

University of Toronto

Rotation Specific Objectives

Cardiac Rehabilitation

For this rotation, please FOCUS the evaluation on the following CanMEDs roles: 1) Medical Expert; 2) Collaborator; 3) Health Advocate

General Requirement:

- To acquire the knowledge and practical skills required to offer appropriate rehabilitation services to individuals living with cardiac conditions, to help them to achieve optimal physical, social and emotional well-being

Medical Expert

Definition:

As Medical Experts, Psychiatrists integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centered care. *Medical Expert* is the central physician Role in the CanMEDS framework. The Psychiatrist is a medical specialist, expert in the comprehensive diagnosis, management and rehabilitation of people of all ages with neuromusculoskeletal disorders and associated disabilities.

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

- Define cardiac rehabilitation and recount the evidence supporting intensive cardiac rehabilitation in improving outcomes such as the need for future revascularization, further coronary events, and mortality
- Demonstrate reliable and conscientious professional conduct in all aspects of patient care
- Demonstrate an academic approach to the understanding of the issues of each cardiac patient
- Recognize the different models of rehabilitation as demonstrated by cardiac rehabilitation and the team
- Participate in team reviews and discuss the medical evaluation of specific patients

2. Establish and maintain clinical knowledge, skills and attitudes appropriate to their practice

- Understand the evidence supporting the paradigm shift away from immobilization to early mobilization of cardiac patients in the acute (formerly Stage I) period.
- Describe the known benefits of exercise on risk factors and heart disease; as a corollary, describe the effects of a sedentary lifestyle on cardiovascular health
- Understand the effect of diet on cardiovascular risk and the role for diet management (for example, with adherence to the Canada Food Guide) as an integral component of interdisciplinary cardiac rehabilitation

- Understand the importance of optimal glycemic control and management of diabetes mellitus for the primary and secondary prevention of cardiovascular disease
- Understand the relationship between stress and the risk of cardiovascular events
- Be familiar with the prevalence of post-MI clinical depression/anxiety and the optimal management of these conditions, including the development of stress management strategies
- Discuss cognitive changes that can occur following MI or revascularization
- Understand the difficulties experienced by both patients coping with their diagnosis and living with cardiovascular disease as well as the families of patients after a cardiovascular event
- Understand the sexual difficulties encountered by couples after cardiovascular events
- Discuss the behavioural strategies involved in risk factor modification
- Describe the adaptive physiological changes in response to aerobic and resistance training programs and the benefits derived from long-term outpatient cardiac rehabilitation
- Explain the theory, practice and application of a:
 - “Diagnostic” stress test;
 - Cardiopulmonary exercise test;
 - Stress echocardiogram; and
 - Radionucleotide stress test.
- Explain the essential elements of determining a safe return-to-work, including:
 - Work requirements (physical and psychological)
 - Work tolerance
 - Evaluative techniques (*e.g.*, weight-lifting and carrying)

3. Perform a complete and appropriate assessment of a patient

- Attend the Pre-assessment Clinic to demonstrate proficiency in completing a detailed history and physical examination to ensure that a patient can safely engage in cardiopulmonary assessment
- Attend inpatient cardiac rehabilitation ward and demonstrate proficiency in completing a detailed history and physical examination to ensure the patient is an appropriate rehabilitation candidate and identify any post-op complications *e.g.* UNE, TIA/CVA, MSK pain, volume overload, wound infection.
- List the ROM restrictions of post-operative patients (sternal and pacemaker precautions)
- Attend the Secondary Prevention Clinic to develop the clinical examination and history-taking skills necessary for the formulation of a comprehensive management plan, designed to reduce the risk of further cardiovascular events
- Attend and participate in the ‘Diabetes workshop’ to educate /coach patients living with Diabetes and to empower them take the necessary steps to maintain optimal glycemic control
- Attend and participate in the Stress Management Workshop to enable patients to minimize life stressors that can increase the chance of further cardiovascular events
- Attend MSK Clinic and optimally manage patients suffering from musculoskeletal conditions that serve as barriers to the initiation and maintenance of an optimal exercise regimen
- Communicate with other team members (in both oral and written format) a detailed yet concise history, problem list and diagnostic plan
- Effectively discuss stress related issues, ask about depression/anxiety in each clinical encounter with a cardiac patient
- Be familiar with the various parameters of exercise stress testing including ventilatory exchange (“VE”), ventilatory anaerobic threshold (“VAT”), respiratory quotient (“RQ”), oxygen

consumption (VO_2), and maximal oxygen consumption (“ VO_{2max} ”) and how these values relate to aerobic fitness

- List the effects of cardiac medications, *e.g.* beta-blockers, on exercise stress testing
- List alternative exercise protocols and modalities for patients with low exercise capacity, and neurological and/or musculoskeletal impairments

4. Use preventive and therapeutic interventions effectively

- Know how to draft an exercise prescription, utilizing the ‘FITT’ acronym, and how to use the various methods of calculating exercise intensity
- Facilitate knowledge translation from lab data collection to the practical development of an exercise prescription by following a few specific patients from the lab through the patient intake/track. Learn how to progress through the patient exercise prescription, and follow particular patients through the rehabilitation program and during remainder of the resident’s rotation
- Implement and communicate the exercise prescription to the patient and his/her family in easily-understood language
- Be familiar with special exercise considerations for cardiac rehabilitation of patient populations including populations living with heart failure/ ICD, transplant recipients, cancer, stroke, vasculopathy and those with cardiac risk factors including type II diabetes
- Develop an approach to electrocardiograph interpretation with an emphasis on findings associated with ischemia, and acute, evolving and resolving myocardial infarction
- Be able to supervise and interpret a Cardiopulmonary assessment/stress test, applying knowledge of the factors placing a person at risk during exercise, various stress testing protocols, reasons to terminate stress testing, and results of a stress test that would suggest the patient is at high risk for cardiac events during future exercise
- List the absolute and relative contraindications for exercise stress testing
- Recognize the absolute and relative indications for terminating exercise stress testing
- Identify exercise stress test findings associated with poor cardiovascular prognosis
- Identify the modifiable and non-modifiable risk factors for coronary artery disease (“CAD”) and learn optimal risk factor management, including exercise, for the primary and secondary prevention of cardiovascular events
- Explain the theory and approach for the modification of the following risk factors:
 - Smoking
 - Physical inactivity
 - Stress and mental health
 - Hypertension
 - Diabetes
 - Hyperlipidemia
 - Sleep irregularities
- Demonstrate knowledge of the medications utilized for the primary and secondary prevention of cardiovascular disease and the effect that some of these medications (*e.g.*, beta-blockers) have on exercise and exercise stress testing
- Communicate the risk factor management plan to the patient and his/her family using easily-understood plain language
- Gain insight for individualization of modalities of exercise testing and training (arm

ergometer, reclining bike, treadmill, resistance training) for patients with associated chronic conditions (e.g. arthritis, stroke, COPD)

Communicator

Definition:

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

1. Establish therapeutic relationships with patients, families and interprofessional cardiac team

- Communicate clearly, concisely and effectively to patients/families and team. Demonstrate a patient centred approach that includes concern for the psychosocial, cultural and economic implications of a patient's unique situation
- Listen actively and be aware of and responsive to nonverbal cues
- Gather and synthesize the data necessary for diagnosis and treatment of a particular patient through history taking and review of relevant documentation
- Focus on understanding a particular patient's beliefs, concerns, expectations and illness experience

2. Convey relevant information and explanations accurately to patients and care givers, colleagues and other professionals

- Deliver information to a patient and their care givers, colleagues and other health professionals in a clear and concise manner so that it is understandable and encourages discussion and participation in decision-making
- Address challenging communication issues effectively, such as obtaining informed consent

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

- Prepare and maintain clear, complete, accurate, and appropriate records of clinical encounters and plans
- Present verbal reports of clinical encounters and plans effectively

Collaborator

Definition:

As Collaborators, Physiatrists effectively work within a health care team to achieve optimal patient care.

1. Participate effectively and appropriately in an interprofessional cardiac team

- Learn the roles and responsibilities of physicians and other professionals within the cardiac team (such as physicians, case managers, exercise leader, cardiopulmonary lab staff, program coordinator, dietician, psychologist, social worker)

- Learn the principles of interdisciplinary team dynamics and functioning, the special training and unique abilities of its team and the special relationship of the patient and family to the team
- Participate effectively in interprofessional team meetings

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

- Demonstrate a positive and respectful attitude towards other colleagues and use constructive feedback to avoid conflicts

Manager

Definition:

As Managers, Physiatrists 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.

1. Work effectively and efficiently in a health care organization and utilize resources effectively including related community and disease specific agencies such as the Heart and Stroke Foundation

- Acknowledge the increased strain of health care economics and assist patients/families in proper utilization of resources

2. Utilize personal resources effectively to balance professional and non-professional activities

- Enhance effective time management skills through developing your own learning plan and enriching educational experience

Health Advocate

Definition:

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

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

- Identify the health needs of an individual patient
- Demonstrate sensitivity to special issues of gender, ethnicity, language and social bias in dealing with patients, families and persons with special needs
- Identify opportunities for advocacy, health promotion and disease prevention for individuals with cardiac and other chronic diseases (i.e. Diabetes, COPD, CHF, stroke)

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

- Learn the barriers to cardiac rehab access and appropriate resources.
- Work with the inpatient team to ensure outpatient cardiac referral is completed or a suitable alternative rehab plan provided if patient is unable to access outpatient cardiac rehab.
- Identify vulnerable or marginalized populations within those served (i.e. women's, ethnic groups, patients with heart failure and transplant) and respect the diversity and differences among these populations

Scholar

Definition:

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

1. Enhance professional activities through ongoing learning and facilitate the learning of patients/families and the cardiac team

- Develop a cardiac-related personal learning project and present it to the cardiac team or patient and family population
- Attend available workshops (i.e. stress management, diabetic care) and teaching sessions (i.e. ECG rounds, case conferences)

2. Facilitate the dissemination and translation of new knowledge and practices

- Review relevant guidelines (i.e. HTN, diabetes, dyslipidemia, and heart failure) and apply to daily practice
- Attend Risk Factor Modification clinic and coach the patients regarding primary and secondary prevention

Professional

Definition:

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

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

- Exhibit appropriate professional behaviours in practice, including honesty, integrity, compassion, and respect
- Demonstrate a commitment to delivering the highest quality care and maintenance of competence
- Maintain appropriate relations with patients

2. Self-assessment

- Continually evaluate one's own abilities, knowledge and skills, and know the limitations of professional competence