

OBJECTIVES FOR PEDIATRIC SURGERY TRAINEES

ON OFF-SERVICE ROTATIONS

Pediatric Intensive Care Unit (PICU)

1. Medical Expert/Clinical Decision-Maker

A- Knowledge Objectives

- i. anatomy, physiology and pathophysiology of the respiratory system
- ii. the principles and theory of mechanical ventilation and other methods of respiratory support
- iii. principles and interpretation of invasive and non-invasive hemodynamic monitoring
- iv. physiology and pathophysiology of shock
- v. the pathophysiology and management of heart failure and cardiac arrhythmias across the pediatric age-groups
- vi. anatomy and physiology of patients with congenital heart disease; pre and post operatively
- vii. pathophysiology, investigation and monitoring of raised intracranial pressure
- viii. criteria required for the clinical diagnosis of brain death and indications for ancillary investigation
- ix. the major pathophysiologic entities associated with neuromuscular disease
- x. the indications and ethical implications of long term mechanical ventilation
- xi. the pathophysiology of renal failure and liver failure
- xii. the differential diagnosis of an acute abdomen in the Pediatric Critical Care Unit
- xiii. the various components and effects of pediatric trauma in the critical care unit
- xiv. the complications of pediatric oncologic diseases and their treatment
- xv. differential diagnoses of thrombotic states and bleeding disorders
- xvi. fluid, electrolyte and nutritional requirements of critically ill patients
- xvii. transport physiology and problems associated with patient transport
- xviii. extra-corporeal membrane oxygenation (ECMO): indications in neonates and older children, techniques of cannulation, monitoring, and complications

B- Skills Objectives

- i. application of skills from PALS, APLS and ATLS
- ii. intravenous (both peripheral and central) and intraosseous access in a critically ill child
- iii. airway management including placement of oro- and naso-tracheal intubations, and rapid sequence intubation
- iv. insertion of hemodialysis catheters for CRRT
- v. exposure to transcutaneous synchronized cardioversion, defibrillation and pacing
- vi. interpretation and trouble-shooting measurements from ICP monitor

2. Communicator

- i. to understand the issues involved in communicating bad news
- ii. to be able to explain complicated medical issues regarding diagnosis and prognosis
- iii. demonstrate respect and understanding for the role of each member of the health care team
- iv. effectively communicate with subspecialty services during consultation requests and follow-up discussions
- v. recognize the importance of clear documentation in patient's health care record
- vi. demonstrate conflict resolution skills
- vii. effectively communicate appropriate positive and negative feedback on performance of junior trainees

3. Collaborator

- i. to consult effectively and in a timely manner with other members of the PCCU health care team and with subspecialty services
- ii. to communicate care plans clearly and precisely to all members of the allied health teams
- iii. to demonstrate leadership and work in a collaborative manner with fellow learners

4. Manager

- i. understand the demands of working in a PCCU including the personal physical and emotional stressors associated with the environment
- ii. effectively balance time and prioritize between patient care, learning needs, stress management and outside activities
- iii. understand issues regarding health resource allocation and the impact on patient management

5. Health Advocate

- i. understand the diverse determinants of health across patients
- ii. is aware of the medico-legal considerations in the PCCU
- iii. is aware of societal programs available for prevention of many PICU conditions such as head injury, near drowning etc.
- iv. understand the impact of critical care on the long-term functional outcome and quality of life of patients
- v. demonstrate proficiency with obtaining informed consent
- vi. understand the concepts of "best-interest" and "futility"
- vii. provide caring and compassionate end-of-life care to patients and their families

6. Scholar

- i. facilitate education of other learners in the PICU
- ii. application of evidence based medicine principles and current literature to patient management decisions on a daily basis
- iii. participate in teaching sessions on basic critical care topics

7. Professional

- i. exhibit appropriate personal and interpersonal professional behaviour in interactions with other health care staff and patient and family members
- ii. understand the impact of personal moral and ethical value systems on the care of individual patients and families
- iii. ensure detailed and complete follow-up and handover of all patients under the residents care
- iv. demonstrate effective conflict resolution skills and appropriate code of conduct

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