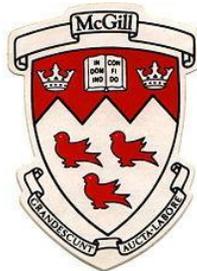


**Adult Intensive Care Unit Rotation
(Tertiary care setting)
SMBD -Jewish General Hospital
Montreal General Hospital
Royal Victoria Hospital**

Introduction

ICU rotations offer the resident the opportunity to manage critically ill patients with various problems of the type they would encounter in the Emergency Department setting. As the ICU experience allows residents to follow these patients for a longer period of time, a greater understanding of pathophysiology and prognosis can be gleaned which will ultimately aid the resident in his future decisions and therapies initiated in the Emergency Department. A number of useful skills and procedures, which have Emergency Department applications, are also learned.

The three sites available for tertiary care ICU are the Jewish General Hospital, a high volume multi-ethnic centre, the Royal Victoria Hospital, a transplant and cardiac surgery centre, and the Montreal General Hospital, a trauma centre. Each offers the resident a unique experience in managing acutely ill patients under the tutelage of intensive care specialists.



**Rotation Specific Learning Objectives
CCFP-EM Residency Program**

INTENSIVE CARE UNIT ROTATION

OVERALL GOAL OF THE ROTATION

To utilize the relevant competencies contained within the CanMEDS-FM roles to rapidly evaluate, diagnose, and treat the critically ill ICU patient, with special

emphasis on those clinical presentations and procedures common to the Emergency Department.

EDUCATIONAL OBJECTIVES

ROLE OF FAMILY MEDICINE EXPERT:

The resident should:

- Develop the ability to rapidly perform a history and physical exam appropriate for a critically ill patient
- Develop sound judgment regarding the assessment and management of critically ill patients
- Develop the ability to generate a differential diagnosis and initiate immediate stabilization of the critically ill patient
- Develop a fundamental understanding of the pathophysiology, presenting signs and symptoms, diagnosis, and management of critically ill patients who may present with the following disease states:

- Ø acute coronary syndromes
- Ø cardiac arrhythmias
- Ø pericarditis and myocarditis
- Ø respiratory failure
- Ø pneumonia
- Ø multisystem organ failure syndrome
- Ø sepsis
- Ø the acute abdomen
- Ø gastrointestinal hemorrhage
- Ø perforated hollow viscous
- Ø renal failure
- Ø hepatic failure
- Ø coma, status epilepticus, and neuromuscular diseases
- Ø endocrine disturbances of the critically ill patient
- Ø disturbances of water and electrolytes in the critically ill patient
- Ø acid base disorders
- Ø hypothermia and hyperthermia
- Ø polytrauma and head injury
- Ø burns

Ø the severely poisoned patient

- Develop expertise in procedural skills relevant to the management of the critically ill patient including:

- Ø Endotracheal intubation
- Ø Bagvalve mask ventilation
- Ø CPAP/BiPAP
- Ø Cricothyrotomy *
- Ø Tube thoracostomy
- Ø Arterial line placement
- Ø Central Venous Access (including the use of US for line placement)
- Ø Transvenous cardiac pacing
- Ø Nasogastric Tube insertion
- Ø Foley catheter insertion

*rare procedure – if not actually performed, should be able to describe technique

- Develop expertise with monitoring critically ill patients including:

- Ø ABG interpretation
- Ø Invasive hemodynamic monitoring
- Ø Intracranial pressure monitoring
- Ø Pulse oximetry
- Ø End tidal CO₂ monitoring
- Ø ECG rhythm monitors
- Ø Ventilator monitoring

- Demonstrate a working knowledge of common ventilator modes and the indications for each as well as troubleshooting common ventilator problems
- Develop expertise in safe use of medications common in the resuscitation of critically ill patients suffering from shock, sepsis, fluid and electrolyte abnormalities, cardiac failure, cardiac dysrhythmias, renal failure, hepatic failure and toxicologic emergencies
- Develop a fundamental understanding of the pathophysiology, presenting signs and symptoms, diagnosis, and management of the various forms of shock
- Demonstrate a working knowledge of the following problems of long term ICU patients:

- ∅ Coagulation disorders
- ∅ Nutrition
- ∅ Transportation of the critically ill patient
- ∅ Pain, anxiety and sleep
- ∅ Rehabilitative needs

- Demonstrate the appropriate use of consultants and multidisciplinary team members in critically ill patients
- Demonstrate an understanding of the legal and ethical issues surrounding the care of critically ill patients
- Demonstrate a fundamental understanding of the diagnosis of brain death and issues around tissue and organ donation

ROLE OF COMMUNICATOR

Overall Goal

The resident will act to facilitate the doctor-patient relationship and establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy.

The resident will demonstrate expertise in the ability to

- Communicate with the patient and their family in a way that takes into account the patients own experience of the illness (feelings, expectations, ideas) and the impact of the illness and ICU experience on the lives of patients and families, considering such factors as age, gender, socio-economic status, cultural and religious/spiritual values.
- Communicate with the members of the ICU health care team in a way that respects the skills of team members and facilitates an optimal team based approach to the care of the critically ill patient
- Effectively communicate with consultants
- Keep legible, coherent and complete written medical records including the ability to summarize a patients ICU care when the patient is transferred to the ward
- Clearly articulate a summary of a patient's problem list and care plan to the multidisciplinary ICU team during daily rounds
- Compassionately deliver bad news including death-telling
- Understand issues related to patient confidentiality

- Communicate effectively with the emergency department care team when acting as a representative of the ICU team that has been consulted

ROLE OF COLLABORATOR:

Overall Goal

The resident will act to facilitate the doctor-patient relationship and establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy.

- Develop an understanding of the role of specialist consultants in the ICU
- Maintain collegial relationships with the team members in the ICU including ICU attending physicians, resident colleagues, consultants, nurses, respiratory therapists, spiritual care representatives and physiotherapists
- Participate in interdisciplinary team meetings, demonstrating the ability to respect both the expertise and limitations of the other team members
- Respect team ethics including confidentiality, resource allocation and professionalism

ROLE OF MANAGER

Overall Goal:

The resident will play a central role in the organization of the care delivered to patient during their stay in the intensive care unit. They will coordinate the members of the health care system and utilize resources in a way that sustains and improves the health of their patient population.

- The resident should be able to effectively manage the care of multiple critically ill patients in the ICU
- The resident should be able to serve equally effectively as a leader or member of a team
- Understand the effective use of patient-related databases, computer based medical information and the use of medical informatics
- Demonstrate an ability to understand the importance of appropriate allocation of healthcare resources
- Develop an approach to balancing patient care responsibilities with other personal and family responsibilities
- Develop an understanding of the principles of Quality Improvement as they relate to the care of critically ill patients

ROLE OF HEALTH ADVOCATE

Overall Goal

The resident will use their role as an ICU resident to influence and advance the health and wellbeing of patients

The resident will develop expertise in the ability to

- Evaluate patients with respect to determining their status regarding determinants of health (i.e. unemployment) and implement a disease prevention strategy tailored to each patient's unique status regarding those determinants of health
- Obtain informed consent and measurement of capacity
- Understand living wills, advanced directives, durable power of attorney, and personal directives.
- Understand the concept of medical futility and understand how to discuss this idea with patients and their families

ROLE OF SCHOLAR

Overall Goal

To demonstrate a commitment to self-learning and the creation, translation, and dissemination of medical knowledge.

DEMONSTRATE EXPERTISE IN THE ABILITY TO

- Self-identify learning needs and make use of available learning resources in the ICU setting including the Human Patient Simulator, medical data bases on-line in the ICU, and the local expertise of physicians, nurses, respiratory therapists, social workers, spiritual care representatives and other members of the ICU team
- Understand evidence based medicine and clinical practice guidelines as they relate to the critically ill patient
- Facilitate the learning of students, patients, colleagues through a learner-centered approach to teaching
- Learn how to give and receive effect feedback regarding teaching skills

ROLE OF PROFESSIONAL

Overall Goal

To display commitment to an ethical practice and high personal standards of behavior in a manner that is commensurate with the importance of the doctor-patient relationship.

- The resident will display professional attitudes and behaviors, including:

- Honesty, integrity, reliability, compassion, respect, altruism and a sincere commitment to patient well being

- The resident will be punctual for all learning activities and patient care events

- The resident will follow through on assigned tasks

- The resident will maintain an appearance that conveys a sense of dignity commensurate with the importance of the patient-physician interaction

- The resident will balance personal and professional priorities to ensure maintenance of personal health during an 8- week rotation in the ICU