

Pediatric Intensive Care Rotation

DESCRIPTION

The resident will partake in a clinical rotation in the pediatric intensive care unit.

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REQUIRED READINGS

Rogers Textbook of Pediatric Intensive Care, or equivalent text.

EDUCATIONAL GOALS

To give the first year pediatric surgery resident an appreciation for the intensive care of the child, particularly as it pertains to surgical conditions, and to familiarize the resident with pediatric physiology and the social dynamics of pediatric intensive care, including the management of the polytrauma patient. This four week experience will be supervised by the critical care faculty and will confer a graduated level of responsibility.

LEARNING OBJECTIVES

At the end of the rotation, the resident will become familiar with the following, based on the general core competencies:

Medical Knowledge & Patient Care

- 1) Fluid, Nutrition and Electrolyte management in the critically ill child.
- 2) Respiratory support required to manage the critically ill child:
 - a. This includes the application both non-invasive and invasive ventilation techniques
 - b. Exposure to the use of inhalational gases (e.g. Nitric oxide, heliox)
 - c. Exposure to both conventional, high frequency ventilation, and use of extracorporeal oxygenation devices
 - d. Bedside flexible bronchoscopy with and without lavage.
 - e. Mastery of bag-mask ventilation and insertion of laryngeal mask airway device.

- 3) Cardiovascular support
 - a. Vascular Access techniques (with and without bedside ultrasound guidance)
 - b. Pharmacologic support for cardiac output
- 4) Neurologic care
 - a. Appropriate use of muscle relaxants, sedation, analgesia in the ICU setting
 - b. Monitoring of the neurologically injured child
 - c. Management of abnormal intracranial pressure
- 5) Multidisciplinary care issues including (but not limited to):
 - a. Infectious Diseases
 - b. Hematologic diseases
 - c. Gastroenterology
 - d. Imaging studies for the critically ill infant and child
 - e. Transport medicine

Systems-Based Practice

The resident will:

- 1) Recognize the need for referral to appropriate subspecialists and demonstrate appropriate communication skills within the multidisciplinary PICU environment.
- 2) Make efficient use of medical resources including awareness of the benefits of pediatric intensive care, awareness of the cost to society of pediatric intensive care, and rational use of laboratory and radiologic studies.
- 3) Demonstrate familiarity with the discharge planning process and appropriate follow-up care.

Professionalism

The resident will:

- 1) Understand the ethical principles governing decisions to initiate, terminate or modify intensive care; exhibiting facility in speaking with families about the appropriate or inappropriate application of technology; supporting families in such situations.
- 2) Demonstrate organization of information and prioritization of problems.
- 3) Participate in end-of-life decisions and discussions.

Practice-Based Learning & Improvement

The resident will:

- 1) Exhibit evidence of continuing review of contemporary medical literature as indicated by comments on rounds, in conferences and other settings.
- 2) Show enthusiasm for fostering medical education among trainees and colleagues.
- 3) Demonstrate familiarity with the medical literature as it relates to common pediatric critical care problems.

Interpersonal and Communication Skills

The resident will exhibit competence in public speaking.

Medical Knowledge

The resident will use and be taught evidence-based medicine in the practice of pediatric critical care medicine.

Learning Activities (See Tables 2 & 3 under *Competency-Based Goals and Objectives*)

1. Learning activities will include daily rounds, didactic teaching conferences, and M&M reviews. The resident assigned to the PICU service will be required to attend and participate in the weekly conferences. These include weekly didactic lectures, multidisciplinary rounds, service review (“check-out”), fellows’ board review, and combined cardiology/critical care conference.
2. While rotating in the PICU, the resident will supervise the pediatric residents and students, work with the PICU attendings and fellows.
3. The resident will take call every fourth night, in-house. He will be paired on call with the third year PICU fellow.