

**University of Ottawa Critical Care Medicine Resident Objectives: Clinical Rotation-Specific Objectives Months 3 – 8 CIVIC**

CanMEDS Roles	CanMEDS Key Competencies	Methods To Facilitate Achievement of Competency
<p><b>1. Medical Expert</b>  a. Knowledge:</p>	<p><u>First Year Critical Care Resident:</u></p> <ul style="list-style-type: none"> <li>a) Anatomy, physiology and pathophysiology of the respiratory system</li> <li>b) Principles and theory of mechanical ventilation and other methods of respiratory support</li> <li>c) Principles of invasive and non-invasive hemodynamic monitoring</li> <li>d) Physiology and management of myocardial ischemia, congestive heart failure, cardiogenic shock and cardiac arrhythmias</li> <li>e) Diagnosis and management of brain death and/or organ transplantation</li> <li>f) Pathophysiology, monitoring and investigation of raised intracranial pressure</li> <li>g) Management of head injury in critically ill patients</li> <li>h) Management of subarachnoid hemorrhage in critically ill patients</li> <li>i) Physiology and management of renal failure and renal replacement therapy</li> <li>j) Drug interactions in renal and hepatic failure</li> <li>k) Differential diagnosis and management of intra-abdominal sepsis</li> <li>l) Differential diagnosis and management of sepsis in the ICU patient</li> <li>m) Diagnosis and management of upper and lower gastrointestinal hemorrhage</li> <li>n) Pathophysiology and management of acute hepatic failure</li> <li>o) Management of critically ill trauma patients</li> <li>p) Perioperative management of high-risk surgical patients</li> <li>q) Management of high-risk post-op vascular surgery patients</li> <li>r) Management of complications from oncologic diseases</li> <li>s) Management of drug overdose and toxicology in critically ill patients</li> <li>t) Differential diagnosis of common thrombotic and coagulopathic conditions</li> <li>u) Sedation and analgesia requirements for critically ill patients</li> <li>v) Fluid, electrolyte and nutritional requirements of critically ill patients</li> </ul>	<ul style="list-style-type: none"> <li>• Distribution of relevant educational citations by CD</li> <li>• ICU daily patient rounds</li> <li>• ICU daily x-ray rounds</li> <li>• ICU sign-over rounds</li> <li>• ICU daily core lecture series for rotating off-service residents</li> <li>• Weekly Critical Care Resident core lecture &amp; small group discussion sessions</li> <li>• Self-directed reading</li> <li>• Critical Care Resident seminars</li> <li>• Monthly ICU Journal club</li> </ul>

	<p>w) Transport physiology and problems associated with patient transport</p> <p><u>Second Year Critical Care Resident:</u></p> <p>a) Independent clinical management of (and recognition of controversies in) the above conditions.</p>	
<p>b) Technical skills:</p>	<p><u>First Year Critical Care Resident:</u></p> <p>a) Recognition of the ABC's of a critically ill patient</p> <p>b) Obtain and perform measurement of all vital signs, including oxygen saturation and non-invasive blood pressure</p> <p>c) Intravenous and intra-arterial access in a critically ill patient</p> <p>d) Insertion of femoral, internal jugular and subclavian venous catheters</p> <p>e) Insertion of a Swan-Ganz catheter</p> <p>f) Airway management including performance of endotracheal intubation</p> <p>g) Maintenance and operation of intracranial pressure (ICP) monitors</p> <p>h) Insertion of orogastric and nasogastric tubes, including Stengsten-Blakemore tube</p> <p>i) Insertion of Foley catheters</p> <p>j) Insertion of hemodialysis catheters</p> <p>k) Performance of flexible bronchoscopy in the intubated patient</p> <p>l) Insertion of thoracostomy tubes and thoracentesis</p> <p>m) Performance of lumbar puncture</p> <p><u>Second Year Critical Care Resident:</u></p> <p>a) Bedside operation of the Swan-Ganz catheter</p> <p>b) Proficiency in flexible bronchoscopy of the awake patient</p> <p>c) Proficiency in the skills listed under the requirements for first year fellows</p>	<ul style="list-style-type: none"> <li>• Supervised performance of procedures on ICU patients</li> <li>• Anesthesiology elective and off-site elective rotations</li> <li>• National Acute Critical Events Simulations (ACES) course</li> <li>• Biannual high-fidelity simulator sessions</li> </ul>
<p><b>2. Communicator</b></p>	<p><u>First Year and Second Year Critical Care Resident:</u></p> <p>a) To understand the issues involved in communicating end-of-life issues with families of critically ill patients</p>	<ul style="list-style-type: none"> <li>• Observation and participation in family meetings held by Attending ICU staff</li> </ul>

	<p>b) To convey complicated medical information and related issues in simple terms to families of critically ill patients</p> <p>c) To develop the ability to communicate with families and the medical team in times of medical and/or family crises</p> <p>d) To effectively and appropriately communicate positive and negative feedback on performance of junior house staff</p> <p><u>Second Year Critical Care Resident:</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"> <li>• Daily communication with families for updates on patient condition</li> <li>• Participation in monthly rotating ICU resident evaluations</li>   <li>• Participation as lead physician in family meetings with staff supervision as required</li> </ul>
<p><b>3. Collaborator</b></p>	<p><u>First and Second Year Critical Care Resident:</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>	<ul style="list-style-type: none"> <li>• Interaction with consultation services and staff physicians for patient care</li> <li>• Participation as team leader in daily ICU patient rounds</li> <li>• Coordinate patient care for all patients in the ICU</li> <li>• Facilitation of bimonthly ICU presentations done by off-service residents</li> </ul>
<p><b>4. Manager</b></p>	<p><u>First and Second Year Critical Care Resident:</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>	<ul style="list-style-type: none"> <li>• Discussion of time issues with ICU staff physicians</li> <li>• Use of organizational aids such as Critical Care website, network drive, etc.</li> </ul>

	<p>c) To effectively prioritize a heavy workload</p> <p><u>Second Year Critical Care Resident:</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 management in the ICU</p>	<ul style="list-style-type: none"> <li>• Participation as junior attending staff for daily ICU rounds and on-call schedule</li> <li>• Participation in morbidity and mortality reviews</li> </ul>
<p><b>5. Health Advocate</b></p>	<p><u>First and Second Year Critical Care Resident:</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>	<ul style="list-style-type: none"> <li>• Discussion of cost and issues on rounds with attending ICU staff physicians and pharmacists</li> <li>• Participation in family discussions</li> <li>• Discussion of futility and ethics with ICU staff physicians and nurses</li> <li>• Participation in obtaining informed consent from families for special procedures and clinical trials</li> </ul>
<p><b>6. Scholar</b></p>	<p><u>First Year Critical Care Resident:</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>	<ul style="list-style-type: none"> <li>• Presentation in Critical Care Resident Core Lecture series</li> <li>• Presentation in ICU daily core rounds for rotating off-service residents</li> </ul>

	<p><u>Second Year Critical Care Resident:</u></p> <ul style="list-style-type: none"><li>a) To organize and present Critical Care rounds</li><li>b) To lead informal teaching sessions on basic critical care topics</li></ul>	<ul style="list-style-type: none"><li>• Presentation in Critical Care Journal Club</li><li>• Instruction during daily ICU patient rounds</li></ul>
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