

Elective Description

Campus: Southeast (Fargo)

Elective/Experience Title: Pediatric Critical Care Medicine

Location of Elective: Sanford Children's PICU – Fargo, ND

Department: Pediatrics

Course Number: PED 9207

Preceptor(s): Nisha Agarwal, MD; Aretas Braziunas, MD; Scott Engum, MD; Jacob Fish, MD & CJ Mischel, MD

Period(s) Offered: All

Number of students per period: 1 per period

Course prerequisites: Pediatrics Clerkship Completion

Revised Curriculum Phase(s): 2 & 3

Purpose: To provide education and experience in the care of children requiring critical care services.

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

1. Demonstrate an understanding of the concepts of circulatory perfusion, cardiac output, oxygen delivery, oxygen consumption and cellular energy metabolism, and discuss the role of derangements of these functions in critical illness and injury.
2. Recognize signs and symptoms of respiratory failure, circulatory failure, shock, sepsis, and seizures. Discuss the immediate interventions to stabilize children with such life threatening conditions. Describe the role of airway management, IV fluid therapy, and nutrition in pediatric critical illness. Understand basic trauma management. Evaluate a patient in a coma.
3. Describe appropriate diagnostic evaluation of the critically ill child post stabilization.
4. Describe the multidisciplinary nature of pediatric critical care. Show ability to interact with multiple physicians, surgeons, other specialists, and ancillary personnel such as respiratory therapists, nurses, social workers, and clergy. Explain the intensivist's role as coordinator of total patient care.
5. Explain the relationship of molecular biology to the care of critically ill patients in such areas as tissue oxygenation, ARDS, sepsis, and multiple organ failure syndrome.
6. Apply techniques of physiologic monitoring to the management of the critically ill child.
7. Report ways by which children and their families cope with serious illness and injury.

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

1. Daily patient rounds on assigned patients in which student is responsible for forming appropriate assessment and care plans.
2. Daily discussions of specific patient problems based on the reading and instructional assignments given to the student by the preceptor.
3. Common procedures performed in the setting of the pediatric intensive care unit under the close supervision of the preceptor.
4. The calculation of enteral and parenteral nutritional requirements of the critically ill child.
5. Weekly Pediatric Grand Rounds.
6. A team approach (including family involvement) to the management of the ill child.
7. Patient care presentations by student to the preceptor.

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

1. Utilize the standardized UNDSMHS senior elective evaluation form.
2. Evaluate the quality of patient evaluations and daily notes.
3. Evaluate the quality of performance of the instructed procedures.
4. Evaluate the quality of oral and written presentations to the preceptor of assigned readings.