

University of Ottawa Critical Care Medicine Resident Objectives: Clinical Rotation-Specific Objectives Months 9-10

CanMEDS Roles	CanMEDS Key Competencies	Methods To Facilitate Achievement of Competency
<p>1. Medical Expert a. Knowledge:</p>	<p><u>First Year Critical Care Residents:</u></p> <ul style="list-style-type: none"> a) Anatomy, physiology and pathophysiology of the respiratory system b) Principles and theory of mechanical ventilation and other methods of respiratory support c) Principles of invasive and non-invasive hemodynamic monitoring d) Physiology and management of myocardial ischemia, congestive heart failure, cardiogenic shock and cardiac arrhythmias e) Diagnosis and management of brain death and/or organ transplantation f) Major pathophysiologic entities associated with neuromuscular disease g) Physiology and management of renal failure and renal replacement therapy h) Drug interactions in renal and hepatic failure i) Differential diagnosis and management of intra-abdominal sepsis j) Differential diagnosis and management of sepsis in the ICU patient k) Diagnosis and management of upper and lower gastrointestinal hemorrhage l) Pathophysiology and management of acute hepatic failure m) Management of complications from oncologic diseases n) Perioperative management of high-risk surgical patients o) Management of drug overdose and toxicology in critically ill patients p) Differential diagnosis of common thrombotic and coagulopathic conditions q) Sedation and analgesia requirements for critically ill patients r) Fluid, electrolyte and nutritional requirements of critically ill patients s) Transport physiology and problems associated with patient transport <p><u>Second Year Critical Care Residents:</u></p> <ul style="list-style-type: none"> a) Independent clinical management of (and recognition of controversies in) the above conditions. <p>The ability to provide instruction in the above categories to junior house staff</p>	<ul style="list-style-type: none"> • ICU daily patient rounds • ICU daily x-ray rounds • ICU sign-over rounds • ICU daily core lecture series for rotating off-service residents • Weekly Critical Care Residents core lecture & small group discussion sessions • Self-directed reading • Fellow seminars • Monthly Critical Care Journal club

<p>b) Technical skills:</p>	<p><u><i>First Year Critical Care Residents:</i></u></p> <ul style="list-style-type: none"> a) Recognition of the ABC's of a critically ill patient b) Obtain and perform measurement of all vital signs, including oxygen saturation and non-invasive blood pressure c) Intravenous access in a critically ill patient d) Insertion of femoral, internal jugular and subclavian venous catheters e) Insertion of a Swan-Ganz catheter f) Airway management including performance of endotracheal intubation g) Maintenance and operation of intracranial pressure (ICP) monitors h) Insertion of orogastric and nasogastric tubes, including Stengsten-Blakemore tube i) Insertion of Foley catheters j) Insertion of hemodialysis catheters k) Performance of flexible bronchoscopy in the intubated patient l) Insertion of thoracostomy tubes and thoracentesis m) Performance of lumbar puncture <p><u><i>Second Year Critical Care Residents:</i></u></p> <ul style="list-style-type: none"> a) Proficiency in the bedside operation of the Swan-Ganz catheter b) Proficiency in flexible bronchoscopy of the awake patient c) Proficiency in the skills listed under the requirements for first year fellows d) The ability to provide instruction in the above skill sets to junior house staff 	<ul style="list-style-type: none"> • Supervised performance of procedures on ICU patients • Anesthesiology elective and off-site elective rotations • National Acute Critical Events Simulations (ACES) course • Biannual high-fidelity simulator sessions
<p>2. Communicator</p>	<p><u><i>First Year and Second Year Critical Care Residents:</i></u></p> <ul style="list-style-type: none"> a) To understand the issues involved in communicating end-of-life issues with families of critically ill patients b) To convey complicated medical information and related issues in simple terms to families of critically ill patients c) To develop the ability to communicate with families and the medical team in times of medical and/or family crises d) To effectively and appropriately communicate positive and negative 	<ul style="list-style-type: none"> • Daily communication with families for updates on patient condition • Participation in monthly rotating ICU resident evaluations

	<p>feedback on performance of junior house staff</p> <p><u>Second Year Critical Care Residents:</u></p> <p>a) To perform the above skills independent of staff supervision</p> <p>b) To supervise junior house staff and first-year Fellows in the above categories</p>	<ul style="list-style-type: none"> • Participation as lead physician in family meetings
3. Collaborator	<p><u>First and Second Year Critical Care Residents:</u></p> <p>a) To communicate effectively and in a timely manner with consulting services</p> <p>b) To communicate care plans clearly and precisely to all members of the allied health teams</p> <p>c) To work in a collaborative manner with fellow learners</p> <p>d) The ability to provide instruction and guidance to first year Fellows and junior house staff in the above categories</p>	<ul style="list-style-type: none"> • Interaction with consultation services and staff physicians for patient care • Participation as team leader in daily ICU patient rounds • Coordinate patient care for all patients in the ICU • Facilitation of bimonthly ICU presentations done by off-service residents
4. Manager	<p><u>First and Second Year Critical Care Residents:</u></p> <p>a) The ability to effectively balance time between patient care, learning and stress management</p> <p>b) The ability to manage and recognize effects of fatigue on patient care and safety</p> <p>c) To effectively prioritize a heavy workload</p> <p><u>Second Year Critical Care Residents:</u></p> <p>a) To acquire the managerial skills necessary to effectively run an ICU</p> <p>b) To acquire the ability to assume the role of final decision-maker</p> <p>c) To understand the basic principles and implement strategies for risk</p>	<ul style="list-style-type: none"> • Discussion of time issues with ICU staff physicians • Use of organizational aids such as ICU website, network drive, etc. • Participation as junior attending staff for daily ICU rounds and on-call schedule • Participation in morbidity

	management in the ICU	and mortality reviews
5. Health Advocate	<p><u>First and Second Year Critical Care Residents:</u></p> <p>a) To familiarize oneself with the relative costs of different diagnostic and treatment modalities</p> <p>b) To familiarize oneself with programs available for prevention of many critical illnesses, such as trauma, alcohol and tobacco addiction, etc.</p> <p>c) To demonstrate proficiency with obtaining informed consent</p> <p>d) To demonstrate an understanding of the concept of futility</p> <p>e) To provide instruction and guidance to first year Fellows and junior house staff in the above categories</p>	<ul style="list-style-type: none"> • Discussion of cost and issues on rounds with attending ICU staff physicians and pharmacists • Participation in family discussions • Participation in obtaining informed consent from families for special procedures and clinical trials
6. Scholar	<p><u>First Year Critical Care Residents:</u></p> <p>a) To acquire the skills necessary to submit an academic publication or presentation</p> <p>b) To facilitate the education of other learners in the ICU</p> <p>c) To demonstrate a basic understanding of research study design, grant and manuscript preparation</p> <p><u>Second Year Critical Care Residents:</u></p> <p>a) To organize and present Critical Care rounds</p> <p>b) To lead informal teaching sessions on basic critical care topics</p>	<ul style="list-style-type: none"> • Presentation in ICU Fellow Core Lecture series • Presentation in ICU daily core rounds for rotating off-service residents • Presentation in Critical Care Journal Club • Instruction during daily ICU patient rounds • Participation in at least one research / education / CQI project