

**Dalhousie University Family Medicine Enhanced Skills
in Emergency Medicine (Dal ESEM)**



**Clinical Learning Experience (CLE) IN CORONARY CRITICAL CARE (CCU)/
ED CARDIOLOGY CONSULTS**

GENERAL

The CCU/ED Cardiology Consult CLE is intended to provide residents with an opportunity to consolidate their knowledge of common cardiac emergencies and their treatment. The focus of this rotation is on assessing patients with chest pain and dysrhythmias as well as developing expertise in the administration of thrombolytics, inotropes and other cardiac medications. They should also become familiar with invasive monitoring as it pertains to the cardiac patient, and alternative modes of therapy such as cardiac catheterization, PTCA and intra-aortic balloon pumps. To this end the resident should make every effort to become involved with the management of critically ill patients in the emergency department or the CCU.

Primary responsibilities will be care of patients admitted to the Coronary Care unit (and associated step-down units as dictated by service demands) and provision of CCU/Cardiology Consultation to the Emergency Department and the supervision of the attending Cardiologist and Fellow.

The resident will attend as a member of the in-house cardiac arrest team.

The resident will share the on-call responsibilities of the service.

MEDICAL EXPERT

1. To develop skills with clinical assessment of the critically ill/injured patient.
2. To demonstrate skilled physical exam.
3. To exhibit appropriate knowledge of diagnostics.
4. To exhibit appropriate knowledge of therapeutics.
5. To accurately identify problems in the critically ill.
6. To develop knowledge of the approach to resuscitation situations.
7. To perform complete, accurate and well-organized clinical evaluations relevant to key cardiovascular presentations.
8. To recognize instability and manages cardiac resuscitation in a calm, prompt and skillful manner.
9. To demonstrate knowledge of current cardiac care guidelines and applies them in cardiac resuscitation.
10. Technical Skills – To develop the following technical skills:
 - 10.1 Airway Management
 - 10.2 Reperfusion strategies
 - 10.3 Hemodynamic monitoring and therapeutics
 - 10.4 Central vascular access
 - 10.5 Decontamination for toxicological problems
 - 10.6 Develop the skill of interpretation of Electrocardiograms

COMMUNICATOR AND COLLABORATOR

1. To understand the roles and responsibilities within the cardiac system.
2. To understand the importance of team work and collaboration with the cardiac team and other consultants involved in cardiac care.
3. To learn various approaches to leadership in cardiac events and in conflict resolution.
4. To understand how to communicate effectively with the family of acutely and critically ill patients.
5. To understand and demonstrate patient-centered orientation.
6. To involve patient & family in management plan.
7. To demonstrate integrity, honesty, and compassion.
8. To understand and demonstrate appropriate patient-physician boundaries.

MANAGER

1. To understand the appropriate management of time and resources in the cardiac system and how expedient diagnosis and treatment relates to better outcomes.
2. To be aware of the availability, cost and limitations of hospital resources (equipment, personnel, bed availability) and understand how to manage resources.
3. To understand the role of pre-hospital services for the transport of coronary patients.
4. To recognize roles of, and interact effectively with other specialty consultants.
5. To demonstrate the ability to effectively work within a multi-disciplinary team.
6. To demonstrate the ability to effectively approach uncertainty and ambiguity.
7. To demonstrate team-based leadership skills.
8. To be aware of personal limitations and appropriately seeks assistance.
9. To follow through on commitments.

HEALTH ADVOCATE

1. To understand and apply patient-centered care in the critically ill patient.
2. To understand the role of ethics in treatment decisions in the critically ill patient.
3. To understand the importance and role of support services in the cardiac system including social work, clergy, physiotherapy and occupational therapy.
4. To understand the importance of cultural awareness and sensitivity in care of the cardiac patient.
5. To provide accurate and organized documentation of patient care.
6. To demonstrate patient advocacy and respect for end-of-life issues.
7. To demonstrate the understanding of the principles of triage and appropriate resource allocation.
8. To appropriately use relevant community and hospital resources for discharged patients.

SCHOLAR

1. To understand how to apply best practices in the management of the cardiac patient by means of critical appraisal of the literature.
2. To demonstrate initiative and self-directed learning.
3. To effectively manage time for learning and patient care.
4. To teach junior learners effectively.
5. To participate and present in group learning events (rounds).

Professional

1. To be punctual, reliable, and consistent in the management of cardiac patients.
2. To be empathetic and patient-centered in the care of the acutely injured patient.
3. To be respectful and professional in all interactions with the patient, family, trauma team, consultants and support staff within the hospital and within the cardiac system.
4. To recognize the importance of behaving in an ethical and professional manner at all times.

APPENDIX I

i) Scientific and Clinical Knowledge

1. To describe the history, epidemiology and disease burden of non-traumatic cardiopulmonary arrest and resuscitation in North America.
2. To know and apply current ACLS recommendations and algorithms for cardiopulmonary arrest. Maintain detailed knowledge of current relevant literature supporting these guidelines.
3. To identify circumstances under which cardiopulmonary resuscitation should not be initiated or may be terminated.
4. To use clinical and laboratory data to efficiently and safely risk stratify Emergency Department patients with possible ACS and determine an appropriate course of investigation/management.
5. To describe in detail, the surface ECG manifestations of coronary ischemia, infarction and their evolution.
6. To prescribe antiplatelet, anticoagulant and thrombolytic agents in ACS based upon a thorough and current understanding of best evidence.
7. To know current evidence concerning the use of coronary reperfusion techniques in ACS and determine the best approach for individual patients based upon clinical characteristics and available resources.

ii) Cardiac Dysrhythmia

1. To identify abnormalities on the resting ECG that may indicate a predisposition to cardiac dysrhythmia.
2. To analyze/identify common and serious cardiac dysrhythmias/conduction abnormalities on the ECG or cardiac monitor.

iii) Congestive Heart Failure

1. To describe in detail, the complex pathologic and physiologic mechanisms relevant to the development, compensation and treatment of congestive heart failure (CHF) and pulmonary edema.
2. To apply a detailed knowledge of therapeutic options (including non-pharmacologic) to the Emergency Department management of patients with CHF across a full spectrum of severity and acuity.

iv) Pericardial, Myocardial and Valvular Heart Disease

1. To describe the etiology, pathophysiology and clinical features of pericarditis. To choose and interpret relevant diagnostic tests. To provide emergency management for uncomplicated pericarditis, pericardial effusion and tamponade.
2. To describe the etiology, pathophysiology and clinical features of common/serious diseases of the myocardium and heart valves (native, tissue or prosthetic). To identify acute complications of these disorders and initiate emergency investigation and management.