

**THE UNIVERSITY OF BRITISH COLUMBIA**

**Adult Critical Care Medicine**

**Postgraduate Training Program**

## Specific Objectives in Adult Acute Care Cardiology Rotations

MEDICAL EXPERT/CLINICAL DECISION MAKER:

**Competencies:**

***To develop knowledge, diagnostic, technical and therapeutic skills necessary for the day to day management of patients in an adult coronary care unit. Specifically,***

***Given a critically ill patient with cardiac dysfunction, either congenital or acquired, the***

***Resident must be able to recognize the major categories of congenital and acquired***

***heart disease, provide emergency life saving support, and embark upon a diagnostic and***

***management program to correct the instability.***

**The Resident shall demonstrate:**

* **Knowledge of the methods and application of “Advanced Cardiac Life Support” techniques**
* **Knowledge of principles of invasive and non-invasive hemodynamic monitoring.**
* **Ability to assess and manage the patient with chest pain, including myocardial infarction**
* **Detailed knowledge of the pathophysiology and treatment of cardiac failure in children, adolescents and adults, including the pharmacology of drugs used to treat these entities**
* **An understanding of the basic and complex cardiac arrhythmias, including pharmacological and electrical management**
* **An understanding of the shock syndromes, with emphasis on the pathophysiological events leading to and resulting from the shock state**
* **An understanding of heart-lung interactions with particular emphasis on the role of right-heart hemodynamics**
* **Familiarity with the hemodynamic complications of acute valvular (native and prosthetic) disease, with familiarity of the pathophysiological alterations induced by chronic valvular disease in critically ill patients**
* **Familiarity with the management of problems associated with cardiac and vascular surgical interventions in children and adults**
* **Familiarity with the congenital malformations of the vascular system leading to heart failure and/or hypoxemia**

***Technical Skills:***

* **Insertion, testing and use of temporary pacemakers**
* **Indications, contraindications and use of intra-aortic balloon pump in the treatment of acute myocardial infarction and cardiogenic shock**

***These skills will be taught by:***

* **studying the basic and clinical science of acute care cardiology using published sources to find, sift and integrate new information into the practice of critical care medicine**
* **recognition, diagnosis and treatment of critical illness while exposed to the acute care cardiology rotations in critical care**
* **attendance at academic half days / hospital based rounds**
* **formal process of graded responsibility**
* **teaching of procedural skills**
* **learning about evidence based medicine through library facilities and academic sessions**
* **Defined lectures of epidemiology and principles of evidence based medicine at academic half days**
* **Journal clubs**

***These skills will be evaluated by:***

* **monitoring of performance at daily ward rounds**
* **in training evaluations at mid-term and completion of designated core and elective rotations**
* **annually partaking the MCCKAP written examination sponsored by the Society of Critical Care Medicine**
* **twice yearly oral examinations**
* **quarterly review of performance by Program Director and other members of the Division of Critical Care Medicine**
* **performance of research and quality assurance/improvement projects**
* **presentation of research projects at the annual Residents Research Competition**
* **in-training evaluations and meeting of expectations**

COMMUNICATOR:

***Competencies:***

***Establishes effective communication with patients and their families***

***Establishes effective communication with medical and non-medical colleagues***

***Acts as a consultant and co-ordinate management involving a number of consultants***

***Able to refer problem issues or problem cases appropriately***

***Learns to communicate effectively and efficiently with colleagues both verbally and through written records (medical records, discharge summaries, consultation reports, family conferences)***

***These skills will be taught and assessed by:***

* **daily observation of trainee performance by clinical supervisors with regular feedback**
* **observation of Resident – staff interaction during rotations**
* **a review of the written records by the attending physicians with ongoing feedback**

COLLABORATOR:

***Competencies:***

***Effectively consults with other physicians and health care professionals***

***Works effectively as part of multi-disciplinary team***

***Acts as a leader of a multidisciplinary team***

***Contributes to the education of medical, nursing and paramedical staff***

***These skills will be taught by:***

* **observation of daily practice patterns with regular feedback**
* **attendance at interdisciplinary rounds**

***These skills will be evaluated by:***

* **direct observation**
* **feedback through in-training evaluation**

MANAGER:

***Knows the duties of an intensive care specialist and director of the coronary care unit***

***Understands the principles of administration and management***

***Understands the principles of departmental budgeting, financial management***

***Learns how to utilize resources to effectively balance patient care and health care economics***

***Works to develop effective and efficient patient management strategies by:***

* ***avoiding duplication of services***
* ***involving other caregivers***
* ***appropriate use of information technology***
* ***knows the physical requirements of a coronary care unit design***
* ***understands the factors that determine optimum staff establishment for specialist and junior medical; staff, nurses, paramedical and secretarial staff***
* ***understands the process of selecting, ordering and maintaining equipment***
* ***contributes to unit activities and encourages others to do so by instilling enthusiasm amongst colleagues in the work place***
* ***recognizes impaired performance in self and in professional colleagues***
* ***contributes to professional meetings and understands their rules, structure and etiquette***
* ***understands the issues in organizing a scientific meeting***
* ***understands the ethical and legal implications of intensive care practice***
* ***creates a congenial and stimulating work environment***
* ***learns how to delegate responsibilities in a fair and non-threatening manner***
* ***recognizes and manages problems with junior staff in a non-threatening and constructive manner***
* ***Understands the need and can undertake clinical audit***
* ***Understands the different types of clinical audit in the intensive care unit***
* ***Recognizes the need for clinical audit and quality improvement activities not to be threatening or punitive to individuals***
* ***Encourages others to participate in clinical audit and QI activities,***
* ***Understands current and future trends in developments in biomedical technology, computers and instrumentation within the coronary care unit***
* ***Understands the role of the coronary care unit in Hospital or regional disaster planning***
* ***Understands issues related to the organization and audit of specialized resuscitation teams within and outside the hospitals and the role of the coronary care unit as contributor to these teams***

***These skills will be taught in the following manner:***

### attendance to formal lectures in ICU administration at academic half day

* **attendance at monthly ICU QA/QI meetings**
* **assignment of annual QI projects**
* **learning computer skills**

***These skills will be evaluated by:***

* **observation of trainees by rotation supervisors and attending physicians with feedback on a regular basis and through ITER’s**
* **attendance at academic half days**

HEALTH ADVOCATE:

***Competencies:***

***Recognizes the risk factors for a variety of common heart critical illnesses and counsel families and colleagues in ways to minimize the acquisition risk***

***Develops the ethic that the patient’s welfare always takes precedence in the event of medical, political or ethical conflicts***

***Appreciates the difficult and stressful situations associated with the environment of critical care***

***Learns to identify and minimize the stresses placed upon the patients, their relatives, and hospital staff***

***These skills will be taught by:***

* **observation of practices of attending physicians and other members of the interdisciplinary team**
* **Annual series of ethical seminars in academic days**
* **ethical case discussions at morning clinical ward rounds and academic half days**

***These skills will be evaluated by:***

* **provision of feedback through ITER’s**

SCHOLAR:

***Competencies:***

***Accumulates the necessary knowledge to be a competent critical care physician***

***Learns how to apply basic and clinical science to patient care***

***Establishes a comprehensive self-directed learning and educational strategy***

***Imparts a similar enthusiasm to colleagues***

***Develops an appreciation of the role of critical appraisal in the assessment of current scientific developments***

***Develops an understanding of evidence based medicine***

***Participates in processes of clinical audit and quality improvement activities***

***Maintains competence in critical care***

***Commits to forever pushing the boundaries of excellence in caring for critically ill patients***

***These skills will be taught by:***

* **Provision of appropriate teaching courses at academic half days**
* **UBC course in Effective Teaching Techniques**
* **Critical appraisal of the literature at Journal Club sessions**
* **Assignment and completion of QI/Research projects**

***These skills will be evaluated and monitored by:***

* **monitoring of attendance at academic half days**
* **regular formal and informal feedback**
* **formal feedback through ITER’s**
* **written examination**
* **assessing teaching skills during rounds and lectures to junior staff and other members of the health care team**
* **presentation of Research and QI projects at the Annual Residents Research competition**

PROFESSIONAL:

***Competencies:***

***Develops an ethical framework for the delivery of the highest quality care***

***Understands professional obligations to patients and colleagues***

***Exhibits appropriate personal and interpersonal professional behaviors***

***Acts with integrity, honesty, fairness and compassion in the delivery of the highest quality health care***

***These skills will be taught by:***

* **lectures at academic half days**
* **observation of the daily practice patterns of attending physicians and other health care workers**

***These skills will be evaluated by:***

* **daily observation of trainees by attending physicians**
* **formal evaluations through ITER’s**
* **annual meetings with the Program Director**