



THE UNIVERSITY OF BRITISH COLUMBIA

Pediatric Critical Care Medicine Postgraduate Training Program

ELECTIVE SPECIFIC COMPETENCIES FOR *ANESTHESIA*

Terminal Objectives:

The competent pediatric critical care resident/fellow will demonstrate their ability to:

1. Distinguish situations requiring intervention for protection or patency of airways.
2. Perform basic and advanced airway maneuvers.
3. Manage airway emergencies.

Enabling Competencies:

1. Ability to assess airway patency and recognize signs of partial airway obstruction.
2. Recognize important differences between adolescent, pediatric and neonatal airways - and different approaches to their management.
3. Perform interventions (eg patient position, oxygen delivery, airway adjuncts) appropriate to the situation to maintain airway patency.
4. Perform assisted and controlled ventilation with bag - valve mask, and JR circuit.
5. Describe indications, contraindications and complications of airway intervention.
6. Discuss equipment and appropriate sizes required for the intubation of pediatric patients.
7. Perform oro-tracheal intubations.
8. Perform naso-tracheal intubations – know the indications and contraindications for choosing this method of intubation.
9. Perform rapid sequence induction with appropriate preparatory steps and medications.
10. Describe variations of rapid sequence induction in patients with a variety of complex critical illnesses. eg., hemodynamic compromise, intracranial pathology and acute bronchospasm.

11. Describe the optimal timing and method of intervention in emergency situations such as CNS depression, chest trauma, shock, respiratory infections, asthma, BPD, etc.
12. Describe manoeuvres to confirm proper endotracheal tube placement.
13. List complications of muscle relaxation associated with intubation.
14. Discuss the mechanism of action, side effects and contraindications of succinylcholine
15. Choose an appropriate muscle relaxant for patient in whom succinylcholine is contraindicated.
16. List a differential diagnosis for delayed reversal of nondepolarizing muscle relaxants.
17. Describe the clinical presentation and treatment of malignant hyperthermia.
18. Understand the indications, contraindications and procedure for laryngeal mask placement and ventilation.
19. Understand the indications, contraindications and procedure in the use of a variety of alternate airway devices used in management of a difficult airway.
20. Understand an algorithm for managing an airway in situations of “failure to intubate/ventilate”.
21. Understand the principles of measuring End Tidal CO₂ and Oxygen saturation in intubated patients.
22. Be introduced to pediatric cardiac anesthesia

Reviewed January 2013

GENERAL ANESTHETIC AGENTS

Enabling Competencies:

1. For sedation to facilitate intubation in the Pediatric Intensive Care Unit and the Emergency Department, discuss the use (including indications, contraindications, side effects, the advantages and disadvantages) of:
 - Benzodiazepines
 - Opioids
 - Muscle Relaxants
 - Pentothol
 - Propofol
 - Neuroleptics
 - Ketamine
 - Lidocaine
 - Antagonists - Naloxone and Flumazenil
2. Discuss the use of sedation for pediatric patients in the Pediatric Intensive Care Unit and the Emergency Department and describe a technique for conscious sedation in such patients.
3. Demonstrate the ability to choose and use appropriate drugs for sedation and facilitation of intubation in the various clinical situations that occur in a hospital setting.
4. Discuss and demonstrate the use of anesthetic agents and equipment for transport of patients requiring airway or ventilatory support by land or air transport.
5. Discuss and demonstrate the reversal of anesthetic agents in the context of post anesthetic management of patients.