January 2019

Goals and Objectives for the Cardiology Junior Rotation

The Junior Cardiology Resident rotation takes place at the Health Sciences Centre. Residents will work in a multidisciplinary Cardiology team under the supervision of the Attending Cardiologist and Senior Residents. Residents will be responsible for seeing Cardiology ER consults, managing CCU patients and admitted ward patients. The resident will get exposure to acute cardiac issues including ischemia, arrhythmia, heart failure, valvular disease and cardiogenic shock. Residents will be expected to attend noon Internal Medicine rounds on a daily basis and to lead ECG rounds on Friday mornings.

It is expected that trainees will demonstrate ongoing development in each of the CanMEDS roles such that the depth, sophistication, efficiency and proficiency of their performance increases with experience. Review of rotation objectives will be done in conjunction with creation of a learning contract at the beginning of the rotation. Trainees completing the program should expect to achieve the key competencies described. This will be documented using an end of rotation in-training evaluation report (ITER). Residents will also be evaluated based on their patient presentations, direct observation of physical examination and clinical skills.

In addition to the rotational objectives and key competencies described below, the following EPAs may be covered during the Cardiology Junior Rotation These will depend on the learner's stage of training, progress and individual learning needs. The learning contract and rotational goals created at the beginning of the rotation can help specify which EPAs the learner may want to focus on throughout their rotation.

Transition to Discipline:

TD1: Performing histories and physical exams, documenting and presenting findings, across clinical settings for initial and subsequent care

TD2: Identifying and assessing unstable patients, providing initial management, and obtaining help

TD3: Performing the basic procedures of Internal Medicine

Foundations:

F1: Assessing, diagnosing, and providing initial management for patients with common acute medical presentations in acute care settings

F2: Managing patients admitted to acute care settings with common medical problems and advancing their care plans

F5: Assessing unstable patients, providing targeted treatment and consulting as needed

F7: Identifying personal learning needs while caring for patients, and addressing those needs

MEDICAL EXPERT

The learner *MUST* gain and demonstrate an approach to the following cardiac symptoms:

1. Chest pain
2. Dyspnea
3. Palpitations
4. Syncope
5. Edema

The learner *MUST* gain and demonstrate an ability to manage the following common cardiac conditions:

1. Acute coronary syndromes
2. Cardiac and non-cardiac chest pain
3. Congestive heart failure
4. Atrial fibrillation and atrial flutter
5. Brady- and tachyarrhythmias
6. Hypotension and shock
7. Aortic stenosis
8. Mitral regurgitation
9. Prosthetic cardiac valves

The learner *MAY* also gain and demonstrate an approach and /or knowledge of the following cardiac symptoms:

1. Claudication
2. Systemic symptoms such as weight loss/gain, fever or fatigue
3. Anasarca

The learner *MAY* also gain and demonstrate an ability to manage the following cardiac conditions

1. Pericarditis
2. Myocarditis
3. Infective endocarditis
4. Hypertensive urgencies and emergencies
5. Aortic dissection
6. Uncommon complications of cardiac therapies such as critical hemorrhage, anaphylaxis or angioedema.
7. Complications from implantable cardiac devices
8. Genetic cardiac conditions
9. Aortic insufficiency, mitral stenosis or tricuspid regurgitation

The learner *must* gain and demonstrate an ability to interpret the following:

1. 12-lead ECG and rhythm strips interpretation of most common rhythm, arrhythmias and ischemic changes.
2. Chest x-ray interpretation including common conditions relevant to cardiology such as cardiomegaly, heart failure, pneumonia, pneumothorax, central line position and ET tube placement.
3. Interpretation of echocardiogram, coronary angiography, myocardial perfusion imaging, cardiac CT and MRI are not expected, however the learner must show understanding and ability to decipher the meaning of the reports for these modalities.

These objectives will be *Achieved* by the following means:

1. Demonstrate competency and obtain experience in the assessment and management of a wide variety of cardiac problems.

    a. Perform a thorough history with particular emphasis on the detailed history of the presenting problem.
    b. Perform a general physical exam as well as a detailed examination of the cardiovascular system.
    c. Select/seek appropriate investigations including cardiac diagnostic procedures.
    d. Interpret the assessment in a comprehensive manner
    e. Participate in patient management
    f. Understand the indications for cardiac diagnostic procedures
    g. Observe cardiac intervention procedures

2. Gain experience in the management of cardiac conditions in the emergency room, coronary care unit and ward.
3. Demonstrate ability to provide emergency resuscitation efforts and ability to seek appropriate help when caring for complex or unstable patients.
4. To gain in-depth experience in reading ECGs and apply to the diagnosis and management of cardiology patients.
5. To acquire knowledge of the etiology and pathophysiology of cardiac conditions.
6. To gain technical experience in the performance of procedures such as recording the electrocardiogram, venipuncture, intravenous therapy, etc.

COMMUNICATOR

1. Establish a therapeutic relationship with patients and families.
2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals.
3. Communicate effectively with peers and other health professionals.
4. To further develop skills in medical record keeping by recording the case histories of inpatients and writing progress notes. Coronary care patients must have daily progress notes with physical exam findings and clear description of management plan. Ward patients need progress notes every 3 days, after significant investigations are completed or when the housestaff is going off service. Ward patients who are medically discharged or deemed "Alternate Level of Care" do not require notes unless some change is made to their management plan. (IF NOTES ARE NOT WRITTEN AT ADEQUATE INTERVALLS, YOU MAY RECEIVE A FAIL MARK ON YOUR ROTATION)
5. To develop communication skills with primary care providers by completing useful discharge summary indicating to the care provider what issues need specific attention and follow up upon a patients' discharge from hospital.
6. To further develop skills in dictating patient records by dictated letters to referring physicians on patients seen on consultation in the outpatient department.
7. To develop skills in verbal presentation by presenting cases at ward rounds, in the clinic and on occasion at formal teaching conferences.
8. Discuss goals of care with patients/families and appropriately document and complete the Advance Care Planning (ACP) Orders form.

COLLABORATOR

1. The PGY-1 should recognize and integrate into case management, the roles of other health care providers including cardiac surgeons, physiotherapists, dieticians, nurses and social workers.
2. To foster respect for and appreciation of the importance of communication with allied health care workers and referring physicians in the care of patients.

LEADER

1. Demonstrate efficient and effective use of time and resources
2. Demonstrate ability to prioritize and manage tasks particularly related to the service and patient care requirements on the cardiology service.

HEALTH ADVOCATE

1. Recognize and respond to determinants of health that particularly affect the patient's cardiac conditions. These factors may include socioeconomic status, financial resources, social supports and public health issues.
2. Be cognizant to elements of patient safety.

SCHOLAR

1. Demonstrate basic understanding of the principles of Critical appraisal of medical literature as it pertains to managing patients with cardiac disease and conditions.
2. Use of evidence from the literature in clinical decision-making.
3. Facilitate the learning of patients, families, students, residents and other health professionals.
4. Recognize the critical role of self-directed learning and continuing medical education.

PROFESSIONAL

1. Behave in a respectful manner toward patients and families, as well as other health professionals.
2. Consider ethical issues and patients' wishes in making treatment decisions.
3. Adhere to Eastern Health procedures and policies and applies professional standards, including advance health care directives, substitute decision-making and disclosing adverse events
4. Ensure adequate transition of care of patients including assuring proper handover of patients
5. Attend teaching rounds and demonstrate collegiality.
6. Recognize the limits of one's expertise by knowing when to call for help
7. Demonstrate a commitment to improving one's performance by seeking and responding to feedback
8. Answer pages promptly, display punctuality, and complete expected tasks

These objectives will be assessed by the following methods:

1. The trainees knowledge base, clinical skills, and attitudes, will be continually observed during ward rounds, clinics, and in the more formal teaching rounds.
2. Oral and written case reports under the care of the trainee will be evaluated. The accuracy of history taking and physical findings will be assessed in two ways:

    a. By confirming the findings reported in the oral or written case-report.
    b. By direct observation of the trainee during performance of the witnessed complete or partial history and physical examination.
3. Clinical judgment of the trainee will be assessed by encouraging the trainee to commit themselves (preferably in writing) as to the diagnosis of management of the specific patient problem prior to them receiving input from more senior trainees or members of the attending staff.
4. Monitoring of attendance at academic half-day, noontime rounds and ECG rounds.
5. Professional attributes, such as communication skills, teaching skills, and interpersonal relations will be assessed on an ongoing basis by observing the trainee interacting with other members of the health care team. The attending staff may seek opinions from other members of the health care team concerning these aspects of evaluation.
6. The in-training evaluation report (ITER).
7. Direct observation of performance of procedures and completion of the procedure log.
8. Establishing and completing of learning contracts.

INTERNAL MEDICINE RESIDENT CARDIOLOGY ROTATION ORIENTATION

Preamble:

The following is information for orientation of the Internal Medicine Resident on the Cardiology rotation. The Internal Medicine and Cardiology Program recognize that this is a busy service with a heavy patient caseload. The cardiology rotation provides an excellent opportunity for education and clinical experience. At the same time, as employees of the Health Care Corporation, residents are responsible to provide patient care and fulfill their clinical duties. The following is intended to help the resident transition onto the Cardiology Service and provide some general guidance throughout the rotation.

General Information:

1. **Description of the rotation:** The rotation consists of two blocks of cardiology that is usually divided by service on the "active" and "inactive" weeks as outlined below.

2. **Goals and Objectives:** G and O's have recently been revised to be specific for the residents on the cardiology service.

3. **Evaluation:** The cardiology coordinator is to gather input from all supervising cardiologists. The form is completed by coordinator and may be discussed face to face with the resident if there are any issues or upon request. Feedback may be gathered from other sources e.g. nurses as appropriate. A mid-rotation evaluation should be completed particularly if there any concerns are identified with the residents' performance. The resident is expected to specifically seek-out their mid-rotation evaluation (verbal or written). Written ITER on One45 will be completed after the residents' performance has been discussed at the Cardiology Divisional Meeting and individual feedback obtained from relevant cardiologists. To assure timely completion of the ITER, it is the responsibility of the resident to select their attendings in One45 prior to the end of their cardiology rotation.

   Residents provide feedback on individual cardiologists via the faculty evaluation form on One45. Feedback on the rotation is via the cardiology resident coordinator and/or the Medicine Program Director or delegate.

4. **Call and Duty Schedules**: Regular duty hours are defined in the PAIRN collective agreement. The call schedule will also follow the terms outlined in that agreement. The call is in-hospital and is currently a 24-hour duty period with handover of patient responsibilities following the 24th duty hour. The call schedule is made up by the Medicine administrative resident and should be available 2-4 weeks prior to the start of the rotation. The call schedule is on the Medicine Program One45 site.

5. **Vacation and Conference Leave:** As per the PAIRN Collective agreement and Internal Medicine Program policies.

6. **Daily Routine:** Report with assigned team for clinical service and educational activities. Daily clinical duties are generally associated with the resident assignment on active or inactive week.

Active week duties may include covering the patients in CCU, follow-up patients on the cardiology inpatient floor, Emergency Department consults and other consults potentially needing transfer to CCU. During the active week you are expected to show up and start seeing CCU patients at 0800 hours. The cardiologist will show up for CCU rounds between 0800 and 1000 hours generally.

Inactive week duties include care of cardiology in-patients, follow-up patients on the cardiology in-patient floor, inpatient consults who are not destined to CCU, outpatient consults outside the Emergency Department (ie: Preadmission Clinic or Cancer Clinic) and other related duties.

Note this description is not all-inclusive and duties may vary based on patient and other clinical service needs. Workload between Active and Inactive week is highly variable. If one team's consult load is high, the other team's residents are expected to help out. Clinical clerks will also be expected to help out.

7. **Pager Responsibilities**: There are three pagers, the code pager, the Active Team Consult pager and the Inactive Team Consult pager. The pager will be handed down to the next person in the sequence for situation where the active/inactive team resident is post-call or in teaching. (Residents may keep the code pager but the not the consult pager during academic half-day)

    a. The code pager should be handed down according to this sequence:
        i. Resident on active or inactive team
        ii. Off-service medicine resident from on-call medicine team

    b. The consult pager (Active and Inactive) should be handed down according to this sequence:
        i. Resident on active or inactive team
        ii. On-call cardiologist for that team

8. **Call Routine and Duties:** The call duty hours are outlined above. Duties on call may vary depending on patient and clinical service needs. Generally these duties include coverage of all in-patients and the patients in the CCU, emergency and urgent consults, and managing other emergent/urgent cardiology duty/procedures. The resident is responsible to the Cardiologist on-call. It is suggested contact with that individual be made at the beginning of the call duty period to establish a plan for patient management and communication. It is generally expected that most cases if not all cases be reviewed with the on-call cardiologist. This may be negotiated with the specific cardiologist covering call on that day. Patients may not be discharged home without first discussing it with the cardiologist on-call. You are not responsible for outside calls, whether it is for advice or to approve a patient transfer. These calls should be referred to the cardiologist on-call.

9. **Procedures if unable to reach on-call cardiologist:** The most common reason for not immediately answering a page is because the cardiologist is taking an outside call (we cover cardiology province-wide). Realize that pager technology is sometime imperfect and that there are pager dead-zones within as well as outside the hospital. Known pager dead-zones in the hospital include parts of the cardiac cath lab (Lab 2), the basement cardiology offices and certain rooms in the medical school. During daytime hours, phoning the cardiologist's office or an overhead page are your options. Some cardiologists do not carry a personal pager (see contact list at the end of this document). Afterhours, if repeated pages (2 to 3) go unanswered, you may contact the CCU or Hospital Switchboard for alternate

contact numbers for the cardiologist on-call (home phone or cell). If the on-call cardiologist cannot be reached, then contact the on-call interventional cardiologist. If neither of these cardiologists can be reached, then contact the rotation supervisor, Dr. Fred Paulin. If this fails, contact the Chief of Cardiology, Dr. Sean Connors.

10. **Education:** Residents are expected to attend and participate in rounds, conferences and other education opportunities scheduled on the cardiology service. The schedule is available on One45. It is responsibility of the resident to confirm timing of rounds etc. while on the service. Medicine residents are protected to attend their half-day on Thursday afternoon. ECG rounds are every Friday morning and residents on the active team are expected to bring ECGs for teaching. Residents on other services may bring interesting or problematic ECGs for discussion as well.

11. **Resident Concerns:** Should a resident have any concern pertaining to the cardiology rotation; he/she may bring that to the Cardiology Coordinator or the Internal Medicine Program Director or other appropriate individual as identified in the policies of the Postgraduate Program. Either the Medicine Program or the Postgraduate office can provide direction should the resident not have access to or not be current with such policies.

Points for the resident to note for orientation to the Cardiology Rotation

1. Know the dates of rotation start and finish.
2. Check the call schedule prior to the start of the rotation. Confirm vacation or conference leave if you have it scheduled.
3. Confirm the duty and responsibilities of the resident on the service as well as the daily routines.
4. Review the goals and objectives.
5. Know the evaluation processes and timing.
6. Request a tour of the cardiology department, critical care areas, cath lab etc. If unfamiliar with these areas.
7. Acquire the rounds and teaching schedules. Note when you are expected to present and participate.
8. Introduce self to cardiologists, nurses and other team members as appropriate.
9. Determine best method of communication with attending staff especially when on call.
10. Communicate with supervisory staff and other residents when attending activities off the Cardiology service such as Medicine teaching Rounds.
11. Communicate with supervising staff and cardiology coordinator should there be a need for unanticipated time off such as illness, family emergency etc.
12. Remember that patient care comes first.

Points for Cardiology staff to note for resident orientation to the Rotation

1. Note start date of rotation as the resident may be new to the service.
2. Be aware of the Goals and Objectives, evaluation processes and timing of evaluations.
3. Be aware of rounds and teaching schedules the resident is expected to attend.
4. Discuss with the resident about preferred method of communication on a daily basis and on call.
5. Participate as appropriate in the evaluation process.

Cardiologist Contact Information

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