

**University of Ottawa Adult Critical Care Medicine Residency Objectives
Junior Fellow Rotation-Specific Objectives Months 1-2**

CanMEDS Roles	CanMEDS Key Competencies	Methods To Facilitate Achievement of Competency
<p>1. Medical Expert a. Knowledge:</p>	<p><u>First Year Fellows:</u></p> <ul style="list-style-type: none"> a) Gather, organize, interpret and apply information available to generate a differential diagnosis and concurrent management plan for critically ill patients b) Gain familiarity with our ICU admission and discharge policies and protocols with the assistance of our multi-disciplinary team c) Review the anatomy, physiology and pathophysiology of the respiratory system within the patient context d) Introduction to principles and theory of mechanical ventilation and non-invasive methods of respiratory support e) Introduction to principles of invasive and non-invasive hemodynamic monitoring f) Physiology and management of; myocardial ischemia, congestive heart failure, cardiogenic shock and cardiac dysrhythmias g) Introduction to the differential diagnosis and management of sepsis in the critically ill patient h) Perioperative management of high-risk surgical patients i) Physiology and management of renal failure and renal replacement therapy j) Introduction to the management of the trauma patient k) Introduction to the major patho-physiologic entities associated with traumatic brain injuries l) Review of sedation and analgesia requirements for critically ill patients m) Review of fluid & electrolyte requirements of critically ill patients n) Introduction to management of the nutritional requirements of critically ill patients o) Review of diagnosis and management of hemorrhagic shock (non-traumatic and traumatic) p) Transport physiology and problems associated with patient transport q) Introduction to the pathophysiology and management of acute hepatic failure r) Introduction to pharmacokinetics and drug interactions in renal and hepatic failure 	<ul style="list-style-type: none"> • Discussion with Intensivists and senior CCM Fellows during daily ICU patient-care rounds • Discussion with Intensivists and senior CCM Fellows during daily ICU afternoon sign-over rounds • CCM Fellow academic ½ day summer core seminar series • Morning ICU core seminar series for house-staff on their ICU rotation • Self-directed reading as per objectives • Introduction to various learning resources • ACES course • Simucase(s) • Simulation session(s)

	<p>s) Introduction to the management of oncologic emergencies and complications arising from oncologic diseases/treatments</p> <p>t) Introduction to major pathophysiologic entities associated with neuromuscular disease</p> <p>u) Introduction to the management of drug overdose and toxicology in critically ill patients</p> <p>v) Differential diagnosis of common thrombotic and coagulopathic conditions</p> <p>w) Introduction to common radiologic imaging of critically ill patients</p> <p>x) Introduction to diagnosis and management of brain death and/or organ transplantation & donation after cardiac death (DCD)</p>	
<p>b) Technical skills:</p>	<p><u>First Year Fellows:</u></p> <p>a) Concurrent management of the ABC's of a critically ill patient</p> <p>b) Obtain and perform measurement of vital signs, including oxygen saturation and non-invasive blood pressure & glucose</p> <p>c) Familiarization with ultrasound techniques to facilitate common CCM procedures</p> <p>d) Familiarization with & hands-on practice of gaining intravenous access in a critically ill patient</p> <p>e) Familiarization with and the hands-on practice of insertion of femoral, internal jugular and subclavian venous catheters</p> <p>f) Familiarization with and the hands-on practice of insertion of an arterial catheter (<i>radial, femoral ± brachial</i>)</p> <p>g) Familiarization with and the hands-on practice of insertion of a Swan-Ganz catheter</p> <p>h) Familiarization with and the hands-on practice of airway management including endotracheal intubation</p> <p>i) Familiarization with and the hands-on practice of percutaneous bedside tracheostomy</p> <p>j) Familiarization with and the hands-on practice of diagnostic bronchoscopy</p> <p>k) Familiarization with and the hands-on practice of transthoracic and transvenous cardiac pacing</p> <p>l) Familiarization with and the hands-on practice of insertion of orogastric and nasogastric tubes</p> <p>m) Familiarization with insertion of Foley catheters</p> <p>n) Familiarization with and the hands-on practice of insertion of hemodialysis</p>	<ul style="list-style-type: none"> • Supervised performance of procedures on ICU patients (<i>please ask the senior Fellow or Intensivist to watch you perform the procedure</i>) • ACES course • Anesthesiology elective • Review podcasts of common procedures developed by the Program* <p>* <i>in development</i></p>

	<p>catheters (<i>internal jugular, subclavian and femoral</i>)</p> <p>o) Familiarization with and the hands-on practice of insertion of thoracostomy tubes and thoracentesis</p> <p>p) Familiarization with and the hands-on practice of lumbar puncture</p> <p>q) Interpretation of common radiologic images taken of the critically ill patient</p>	
2. Communicator	<p><u>First Year Fellows:</u></p> <p>a) Develop/evolve the ability to build trust and rapport to convey complicated medical information and related issues in simple, non-jargon terms to; patients, their families or designated Power(s) of Attorney of critically ill patients</p> <p>b) Develop/evolve the ability to communicate with families and the ICU team/consulting physicians, in times of medical and/or family crises</p> <p>c) Understand & learn the role of the Intensivist (<i>and issues involved</i>) in developing & communicating end-of-life goals and care plan(s) with; patients, their families or designated Power(s) of Attorney of critically ill patients</p> <p>d) To effectively and appropriately communicate positive and negative formative feedback on performance of junior house staff & medical students</p>	<ul style="list-style-type: none"> • Observation and participation in patient/family/PoA meetings held by senior fellows or Intensivists • Daily (<i>ideally</i>) communication with families/PoA for updates on patient condition and management plan • Observation of the interaction between; social work, pastoral care and nurses with families • Participation in monthly ICU house-staff (<i>residents and medical students</i>) evaluations
3. Collaborator	<p><u>First Year Fellows:</u></p> <p>a) To work effectively with consulting medical/surgical services.</p> <p>b) To communicate care plans clearly and precisely to all members of our ICU team.</p> <p>c) To work in a collaborative manner with fellow learners</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, where possible • Coordinate patient care for all patients on your ICU team and help out with care delivery for patients on the other ICU team.

<p>4. Manager</p>	<p><u>First Year Fellows:</u></p> <p>a) To develop an approach or strategy to help you effectively balance time between patient care, learning, teaching and crises management</p> <p>b) To develop an approach or strategy to help you recognize and manage the effects of mental and physical fatigue on patient care and safety</p> <p>c) To develop an approach or strategy to help you effectively prioritize a demanding workload</p>	<ul style="list-style-type: none"> • Discussion of time issues with Intensivists • Use of organizational aids such as our Program website, network drives, iPads, library systems etc. • Lead site specific monthly morbidity and mortality rounds
<p>5. Health Advocate</p>	<p><u>First Year Fellows:</u></p> <p>a) To familiarize yourself with the relative costs of different diagnostic and treatment modalities/therapies</p> <p>b) To familiarize yourself 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 for diagnostic or therapeutic procedures that you are performing</p> <p>d) To demonstrate an understanding & limitations of the concept of futility</p>	<ul style="list-style-type: none"> • Discussion of cost and opportunity cost concerns on rounds with Intensivists and pharmacists • Participation in family discussions
<p>6. Scholar</p>	<p><u>First Year Fellows:</u></p> <p>a) To develop a personal learning strategy to help you become and evolve as a life-long learner</p> <p>b) To become familiar with the range of research being done by Intensivists</p> <p>c) To determine potential scholarly/research projects to help you develop as a scholar</p> <p>d) To evolve your teaching skills and facilitate the education of other learners in the ICU</p> <p>e) To demonstrate a basic understanding of research study design</p>	<ul style="list-style-type: none"> • Attendance at all core ICU Summer Series seminars • Presentations in ICU morning teaching seminars for house-staff • Discussion with Intensivists regarding their personal learning strategies

This list of objectives is meant to summarize the most salient and pertinent general objectives for CCM Residents (*colloquially called Fellows*) completing their Junior Resident rotations in July, August & September, of their first year of CCM residency. A comprehensive list of all educational objectives in each domain of expertise, as well as other rotation-specific objectives, is provided on the Program's website at <http://www.critcaremed-ottawa.ca>.

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