be sure to introduce yourself to the resident or attending with whom you will be working. Following room setup, you should join your anesthesiologist for the preoperative evaluation of your patient. Be sure to introduce yourself to your patient.

Your anesthesiologist will determine which tasks are appropriate for your participation. This may include IV placement, mask ventilation, and possibly LMA placement or intubation.

You should regularly be performing preoperative evaluations of patients. As a case is winding down, you should discuss with your anesthesiologist when it would be appropriate for you to excuse yourself from the case to see the next patient. After evaluating the patient, you should present the patient to your anesthesiologist.

Keep your course syllabus with you in the operating room. It should serve as the basis for discussion between you and your anesthesiologist. Check off topics as they are covered so that you know what is left to talk about.

**Day 10**

This is the exam day, please follow the posted schedule.

**NOTE**

We understand that third year students rotating through the surgery subspecialty elective have surgery lecture and testing requirements which conflict with this schedule. These will be accommodated. Contact Maquita Irvin (mirvin@mfa.gwu.edu, (202) 715-4753) early in the rotation to make arrangements.
Student Technical Skill Checklist
Anesthesia 302 – Introduction to Anesthesia

Name: ________________________________

Date: ________________________________

Activities are to be signed off by resident, attending, or nurse as appropriate

### Morning Room Setup

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### Preoperative Evaluations and Presentation

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### Mask Ventilation

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