

RRUMC PEDIATRIC ANESTHESIOLOGY GOALS AND OBJECTIVES

GOALS	EDUCATIONAL OBJECTIVES	CLINICAL RESPONSIBILITIES / ACTIVITIES	EVALUATIONS
<p>Patient Care: To provide the resident with clinical experience in a variety of pediatric cases, and in particular, the more challenging cases, that is compassionate, appropriate, and effective.</p>	<ol style="list-style-type: none"> 1. Explain the anatomical differences between the various groups: neonates, infants, child, and adult. 2. Explain the physiological changes as the pediatric patient progresses from the newborn stage to an adult. 3. Recognize the distinctive cognitive developmental stages of childhood. 4. Understand the impact of the physiological changes on the pharmacokinetics of a variety of inhalational agents, opioids, muscle relaxants and local anesthetics 5. Participate in the preoperative evaluation of inpatients and outpatients for surgery and assess the appropriateness of a pediatric patient for surgery. 6. Delineate the work-up of a healthy child with a newly discovered murmur. 7. Explain the risks and limitations of general anesthesia and the common regional anesthetic blocks used for children. 8. Explain the risks of airway problems in a child with an upper respiratory tract infection. 9. Administer sedation, general and regional anesthesia to ASA 1 and ASA 2 pediatric patients. 10. Initiate a basic resuscitation of a neonate infant or child. 11. Recognize and initiate appropriate treatment/management of a patient with malignant hyperthermia. 12. Explain heat loss and heat maintenance in the neonate. The resident should also be able to describe four intraoperative methods to conserve heat 13. Explain the problems that can occur with a child that has a muscle abnormality such as Duchenne's musculodystrophy or strabismus 14. Calculate the intraoperative fluid requirements of a child 15. Regularly perform postoperative evaluations of patients previously cared for by the anesthesia resident 16. Show competency in those skills needed to provide peri-operative care for the pediatric patient. These skills include intravenous line placement, intubation and limited regional anesthesia techniques. 	<ol style="list-style-type: none"> 1. Cases will represent all surgical subspecialties, including urology, orthopedics, cardiac, otolaryngology, plastic surgery, ophthalmology, neurosurgery, etc. The patient population will include predominately those from ASA class 2 and greater. 2. Residents will be scheduled a 1-month rotation in the CA-1 or CA-2 year. Residents will be scheduled for pager call. 3. A daily phone call is made by the residents to their assigned faculty for the next day to discuss the anesthetic plan for the cases. Any anesthetic or medical issues are researched and discussed. Final plans for patient optimization are also confirmed. 4. Residents may participate in simulation. 	<ol style="list-style-type: none"> 1. Monthly on-line faculty evaluations. 2. 360 evaluations. 3. Quarterly meeting with program director.
<p>Medical Knowledge: To gain knowledge of the anatomical, physiological and pharmacological concepts, principles and practices needed to become an anesthesia consultant in matters pertaining to the pediatric patient.</p>	<ol style="list-style-type: none"> 1. Normal and Abnormal Physical and Psychological Development 2. Comparative Anatomy and Physiology of the: <ol style="list-style-type: none"> a) Airway b) Pulmonary tree c) Thoracic cavity and its components d) Cardiac system e) Renal system f) Central and peripheral nervous system g) Hematopoietic system 3. Pharmacokinetics and Pharmacodynamics (in the pediatric patient) of: <ol style="list-style-type: none"> a) Inhalational anesthetics b) Intravenous anesthetics 	<ol style="list-style-type: none"> 1. Preanesthetic evaluations. 2. Individual supervision and instruction in the operating room. 3. Directed independent study. 4. Annually scheduled lectures. 5. Simulation curriculum. 6. Daily lectures on a one-on-one basis as determined by the cases of the day. Subjects include topics listed under Educational Objectives. 	<ol style="list-style-type: none"> 1. Monthly on-line faculty evaluations. 2. Quarterly meeting with program director.

	<ul style="list-style-type: none"> c) Local anesthetics d) Opioids, barbiturates and benzodiazepines e) Vasoactive agents <ol style="list-style-type: none"> 4. Metabolic and neuroendocrine effects of surgery 5. Pathophysiology and therapy of infection and sepsis 6. Thermoregulation 7. Fluid and electrolyte management 8. Pain management 9. Technical skills will be gained the following areas: <ul style="list-style-type: none"> a) Airway management of the pediatric airway <ul style="list-style-type: none"> i Bag-mask ventilation ii Laryngoscopy with a variety of blades iii Laryngeal mask insertion iv Fiberoptic intubation b) Regional Anesthesia <ul style="list-style-type: none"> i Caudal, lumbar and thoracic epidural placement ii Peripheral nerve block 10. Establishment of vascular access <ul style="list-style-type: none"> a) Intravenous line placement b) Central venous line placement c) Arterial line placement 11. Monitoring <ul style="list-style-type: none"> a) Precordial stethoscope use b) EKG c) NIBP monitoring d) Pulse oximetry e) Temperature monitoring f) Neuromuscular blockade monitoring 		
<p>Practice Based Learning: To be able to investigate and evaluate their own patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.</p>	<ol style="list-style-type: none"> 1. Learn to critically evaluate the pediatric anesthesiology literature and apply scientific evidence to decision making. 2. Demonstrate the ability to utilize information technology, and primary texts to expand their knowledge base. 3. Understand how to assess the impact of one's actions on outcomes. 4. Seek and respond to constructive criticism to improve performance in the six core competencies 	<ol style="list-style-type: none"> 1. Obtain feedback from the supervising faculty. 2. Review and discuss supporting literature with the supervising faculty. 3. Participation in departmental Q/A. 4. Faculty lectures on statistics and critical literature evaluation. 5. Attend resident simulation. 	<ol style="list-style-type: none"> 1. Daily faculty-resident interaction in the operating room. 2. Self evaluations. 3. Monthly on-line faculty evaluations. 4. Quarterly meeting with program director.
<p>Interpersonal and Communication Skills: To be able to demonstrate communication skills that result in effective information exchange and appropriate interaction with colleagues, surgeons, patients, and ancillary personnel.</p>	<ol style="list-style-type: none"> 1. Understand the importance of effective communication between the pediatric anesthesiologist and the pediatric surgeon, OR nurses, and ICU nurses. 2. Learn techniques to decrease patient and patient family anxiety. 3. Learn effective communication techniques during period of severe stress, anxiety and complex patient care. 	<ol style="list-style-type: none"> 1. Modeling by the anesthesia faculty 2. Interact with patients and their families. 3. Discuss preanesthetic evaluation and plan with the supervising faculty and pertinent members of the health care team. 4. Attend resident simulation. 5. Experience teaching medical students in the operating room. 	<ol style="list-style-type: none"> 1. Daily faculty-resident interaction in the operating room. 2. 360 evaluations. 3. Monthly on-line faculty evaluations. 4. Feedback medical students. 5. Quarterly meeting with program director.

<p>Professionalism: Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.</p>	<ol style="list-style-type: none"> 1. To understand the legal and ethical issues involved in obtain consents for pediatric patients. 2. Demonstrate caring and respectful behaviors when interacting with patients and their families. 3. Maintain sensitivity towards and learn communication techniques with patients and families of different cultural backgrounds who possibly speak little English. 4. Learn how to create and maintain an atmosphere of collegiality and mutual respect with all providers involved in the care of patients. 5. Learn how to discuss and record cases with complications and/or poor outcomes. 6. Adhere to institutional and departmental standards and policies. 7. Demonstrate respect, compassion, integrity and ethical behavior. 8. Demonstrate ability to appropriately take on, share and delegate patient care responsibilities. 9. Demonstrate the ability to effectively balance one's own personal affairs with clinical and educational duties as outlined in this document. 10. Demonstrate a commitment to ongoing professional development. 	<ol style="list-style-type: none"> 1. Modeling by the anesthesia faculty. 2. Attendance at conferences where many of these issues are discussed. 	<ol style="list-style-type: none"> 1. Daily faculty-resident interaction in the operating room. 2. 360 evaluations. 3. Monthly on-line faculty evaluations. 4. Quarterly meeting with program director.
<p>Systems Based Medicine: To be familiar with the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.</p>	<ol style="list-style-type: none"> 1. Learn the cost of the drugs, monitoring equipment and overall procedures involved in pediatric surgery. 2. Practice cost-effective health care without compromising quality of care. 3. Understand the complex systems that form the foundation for pediatric surgical patients. 4. Learn how to effect improved operating room efficiency safely. 5. Appreciate the complex interactions that go on between pediatricians, pediatric surgeons and anesthesiologist in the overall hospital management of these complex patients. 6. Be able to assist patient's families in dealing with system complexities. 7. Learn how to consult or work as a team member with health care managers or providers to assess, coordinate, and improve health care. 8. Understand how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources. 9. Understand how choices in patient care and other professional practices affect other healthcare professionals, the healthcare organization and the larger society and how these elements of the system affect the practice of pediatric anesthesia. 	<ol style="list-style-type: none"> 1. During their experiences in the, the pediatric wards and surgical ICUs, the trainees will interact with the pediatric, intensive care, surgical and nursing services in a unique environment distinct from their usual operating room practice which will require sensitivity to structured and multidisciplinary, simultaneous patient care. 2. Attend resident simulation. 	<ol style="list-style-type: none"> 1. Daily faculty-resident interaction in the operating room. 2. 360 evaluations. 3. Monthly on-line faculty evaluations. 4. Quarterly meeting with program director.