

Elective Description

Campus: Southeast (Fargo)

Department: Surgery

Elective/Experience Title: Anesthesiology

Course Number: SURG 9212-02

Location of Elective: Essentia Health – Fargo, ND

Preceptor(s): Melanie Brumwell, MD Helen Dosch, DO Neil Karjalainen, MD Jeffrey Ottmar, MD

Period(s) Offered: All

Course Prerequisites: Completion of Surgery Clerkship

Number of students per period: 1

Revised Curriculum Phase(s): 2 & 3

Purpose: To provide education and experience in the care of patients requiring anesthesiology services.

Objectives: Following successful completion of this elective, the student will be able to:

1. Evaluate surgical patients in order to stratify operative risks and then to present strategies to decrease the risk for non-emergency procedures. (Y4 1, 14; Program 3.1, 3.4)
2. Determine conditions that require rapid sequence intubation. (Y4 10 Program 3.5.1)
3. Determine the level of depth of sedation in the anesthetized patient and recognize physiologic states that alter anesthetic levels. (Y4 1, Program 2.2, 2.4, 2.7)
4. Establish central and peripheral vascular access. (Program 3.6)
5. Place non-invasive monitoring devices and interpret basic physiologic data utilizing these monitoring devices. (Program 2.7, 3.3, 3.6)
6. Perform direct laryngoscopy for endotracheal intubation. (Program 3.6)
7. Describe strategies to prevent or minimize postoperative nausea, vomiting, pain, delirium, and adverse cardiac events. (Y4 14, Program 2.4, 2.6, 2.7, 3.4)
8. Demonstrate regional anesthetic techniques and discuss potential complications of regional anesthesia. (Program 2.1, 2.4, 2.5)
9. Explain indications for epidural, spinal, and combined spinal epidural anesthesia in obstetric and general surgery patients. (Program 2.4, 2.6)
10. Recognize status change(s) present in patients during the preoperative, operative, and postoperative settings. (Y4 1, 10; Program 3.1, 3.5.1)

Instructional Activities: During this elective, the student will be involved in/experience:

1. Performing pre-surgical anesthetic evaluations, including Mallampati and ASA classifications.
2. Participating in the management of the intra-operative patient, including focused discussion with attending MDA regarding how altered physiologic disease states or specific surgical techniques affect the management of the anesthetized patient.
3. Interpreting monitoring device data transmitted from electrocardiograms, pulmonary and central venous catheters, trans-esophageal echocardiography and pulse oximeters.
4. Performing basic regional anesthetic techniques under direct observation.

Criteria for Grading: During and following this elective, the preceptor will:

1. Utilize the standardized UNDSMHS senior elective evaluation form.
2. Evaluate by direct observation the student's skills in performing complete and accurate examinations of the pre-surgical patient prior to administering anesthesia. (Objective 1)

**Continue to page two for the remaining criteria for grading*

Criteria for Grading Continued from page 1:

3. Judge by direct observation the student's skills in performing direct laryngoscopy, regional anesthesia, and invasive line placement. (Objective 6, 4, 8)
4. Evaluate the student's professionalism by direct observation and from feedback received from the surgical staff.
5. Evaluate the student's ability to interpret monitoring device data. (Objective 5)
6. Discuss with the medical student special situations that require rapid sequence intubation (Objective 2).
7. Discuss different levels of sedation as applied to various procedures requiring anesthesia in patients with multiple comorbidities (Objective 3).
8. Evaluate the student's understanding of strategies used to prevent postoperative nausea and vomiting, delirium, and adverse cardiac events. (Objective 7)
9. Evaluate the student's understanding of pain management as it applies to multimodal analgesia and regional anesthesia (Objective 7, 8, and 9)
10. Evaluate the student's ability to recognize perioperative changes in physiology and depth of anesthesia (Objectives 3 and 10)
11. Discuss with the medical student common complications of various anesthetic techniques and surgical procedures. (Objectives 1,7,8, 10)