

# CanMEDS Rotation Objectives – PEDIATRIC ANESTHESIA

## RCPS Emergency Medicine Residency Program

### Department of Emergency Medicine

### University of Alberta

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*\*While all objectives may not be accomplished in a single rotation, the aim is for the resident to actively seek learning opportunities to fulfill these objectives while on a particular rotation. Many of these objectives will overlap with other rotations. By the end of the residency program, all objectives should be covered.*

## Medical Expert

The learner should gain knowledge of the following:

- Pediatric airway anatomy, including differences from the adult airway
- Airway management including an approach to the difficult pediatric airway
- Mechanical ventilation, including:
  - Different modes of ventilation
  - Weight-based tidal volumes
  - Age-based respiratory rates
- Pharmacology, indications and contraindications for:
  - Anaesthetic agents
  - Paralytics
  - Inhalational anaesthetics
  - Analgesics
- Fluid resuscitation and basic physiologic differences in the pediatric patient, including blood and blood product administration in the pediatric patient
- Temperature homeostasis
- Management of laryngospasm
- Local and regional anesthetic agents
- NPO regimens
- Out-of-OR issues and management of pediatric patients in these settings

The learner should gain knowledge of, and where applicable, experience in the following technical skills:

- Use of alternative and rescue airway devices (if available), including:
  - Pediatric LMA
  - Illuminated stylet
  - Bougie
  - Glidescope
  - Needle cricothyrotomy and transtracheal jet ventilation
- Invasive monitoring
- Local and regional anaesthetic techniques and procedures

The learner should gain experience in the following technical skills:

- Oral and nasopharyngeal airway device use
- Bag-valve-mask ventilation, including:
  - Selection of appropriately sized mask and bagger

- Ability to bag with age-appropriate rates and volumes
- Endotracheal intubation with and without paralysis, including:
  - Knowledge and use of different laryngoscopy blades
  - Use of cuffed and uncuffed endotracheal tubes
  - LMA's
- Inhalational inductions
- Vascular access, especially peripheral intravenous cannulation (goal of at least 25 during 4 week block)

## **Communicator**

The learner should strive to demonstrate:

- Effective communication with patients and family
- The ability to describe child's clinical condition to consultants using appropriate terminology
- Accurate and timely record keeping
- Concise and accurate preoperative histories

## **Collaborator**

The learner should strive to:

- Recognize the role of other members of the anesthesia and operating suite team
- Interact effectively and respectfully with other team members

## **Leader**

The learner should strive to:

- Allocate finite health care resources wisely
- Be capable of planning the equipment and supplies necessary for the pediatric airway
- Manage time efficiently
- Demonstrate team leadership skills

## **Health Advocate**

The learner should strive to:

- Advocate appropriately on behalf of patients

## **Scholar**

The learner should strive to:

- Critically appraise anesthesia literature, as applicable
- Integrate current literature into daily activities

## **Professional**

The learner should:

- Demonstrate integrity and honesty
- Demonstrate compassion and respect in all patient encounters
- Learn and apply ethical principles appropriately
- Be aware of personal limitations and seek assistance when appropriate