

2013
VERSION 1.0

This document applies to those who begin training on or after July 1st, 2013.

DEFINITION

Cardiac Surgery is that branch of surgery concerned with diseases of the pericardium, heart and great vessels.

GOALS

The resident who has completed training in Cardiac Surgery is expected to function as an independent consultant with respect to the diagnosis and management of patients with cardiovascular disease, including the provision of surgical intervention when indicated and perioperative care. The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in the basic medical sciences and research.

Residents must demonstrate the requisite knowledge, skills, and attitudes for effective patient-centred care and service to a diverse population. In all aspects of specialist practice, the graduate must be able to address issues of gender, sexual orientation, age, culture, ethnicity and ethics in a professional manner.

CARDIAC SURGERY COMPETENCIES

At the completion of training, the resident will have acquired the following competencies and will function effectively as a:

Medical Expert

Definition:

As *Medical Experts*, Cardiac Surgeons integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centred care. *Medical Expert* is the central physician Role in the CanMEDS framework.

Key and Enabling Competencies: Cardiac Surgeons are able to...

1. Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centred medical care

- 1.1. Perform a consultation, including the presentation of well-documented assessments and recommendations in written and/or verbal form in response to a request from another health care professional
- 1.2. Demonstrate use of all CanMEDS competencies relevant to Cardiac Surgery
- 1.3. Identify and appropriately respond to relevant ethical issues arising in patient care
- 1.4. Demonstrate the ability to prioritize professional duties when faced with multiple patients and problems
- 1.5. Demonstrate compassionate and patient-centred care
- 1.6. Recognize and respond to the ethical dimensions in medical decision-making
- 1.7. Demonstrate medical expertise in situations other than patient care, such as providing expert legal testimony or advising governments, as needed

2. Establish and maintain clinical knowledge, skills and attitudes appropriate to Cardiac Surgery

- 2.1. Apply knowledge of the clinical, socio-behavioural, and fundamental biomedical sciences relevant to Cardiac Surgery, including but not limited to:
 - 2.1.1. Thoracic incisions and other relevant incisions for the surgical approach to conduit harvest and vascular access
 - 2.1.2. Wound complications and their management including but not limited to sepsis: causes, prevention, presentation, treatment
 - 2.1.3. Surgical nutrition
 - 2.1.4. Anticoagulation: indications, complications
 - 2.1.5. Investigation and treatment of abnormalities in coagulation including management of heparin induced thrombocytopenia
 - 2.1.6. Use and complications of cardiac medications, including but not limited to: inotropes, antiarrhythmics, vasoactive agents
 - 2.1.7. Recognition and management of concomitant medical conditions in the Cardiac Surgery patient, including but not limited to diabetes, renal failure, and respiratory failure
 - 2.1.8. Principles of diagnosis and management of the trauma patient, with an emphasis on thoracic injury
 - 2.1.9. Recognition and management of vascular, neurological and general surgical complications in cardiac patients including but not limited to peptic ulcer disease, hepatobiliary disease, and limb ischemia
 - 2.1.10. Appropriate investigations and therapeutic interventions for patients with cerebrovascular disease, particularly when presenting with concomitant cardiac disease

OBJECTIVES OF TRAINING IN CARDIAC SURGERY (2013)

- 2.1.11. Natural history, presentation, investigation and management of extracranial cerebral vascular disease, particularly when presenting with cardiac disease
- 2.1.12. Anesthetic management including the use of sedatives, analgesics and local anesthetic agents
- 2.1.13. Cardiopulmonary Bypass (CPB)
 - 2.1.13.1. Use and pathophysiology of CPB
 - 2.1.13.2. Design and function of components of CPB circuits including alternate types of pumps and oxygenators
 - 2.1.13.3. Catastrophic complications of CPB
 - 2.1.13.4. Effects of CPB on inflammatory, coagulation and hematological systems as well as end organ damage
- 2.1.14. Myocardial Protection
 - 2.1.14.1. Mechanisms of myocardial injury and their prevention
 - 2.1.14.2. Myocardial metabolic pathways and their response to ischemia and reperfusion
 - 2.1.14.3. Cardioplegia composition, temperature, alternative delivery methods and assessment of myocardial protection
- 2.1.15. Ischemic Heart Disease
 - 2.1.15.1. Anatomy and physiology of coronary circulation
 - 2.1.15.2. Pathophysiology of atherosclerosis and acute ischemic syndromes
 - 2.1.15.3. Principles of medical and surgical management of patients with ischemic heart disease
 - 2.1.15.4. Principles and use of imaging techniques for myocardial ischemia including electrocardiography (ECG), stress tests, coronary angiography, nuclear medicine scans, stress echocardiography
 - 2.1.15.5. Medical and surgical management of chronic coronary insufficiency including indications, timing and outcomes of revascularization
 - 2.1.15.6. Management of unstable angina and acute myocardial infarction and its complications, including ischemic ventricular septal defect (VSD), cardiac rupture and mitral insufficiency
 - 2.1.15.7. Role of primary and secondary prevention of ischemic heart disease, including current guidelines
- 2.1.16. Valvular Heart Disease
 - 2.1.16.1. Principles of medical and surgical management of patients with valvular heart disease
 - 2.1.16.2. Anatomy of the cardiac valves and relationships to adjacent structures

OBJECTIVES OF TRAINING IN CARDIAC SURGERY (2013)

- 2.1.16.3. Natural history of all forms of valvular heart disease
 - 2.1.16.4. Principles and use of imaging techniques for valvular heart disease including, echocardiography including transesophageal echocardiography (TEE), cardiac catheterization and hemodynamic evaluation, and magnetic resonance imaging (MRI)
 - 2.1.16.5. Indications for medical and surgical intervention
 - 2.1.16.6. Alternative surgical approaches to cardiac valves (including Transcatheter Aortic-Valve Implantation (TAVI))
 - 2.1.16.7. Advantages and disadvantages of available valve repair methods/prostheses
 - 2.1.16.8. Techniques for valve surgery including methods of valve repair, aortic root enlargement, and management of complications of valve surgery
 - 2.1.16.9. Guidelines for reporting valve surgery results including time-related multivariable analysis of morbidity and mortality
- 2.1.17. Thoracic Aortic Pathology
- 2.1.17.1. Principles of medical and surgical management of patients with thoracic aortic disease
 - 2.1.17.2. Anatomy of the thoracic aorta, including its intrathoracic branches and related intrathoracic structures
 - 2.1.17.3. Pathophysiology of aortic disease, including atherosclerotic disease, Marfans syndrome, and cystic medial necrosis
 - 2.1.17.4. Pathophysiology of thoracic and thoracoabdominal aortic aneurysms and dissections
 - 2.1.17.5. Natural history of thoracic aortic disease
 - 2.1.17.6. Sensitivity and specificity of methods for diagnosing thoracic aortic disease including emergencies
 - 2.1.17.7. Indications for medical and surgical intervention
 - 2.1.17.8. Methods of surgical repair, including choice of conduits (including Thoracic Endovascular Aortic Repair (TEVAR)), techniques for preventing brain and spinal cord damage, management of complications of aortic surgery
 - 2.1.17.9. Indications for postoperative surveillance of patients and investigation of relatives
- 2.1.18. Heart Failure and Transplantation
- 2.1.18.1. Principles of management of patients with end-stage heart failure
 - 2.1.18.2. Pathophysiology and endocrinology of heart failure
 - 2.1.18.3. Natural history of heart failure

OBJECTIVES OF TRAINING IN CARDIAC SURGERY (2013)

- 2.1.18.4. Indications for medical therapy and pharmacology of available agents
 - 2.1.18.5. Indications for surgical therapy for heart failure including conventional revascularization, valve surgery, transplantation as well as unconventional therapy including but not limited to: cardiac resynchronization therapy, left ventricular reduction, and cardiomyoplasty
 - 2.1.18.6. Indications for alternative transplantation procedures including heart-lung or lung transplantation with repair of cardiac lesions in patients with primary or secondary pulmonary hypertension
 - 2.1.18.7. Indications for techniques of and complications of temporary/permanent mechanical cardiac support, including intraaortic balloon pump and ventricular assist devices
 - 2.1.18.8. Pathophysiology of brain death and management of the donor including biochemistry and pharmacology of donor heart preservation
 - 2.1.18.9. Immunology of rejection, and management of immunosuppression
- 2.1.19. Arrhythmias
- 2.1.19.1. Principles of medical and surgical management of patients with arrhythmias
 - 2.1.19.2. Pathophysiology and electrophysiology of atrial and ventricular arrhythmias
 - 2.1.19.3. Pharmacology, indications and results of medical management of arrhythmias
 - 2.1.19.4. Indications for and results of medical and surgical treatment for arrhythmias
 - 2.1.19.5. Indications and techniques for implantation of pacemaker devices including automatic implantable cardioverter (AICD) devices and management of their complications including techniques of lead extraction
- 2.1.20. Cardiac Tumours
- 2.1.20.1. Principles of management of patients with cardiac tumours
 - 2.1.20.2. Incidence, pathology, natural history and presentation of cardiac tumours
 - 2.1.20.3. Principles and use of imaging techniques for cardiac tumours including but not limited to echocardiography, cardiac catheterization, computed tomography (CT) and MRI
 - 2.1.20.4. Indications for surgical intervention for cardiac tumours
 - 2.1.20.5. Surgical techniques for resection of cardiac tumours

OBJECTIVES OF TRAINING IN CARDIAC SURGERY (2013)

2.1.21. Pericardial Disease

- 2.1.21.1. Principles of management of patients with pericardial disease
- 2.1.21.2. Anatomy and physiology of the pericardium
- 2.1.21.3. Pathophysiology of the pericardium including congenital and acquired pericardial disease
- 2.1.21.4. Pathophysiology of acute cardiac tamponade and chronic pericardial constriction
- 2.1.21.5. Principles and use of diagnostic techniques for pericardial pathology including physical examination, echocardiography, CT and MRI
- 2.1.21.6. Role and interpretation of cardiac catheterization and hemodynamic studies as they pertain to pericardial disease
- 2.1.21.7. Indications for medical and surgical intervention for pericardial disease
- 2.1.21.8. Surgical techniques for pericardial disease including relief of cardiac tamponade, pericardectomy
- 2.1.21.9. Principles of postoperative care of patients with pericardial disease

2.1.22. Congenital Cardiac Surgery

- 2.1.22.1. Principles essential to care of neonatal, infant, pediatric, and adult patients with congenital cardiac abnormalities including:
 - 2.1.22.1.1. Embryology and nomenclature of congenital cardiac defects
 - 2.1.22.1.2. Physiology and pathophysiology of fetal, neonatal and pediatric circulations
 - 2.1.22.1.3. Principles of intensive care management of pediatric patients including ventilator management, inotropes, treatment of pediatric arrhythmias and the manipulation of the pulmonary and systemic circulations
 - 2.1.22.1.4. Design and functional requirements of CPB circuits for pediatric patients
 - 2.1.22.1.5. Principles of CPB management for pediatric patients: myocardial protection strategies, use of profound hypothermia and circulatory arrest
 - 2.1.22.1.6. Principles and use of techniques for the support of failing circulation in pediatric patients
 - 2.1.22.1.7. Principles and use of imaging techniques in congenital cardiac disease including but not limited to echocardiography, cardiac angiography and hemodynamic assessment, as well as MRI
 - 2.1.22.1.8. Pathophysiology, indications and techniques for repair of simple and complex congenital cardiac defects

2.1.22.1.9. Principles of management of adults with congenital cardiac defects including pathophysiology and evaluation of pulmonary vascular disease; indications and contraindications for repair

- 2.2. Describe the CanMEDS framework of competencies relevant to Cardiac Surgery
- 2.3. Apply lifelong learning skills of the Scholar Role to implement a personal program to keep up-to-date, and enhance areas of professional competence
- 2.4. Contribute to the enhancement of quality care and patient safety in Cardiac Surgery, integrating the available best evidence and best practices

3. Perform a complete and appropriate assessment of a patient

- 3.1. Identify and explore issues to be addressed in a cardiac patient encounter effectively, including the patient's context and preferences
- 3.2. Elicit a history that is relevant, concise and accurate to context and preferences for the purposes of prevention and health promotion, diagnosis and/or management
- 3.3. Perform a focused physical examination that is relevant and accurate for the purposes of prevention and health promotion, diagnosis and/or management
- 3.4. Select medically appropriate investigative methods in a resource-effective and ethical manner
- 3.5. Demonstrate effective clinical problem solving and judgment to address patient problems, including interpreting available data and integrating information to generate differential diagnoses and management plans
 - 3.5.1. Recommend an appropriate surgical approach
 - 3.5.2. Recognize and treat wound complications including but not limited to infections, dehiscence, and mediastinitis
 - 3.5.3. Prescribe appropriate prophylactic measures for infection prevention
 - 3.5.4. Institute and monitor surgical nutrition via enteral or parenteral routes
 - 3.5.5. Diagnose and institute appropriate management of gastrointestinal complications in cardiac patients
 - 3.5.6. Diagnose and institute appropriate management of generalized atherosclerosis

4. Use preventive and therapeutic interventions effectively

- 4.1. Implement a management plan in collaboration with a patient and their family
- 4.2. Demonstrate appropriate and timely application of preventive and therapeutic interventions relevant to Cardiac Surgery
- 4.3. Ensure appropriate informed consent is obtained for therapies
- 4.4. Ensure patients receive appropriate end-of-life care

5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic

- 5.1. Demonstrate effective, appropriate, and timely performance of procedures relevant to Cardiac Surgery, including but not limited to:
 - 5.1.1. Sternotomy and thoracotomy incisions; techniques for safe redo sternotomy
 - 5.1.2. Wound debridement
 - 5.1.3. Reconstruction of sternum
 - 5.1.4. Central venous and arterial cannula insertion for parenteral nutrition, dialysis and hemodynamic monitoring
 - 5.1.5. Chest tube insertion
 - 5.1.6. Trauma patient resuscitation
 - 5.1.7. Peripheral arterial reconstruction
 - 5.1.8. Repair of traumatic injuries to the chest including thoracic aortic tears, cardiac lacerations, great vessel injury, and lung lacerations
 - 5.1.9. Institution of CPB using a variety of cannulation techniques and devices; appropriate conduct of CPB; insertion of intraaortic balloon pumps
 - 5.1.10. Management of airway problems including performance of tracheostomy
 - 5.1.11. Institution of effective myocardial protection using a variety of delivery methods
 - 5.1.12. Coronary artery bypass grafting using a range of arterial and venous conduits
 - 5.1.13. Complications of coronary artery disease (CAD): VSD, mitral insufficiency, LV aneurysm repair
 - 5.1.14. Aortic valve replacement
 - 5.1.15. Aortic root replacement using a variety of prosthetic devices
 - 5.1.16. Complex aortic valve surgery
 - 5.1.17. Mitral valve replacement and repair using a variety of approaches and prosthetic devices
 - 5.1.18. Tricuspid valve surgery
 - 5.1.19. Repair of elective thoracic aortic aneurysms
 - 5.1.20. Repair of emergent aortic dissections
 - 5.1.21. Donor heart procurement and performance of cardiac transplantation
 - 5.1.22. Implantation of various types of pacemakers: single/dual chamber, epicardial/endocardial leads, automatic implantable cardiac defibrillators (AICDs)
 - 5.1.23. Management of electrophysiological device complications including but not limited to lead removal
 - 5.1.24. Resection of cardiac tumours

- 5.1.25. Pericardial aspiration, biopsy and pericardiectomy
- 5.1.26. Institution of cardiopulmonary bypass for neonatal and pediatric patients
- 5.1.27. Management and performance of congenital cardiac defects: coarctation of aorta, patent ductus arteriosus (PDA), VSD
- 5.1.28. Atrial septal defect repair

- 5.2. Ensure appropriate informed consent is obtained for procedures
- 5.3. Document and disseminate information related to procedures performed and their outcomes
- 5.4. Ensure adequate follow-up is arranged for procedures performed

- 6. Seek appropriate consultation from other health professionals, recognizing the limits of their expertise**
 - 6.1. Demonstrate insight into their own limits of expertise
 - 6.2. Demonstrate effective, appropriate, and timely consultation of another health professional, as needed for optimal patient care
 - 6.3. Arrange appropriate follow-up care services for a patient and their family

Communicator

Definition:

As *Communicators*, Cardiac Surgeons effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

Key and Enabling Competencies: Cardiac Surgeons are able to...

- 1. Develop rapport, trust, and ethical therapeutic relationships with patients and families**
 - 1.1. Recognize that being a good communicator is a core clinical skill for Cardiac Surgeons, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction, adherence and improved clinical outcomes
 - 1.2. Establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy
 - 1.3. Respect patient confidentiality, privacy and autonomy
 - 1.4. Listen effectively
 - 1.5. Be aware of and responsive to nonverbal cues
 - 1.6. Facilitate a structured clinical encounter effectively

2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals

- 2.1. Gather information about a disease, but also about a patient's beliefs, concerns, expectations and illness experience
- 2.2. Seek out and synthesize relevant information from other sources, such as a patient's family, caregivers and other professionals

3. Convey relevant information and explanations accurately to patients and families, colleagues and other professionals

- 3.1. Deliver information to a patient and family, colleagues and other professionals in a humane manner and in such a way that it is understandable, encourages discussion and participation in decision-making

4. Develop a common understanding on issues, problems and plans with patients, families, and other professionals to develop a shared plan of care

- 4.1. Identify and explore problems to be addressed from a patient encounter effectively, including the patient's context, responses, concerns, and preferences
- 4.2. Respect diversity and difference, including but not limited to the impact of gender, religion and cultural beliefs on decision-making
- 4.3. Encourage discussion, questions, and interaction in the encounter
- 4.4. Engage patients, families, and relevant health professionals in shared decision-making to develop a plan of care
- 4.5. Address challenging communication issues effectively, such as obtaining informed consent, delivering bad news, and addressing anger, confusion and misunderstanding

5. Convey effective oral and written information about a medical encounter

- 5.1. Maintain clear, accurate, and appropriate records (e.g., written or electronic) of clinical encounters and plans
 - 5.1.1. Write and/or dictate an operative note
 - 5.1.2. Dictate a concise, clear description of a surgical procedure
 - 5.1.3. Write and/or dictate a clear consultation, discharge summary, or clinic note
- 5.2. Present verbal reports of clinical encounters and plans
 - 5.2.1. Prepare and present ward and intensive care unit (ICU) rounds in an organized manner
 - 5.2.2. Provide clear reports at occasions of transfer of care

- 5.3. Present medical information to the public or media about a Cardiac Surgery issue, as needed

Collaborator

Definition:

As *Collaborators*, Cardiac Surgeons effectively work within a health care team to achieve optimal patient care.

Key and Enabling Competencies: Cardiac Surgeons are able to...

1. Participate effectively and appropriately in an interprofessional health care team

- 1.1. Describe the Cardiac Surgeon's roles and responsibilities to other professionals
- 1.2. Describe the roles and responsibilities of other professionals within the health care team
- 1.3. Recognize and respect the diversity of roles, responsibilities and competences of other professionals in relation to their own
- 1.4. Work with others to assess, plan, provide and integrate care for individual patients, or groups of patients, including but not limited to:
 - 1.4.1. ICU, ward, operating room and advanced practice nurses, and other members of the health care team
 - 1.4.2. Consult other health professionals appropriately with regard to patients' social, rehabilitative and nutritional concerns
 - 1.4.3. Delegate responsibilities to members of interprofessional health care team appropriately
- 1.5. Work with others to assess, plan, provide and review other tasks, such as research problems, educational work, program review or administrative responsibilities
- 1.6. Participate in interprofessional team meetings
- 1.7. Enter into interdependent relationships with other professions for the provision of quality care
- 1.8. Describe the principles of team dynamics
- 1.9. Respect team ethics, including confidentiality, resource allocation and professionalism
- 1.10. Demonstrate leadership in a health care team, as appropriate

2. Work with other health professionals effectively to prevent, negotiate, and resolve interprofessional conflict

- 2.1. Demonstrate a respectful attitude towards other colleagues and members of an interprofessional team
- 2.2. Work with other professionals to prevent conflicts
- 2.3. Employ collaborative negotiation to resolve conflicts
- 2.4. Respect differences and address misunderstandings and limitations in other professionals
- 2.5. Recognize one's own differences, misunderstanding and limitations that may contribute to interprofessional tension
- 2.6. Reflect on interprofessional team function

Manager

Definition:

As *Managers*, Cardiac Surgeons are integral participants in health care organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the health care system.

Key and Enabling Competencies: Cardiac Surgeons are able to...

1. Participate in activities that contribute to the effectiveness of their health care organizations and systems

- 1.1. Work collaboratively with others in their organizations
 - 1.1.1. Develop and support constructive relationships with hospital administrators and regional, provincial and federal government agencies and representatives
- 1.2. Participate in systemic quality process evaluation and improvement, including patient safety initiatives
- 1.3. Describe the structure and function of the health care system as it relates to Cardiac Surgery, including the roles of surgeons
- 1.4. Describe principles of health care financing, including surgeon remuneration, budgeting and organizational funding as it relates to Cardiac Surgery
- 1.5. Discuss the effective functioning of health care organizations, ranging from an individual cardiac surgical practice to local, regional, provincial and national surgical associations

2. Manage their practice and career effectively

- 2.1. Set priorities and manage time to balance patient care, practice requirements, outside activities and personal life

- 2.2. Manage a practice including finances and human resources
- 2.3. Implement processes to ensure personal practice improvement
- 2.4. Employ information technology appropriately for patient care

3. Allocate finite health care resources appropriately

- 3.1. Recognize the importance of just allocation of health care resources, balancing effectiveness, efficiency and access with optimal patient care
- 3.2. Describe the triage system for the surgical wait list; its rationale, and how patients are added or upgraded
- 3.3. Apply evidence and management processes for cost-appropriate care

4. Serve in administration and leadership roles, as appropriate

- 4.1. Chair or participate effectively in committees and meetings
- 4.2. Lead or implement change in health care
- 4.3. Plan relevant elements of health care delivery (e.g., work schedules)
- 4.4. Participate in Cardiac Surgery quality assurance committees
- 4.5. Participate in the coordination of local and national specialty society meetings and review courses

Health Advocate

Definition:

As *Health Advocates*, Cardiac Surgeons responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.

Key and Enabling Competencies: Cardiac Surgeons are able to...

1. Respond to individual patient health needs and issues as part of patient care

- 1.1. Identify the health needs of an individual patient
 - 1.1.1. Assess all patients for risk factors for cardiovascular disease and advise appropriate interventions
- 1.2. Identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care
 - 1.2.1. Apply appropriate secondary prevention strategies for cardiac vascular diseases, according to current guidelines

2. Respond to the health needs of the communities that they serve

- 2.1. Describe the practice communities that they serve
- 2.2. Identify opportunities for advocacy, health promotion and disease prevention in the communities that they serve, and respond appropriately
 - 2.2.1. Understand the principles and data supporting primary and secondary prevention of coronary artery disease
- 2.3. Appreciate the possibility of competing interests between the communities served and other populations

3. Identify the determinants of health for the populations that they serve

- 3.1. Identify the determinants of health of the populations, including barriers to access to care and resources
- 3.2. Identify vulnerable or marginalized populations within those served and respond appropriately
- 3.3. Recognize the need for ongoing quality assessment and improvement including management of medical error

4. Promote the health of individual patients, communities, and populations

- 4.1. Describe an approach to implementing a change in a determinant of health of the populations they serve
- 4.2. Describe how public policy impacts on the health of the populations served
- 4.3. Identify points of influence in the health care system and its structure
- 4.4. Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity and idealism
- 4.5. Appreciate the possibility of conflict inherent in their role as a health advocate for a patient or community with that of manager or gatekeeper
- 4.6. Describe the role of the medical profession in advocating collectively for health and patient safety by demonstrating ongoing quality assessment and improvement including management of medical error
 - 4.6.1. Support the activity of local and national organizations promoting health advocacy

Scholar

Definition:

As *Scholars*, Cardiac Surgeons demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

Key and Enabling Competencies: Cardiac Surgeons are able to...

- 1. Maintain and enhance professional activities through ongoing learning**
 - 1.1. Describe the principles of maintenance of competence
 - 1.2. Describe the principles and strategies for implementing a personal knowledge management system
 - 1.3. Recognize and reflect on learning issues in practice
 - 1.3.1. Participate actively in scheduled quality assurance rounds
 - 1.4. Conduct personal practice audits
 - 1.5. Pose an appropriate learning question
 - 1.6. Access and interpret the relevant evidence
 - 1.7. Integrate new learning into practice
 - 1.8. Evaluate the impact of any change in practice
 - 1.9. Document the learning process
- 2. Critically evaluate medical information and its sources, and apply this appropriately to practice decisions**
 - 2.1. Describe the principles of critical appraisal
 - 2.2. Critically appraise retrieved evidence in order to address a clinical question
 - 2.3. Successfully integrate information from a variety of sources
- 3. Facilitate the learning of patients, families, students, residents, other health professionals, the public and others**
 - 3.1. Describe principles of learning relevant to medical education
 - 3.2. Identify collaboratively the learning needs and desired learning outcomes of others
 - 3.3. Select effective teaching strategies and content to facilitate others' learning
 - 3.3.1. Apply knowledge learned to service rounds
 - 3.3.2. Prepare and present scheduled rounds
 - 3.4. Demonstrate an effective lecture or presentation

- 3.5. Assess and reflect on a teaching encounter
- 3.6. Provide effective feedback
- 3.7. Describe the principles of ethics with respect to teaching

4. Contribute to the development, dissemination, and translation of new knowledge and practices

- 4.1. Describe the principles of research and scholarly inquiry
- 4.2. Describe the principles of research ethics
 - 4.2.1. Demonstrate an understanding of the need to incorporate gender, cultural and ethnic perspectives in research methodology
- 4.3. Pose a scholarly question
- 4.4. Conduct a systematic search for evidence
- 4.5. Select and apply appropriate methods to address the question
- 4.6. Disseminate the findings of a study
- 4.7. Participate actively in journal club
- 4.8. Complete a scholarly project suitable for submission to a peer-reviewed journal

Professional

Definition:

As Professionals, Cardiac Surgeons are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.

Key and Enabling Competencies: Cardiac Surgeons are able to...

1. Demonstrate a commitment to their patients, profession, and society through ethical practice

- 1.1. Exhibit appropriate professional behaviors in practice, including honesty, integrity, commitment, compassion, respect and altruism
- 1.2. Demonstrate a commitment to delivering the highest quality care and maintenance of competence
- 1.3. Recognize and appropriately respond to ethical issues encountered in practice
- 1.4. Manage conflicts of interest
- 1.5. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law
- 1.6. Maintain appropriate relations with patients

2. Demonstrate a commitment to their patients, profession and society through participation in profession-led regulation

- 2.1. Demonstrate knowledge and an understanding of the professional, legal and ethical codes of practice
- 2.2. Fulfil the regulatory and legal obligations required of current practice
- 2.3. Demonstrate accountability to professional regulatory bodies
- 2.4. Recognize and respond to others' unprofessional behaviours in practice
- 2.5. Participate in peer review

3. Demonstrate a commitment to physician health and sustainable practice

- 3.1. Balance personal and professional priorities to ensure personal health and a sustainable practice
- 3.2. Strive to heighten personal and professional awareness and insight
- 3.3. Recognize other professionals in need and respond appropriately

REVISED – Specialty Standards Review Committee – February 2013