



PEDIATRIC ANESTHESIA

THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA *Objectives of Training and Specialty Training Requirements in Anesthesia*

Specific Objectives in CanMEDS Format

OVERALL GOALS

Given a pediatric patient presenting for any type of surgery, the resident will outline a plan of management and institute a safe anesthetic for that patient. The plan should encompass the unique physiology of the pediatric patient and also awareness of the psychological impact of the experience for the child and its family.

ROTATION OBJECTIVES

Medical Expert

- The resident will be required to outline the important differences between adult, pediatric, neonate, and premature infant anatomy and physiology, concentrating on those that affect the conduct of anesthesia.
- The resident will be able to perform an appropriate pre-operative evaluation of a pediatric patient using relevant historical, physical and laboratory information.
- The resident will know currently acceptable criteria for accepting a child for anesthesia as well as guidelines for outpatient anesthesia and pre-operative fasting.
- The resident will be able to describe the differences in the adult and pediatric airway. The resident's goal is to become proficient in the assessment of the pediatric airway and in the management of the difficult airway, including the selection of appropriate equipment.
- Residents will be able to institute appropriate fluid and electrolytes and temperature management in the perioperative period for surgical pediatric patients.
- The resident will demonstrate an appropriate approach to and management of common postoperative issues, including postoperative pain, agitation, nausea, and vomiting, PACU discharge criteria and criteria for unplanned admission.
- The resident will describe the special considerations of the premature infant coming for surgery and also will understand the longer term problems of providing anesthetic care to patients who were born prematurely but present for surgery at a later date.
- The resident will describe the anesthetic management and potential complications of patients presenting for common procedures in the following areas: ophthalmology, dental surgery, elective ENT procedures, and kyphoscoliosis.

- The resident will describe the anesthetic implications of the following disorders: hematologic disorders including anemia, sickle cell states, thalassemia, ITP, hemophilia; atypical plasma cholinesterases; diabetes mellitus; non-cardiac surgery in children with congenital heart diseases; Down's syndrome; malignant hyperpyrexia; cystic fibrosis; renal insufficiency or failure.
- The resident will describe the anesthetic management of patients presenting for common neurosurgical procedures, including: hydrocephalus; increased intra-cranial pressure; intracranial hematoma; craniosynostosis; myelomeningocele; encephalocele; spinal cord tumour; intracranial tumour; common neuron-radiologic techniques.
- The resident will be familiar with the perioperative management of children with common pediatric cardiovascular anomalies including: Tetralogy of Fallot; patent ductus arteriosus; aortic coarctation; atrial septal defects; ventricular septal defects.
- The resident will describe the anesthetic management of common congenital defects that may require surgery during the neonatal period. As a minimum the resident will describe the management of the following: congenital lobar emphysema; congenital diaphragmatic hernia; tracheoesophageal fistula and esophageal atresia; congenital hypertrophic pyloric stenosis; omphalocele and gastroschisis; biliary atresia.
- The resident will discuss, diagnose, and treat the more common forms of pediatric lung disease. In the newborn, the resident will discuss the importance of pulmonary surfactant; respiratory distress syndrome of the newborn and abnormal breathing patterns. In the older child, the resident will diagnose and treat croup, bronchitis, cystic fibrosis, and epiglottitis. The resident will describe in detail the anesthetic management of upper airway obstruction in a child.
- The resident will utilize the appropriate regional anesthetic techniques in pediatric anesthesia and pediatric analgesia.
- The resident will be familiar with the practical aspects of providing anesthesia for children outside of the operating room including anesthesia for MRI, CT scan, and other investigative procedures.

Communicator

- The resident will be able to use a variety of approaches in dealing with children of all ages in their preparation for anesthesia and surgery.
- The resident will recognize the psychological impact of hospitalization, anesthesia and surgery on both the patient and their family.
- The resident will provide accurate, appropriate information in a timely fashion to the family.



- The resident will ensure that informed consent is obtained prior to undertaking invasive procedures.
- The resident will effectively communicate with all members of the treatment team using effective verbal communication skills.
- The resident's written communication, including charting of the perioperative events, will consist of concise and clear documentation.

Collaborator

- The resident will demonstrate the capacity to consult effectively with the neo and perinatologist, the pediatricians and the surgeons to assure optimal management of patients.
- The resident will work effectively as an integral member of the perioperative team. This will include the ability to resolve conflicts, provide feedback and assume a leadership role where appropriate.

Leader

- The resident will utilize resources effectively to provide anesthesia services to the pediatric patient.
- The resident will practice according to national standards and provincial guidelines for the management of pediatric patients.

Health Advocate

- The resident will demonstrate increasing expertise and leadership in maintaining and improving the standards of pediatric anesthesia practice and patient care.

Scholar

- The resident should have the ability to critically review the literature and understand and evaluate new information and research.
- The resident should contribute to the learning of others.
- The resident should contribute to the development of new knowledge when possible.

Professional

- The resident should demonstrate an increasing sense of responsibility and "case ownership"
- The resident should deliver the highest quality of care with integrity, honesty and compassion.
- The resident should demonstrate appropriate respect of the opinion of patients and team members in the provision of quality pediatric care.

Reviewed: April 2012, Dr. Granton