

Medical Knowledge Goals Pediatric Anesthesiology

1. Synthesize current knowledge of cardiovascular, respiratory, renal, hepatic, and central nervous system physiology, pathophysiology, and therapy; metabolic and endocrine effects of surgery and critical illness; infectious disease pathophysiology and therapy; coagulation abnormalities and therapy; normal and abnormal physical and psychological development; congenital anomalies and developmental delay
2. Synthesize current knowledge of medical and surgical problems common in children; use and toxicity of local and general anesthetic agents; airway problems common in children; pain management in pediatric patients of all ages; ethical and legal aspects of care; transport of critically-ill patients; trauma, including burn management; organ transplantation in children; and post-anesthetic care and critical care management
3. Compare and contrast differences in anatomy, physiology, and pharmacology of the fetus, premature neonate, full term neonate, and infant.
4. Discuss the concerns and issues related to anesthetic agents and the developing brain
5. Describe pertinent differences in the pharmacology of commonly utilized anesthetic agents and medications as they relate to pediatric patients.
6. Describe Pediatric Advanced Life Support concepts and algorithms
7. Define the monitoring principles and modalities commonly used in both simple and complex pediatric patients undergoing anesthesia and/or sedation.