

PEDIATRIC INTENSIVE CARE UNIT

The senior Pediatric Residents will spend 2 or 3 months in the PICU during their pediatrics residency. These months are balanced with those in the Intensive Care Nursery to maximally expose the resident to 6 months of critical care service over the three year residency. Call is every fourth night.

Residents are required to have sufficient knowledge of their patients in order to present them to the team on rounds, and to construct a differential diagnosis and treatment plan. They are required to appropriately document all patient care information, including admission notes, daily progress notes, discharge notes and transfer notes unless excused by the attending of record.

Residents are required to complete the didactic educational series. In addition, residents are required to incorporate the education of medical students when appropriate.

Goals, Objectives and Resident Responsibilities of the Pediatric Intensive Care Experience:

Patient Care: Residents are expected to provide patient care that is compassionate, appropriate and effective for the promotion of health, prevention of illness, treatment of disease and at the end of life. They will

- Gather accurate, essential information from all sources, including medical interviews, physical examinations, medical records and diagnostic/therapeutic procedures
- Make informed recommendations about preventive, diagnostic and therapeutic options and interventions that are based on clinical judgment, scientific evidence, and patient preference
- Develop, negotiate and implement effective patient management plans and integration of patient care
- Observe and/or perform the diagnostic and therapeutic procedures considered essential to the practice of pediatric critical care medicine
- Learn the overall care of acutely ill children, including patients with major medical illnesses, surgical patients, patients with significant trauma, and patients with congenital heart disease

Medical Knowledge: Residents are expected to demonstrate knowledge of established and evolving biomedical, clinical and social sciences, and the application of their knowledge to patient care and the education of others. Residents will apply an open-minded, analytical approach to acquiring new knowledge, access and critically evaluate current medical information and scientific evidence. They will develop clinically applicable knowledge of the basic and clinical sciences that underlie the practice of pediatric critical care medicine and apply this knowledge to clinical problem-solving, clinical decision-making, and critical thinking. Specifically, the residents will

- Complete the didactic training program in pediatric critical care medicine

The PICU lecture series curriculum

CPR/DNR
Intentional alteration in consciousness
The body fluids
Acid base issues
Electrolytes other than Sodium
Blood and blood products
Respiratory failure: the airway
Respiratory failure: Hypoxia and Hypercarbia
Mechanical ventilation
More on mechanical ventilation
Renal failure/renal replacement therapy
Shock and the physiology of venous return
Sepsis
Cardiac Failure: systolic and diastolic dysfunction
Pharmacologic support of the circulation
Congenital heart disease 1
Congenital heart disease 2
Rhythm and dysrhythmias
Head injury, increased ICP
Brain death
Ethical issues in the ICU

- Learn to evaluate acutely ill patients and to determine which patients require care in the intensive care unit
- Learn how to use the equipment and perform procedures necessary to appropriately monitor and support critically ill children
- Become familiar with the invasive and non-invasive methods of monitoring and supporting critically ill patients
- Learn the process by which decisions are made with respect to the care of acute critical illnesses
- Learn general concepts of medical reversibility and futility

- Procedures to be reviewed and learned:

Endotracheal intubation
Set up, mechanical ventilation
Bag mask ventilation
Arterial puncture
Peripheral arterial line
Peripheral venous line
Central venous line
Basic cardiac life support
Advanced cardiac life support
Placement, chest tube
Placement, nasogastric tube

Venipuncture
Lumbar puncture
Tracheostomy tube change

Practice-Based Learning and Improvement: Residents are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices, and

- Identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes and processes of care
- Analyze and evaluate practice experiences and implement strategies to continually improve the quality of patient practice
- Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care
- Use information technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education

Interpersonal and Communication Skills: Residents are expected to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams, and

- Provide effective and professional consultation to other physicians and health care professionals and sustain therapeutic and ethically sound professional relationships with patients, their families, and colleagues
- Use effective listening, nonverbal, questioning, and narrative skills to communicate with patients and families
- Interact with consultants in a respectful, appropriate manner
- Maintain comprehensive, timely, and legible medical records
- Complete evaluations of the attending, staff and rotation
- Work with the multidisciplinary team involved in the care of acutely ill patients and the role that the various team members serve
- Learn to communicate with parents and other family members of critically ill patients in a compassionate manner

Professionalism: Residents are expected to demonstrate behaviors that reflect a commitment to continuous professional development, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession and society, and

- Demonstrate respect, compassion, integrity, and altruism in relationships with patients, families, and colleagues
- Demonstrate sensitivity and responsiveness to the gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviors and disabilities of patients and professional colleagues
- Adhere to principles of confidentiality, scientific/academic integrity, and informed consent

Systems-Based Practice: Residents are expected to demonstrate both an understanding of the contexts and systems in which health care is provided, and the ability to apply this knowledge to improve and optimize health care, and

- Understand, access and utilize the resources, providers and systems necessary to provide optimal care
- Understand the limitations and opportunities inherent in various practice types and delivery systems, and develop strategies to optimize care for the individual patient
- Apply evidence-based, cost-conscious strategies to prevention, diagnosis and disease management
- Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processes of care
- Understand the economics of pediatric intensive care medicine