

GENERAL INTERNAL MEDICINE RESIDENCY PROGRAM

MCGILL UNIVERSITY

ROTATION-SPECIFIC GOALS & OBJECTIVES

TABLE OF CONTENTS

MANDATORY ROTATION-SPECIFIC GOALS AND OBJECTIVES	
1. General Internal Medicine Consultation	3
2. Community Hospital Internal Medicine Exposure	10
3. Medical Obstetrics	16
4. Critical Care Medicine	20
5. Junior Co-Attending on a Clinical Teaching Unit	26
6. Non-Invasive Cardiology (Non-Invasive Cardiac Stress Testing and Ambulatory ECG Monitoring)	32
7. Longitudinal Ambulatory Medicine	35
8. Preoperative Outpatient Medicine	41
9. Research	47
ELECTIVE ROTATION-SPECIFIC GOALS AND OBJECTIVES	
1. Allergy and Immunology	49
2. Cardiology	53
3. Cardiac Echocardiography	58
4. Dermatology	61
5. Endocrinology	65
6. Gastroenterology and Hepatology	69
7. Hematology	74
8. Immunodeficiency Rotation	77
9. Infectious Diseases	80
10. Medical Oncology	85
11. Nephrology	89
12. Neurology	94
13. Palliative Care	98
14. Radiology	102
15. Respiriology	104
16. Rheumatology	108
17. Thrombosis Medicine	111
18. Tropical Medicine	115



1. GENERAL INTERNAL MEDICINE CONSULTATION

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her rotation in General Internal Medicine consult service.

1a. Medical Expert

Be able to apply expert knowledge and clinical skills in the investigation and management of general internal medicine disorders, multi-system internal medicine disorders, and perioperative care in a variety of clinical settings (e.g. surgery, obstetrics, emergency room, and psychiatry)

Be able to demonstrate effective consultation services with respect to patient care and education in a variety of clinical settings (e.g. surgery, obstetrics, emergency room, and psychiatry) including:

1. INTERNAL MEDICINE DISORDERS:
 - Be able to provide an expert approach to the diagnosis and initial evaluation in the emergency setting
 - Be able to utilize guidelines, and evidence for diagnosis, investigation and management for common chronic illnesses
 - Be able to assess and manage the critical care patient
 - Be able to diagnose and/or manage medical illnesses in the psychiatric patient, including an understanding of the complications and side-effects of commonly prescribed psychiatric drugs
2. MULTI-SYSTEM INTERNAL MEDICINE DISORDERS:
 - Be able to use current evidence-based recommendations for the care of common chronic internal medicine conditions, such as but not limited to diabetes, hypertension, coronary artery disease, chronic obstructive pulmonary disease, dyslipidemia and chronic kidney disease, and apply this knowledge to balance the treatment of one disorder with the management of others while preventing drug interactions and optimizing patient-centered care
 - Be able to assess and manage complex multi-system medical problems in non-medical patients (e.g. diabetic management of a surgical patient)
 - Be able to understand the hazards of poly-pharmacy and medication use in the elderly and in other patients with multiple comorbidities

- Be able to apply the principles of dose adjustment in renal disease and liver failure

3. PERIOPERATIVE CARE:

Cardiovascular Risk:

- Be able to identify factors elevating perioperative cardiovascular risk
- Be able to apply the investigations relevant to assessing perioperative cardiovascular risk
- Be able to apply evidence-based risk stratification models in the evaluation of perioperative cardiovascular risk
- Be able to demonstrate expert knowledge in management strategies necessary in the perioperative care of patients with cardiovascular risk factors
- Be able to advise on optimal timing of the surgery and monitoring of the patient
- Be able to advise and/or manage appropriate post-operative cardiovascular risk factor management

Pulmonary Risk:

- Be able to identify risk factors affecting perioperative pulmonary risk
- Be able to apply the investigations relevant to assessing perioperative pulmonary risk
- Be able to apply evidence-based risk stratification models in the evaluation of perioperative pulmonary risk
- Be able to discuss optimal timing of the surgery and monitoring of the patient
- Be able to demonstrate expert knowledge in management strategies necessary in the perioperative care of patients with pulmonary risk factors
- Be able to advise on appropriate post-operative pulmonary risk factor management

Risk of Thrombosis and/or Bleeding:

- Be able to identify risk factors affecting perioperative risk of thrombosis or bleeding
- Be able to apply investigations relevant to assessing perioperative risk of thrombosis or bleeding
- Be able to apply evidence-based risk stratification models in the evaluation of perioperative risk of thrombosis or bleeding
- Be able to advise on optimal timing of the surgery and monitoring of the patient
- Be able to demonstrate expert knowledge in management strategies necessary in the perioperative care of patients with risk of thrombosis or bleeding
- Be able to advise on appropriate post-operative thrombosis or bleeding risk factor management

Patient with Single or Multiple Pre-Existing Medical Problems:

- Be able to discuss the risk contributed by each medical problem individually and in conjunction with others
- Be able to demonstrate expert knowledge in the potential interactions of each medical

Rotation-Specific Goals and Objectives
February 10th, 2015

problem on the others and on the perioperative care

- Be able to demonstrate expert knowledge and clinical skills in the management of each medical problem focusing on the impact these management strategies may have on the perioperative care

Medication Management:

- Be able to describe the risk: benefit estimates pertaining to the use of each medication in the perioperative period
- Be able to understand the potential interactions between the medications themselves and the impact of these on the perioperative care of the patient
- Be able to advise on optimal timing of the surgery and monitoring of the patient
- Be able to understand the potential impact of the surgery and perioperative care on the use and monitoring of the patient's medications
- Be able to demonstrate expert knowledge in the management of chronic medications during the perioperative setting including corticosteroids, insulin therapy, immunosuppressive agents, antiplatelet agents, and anticoagulants

Acute Internal Medicine Illnesses:

- Be able to diagnose and manage common acute medical illnesses in the perioperative period including their presenting features and initial management
- Be able to describe the impact of the acute medical illness on the perioperative care of the patient including addressing the potential need to delay surgery
- Be able to determine optimal timing of the surgery and monitoring of the patient in the face of the acute medical illness

Substance Abuse Issues:

- Be able to diagnose substance abuse issues pre-operatively and use evidence-based approaches to their management
- Be able to demonstrate expert knowledge and clinical skills in the management of possible withdrawal states in the perioperative period

Perioperative Delirium:

- Be able to diagnose and manage perioperative delirium
- Be able to identify potential causative factors and describe evidence-based approaches to address them
- Be able to demonstrate expert management strategies both pharmacological and non-pharmacological

Be able to apply knowledge and technical expertise in performing the following, which may become necessary to perform as a general internal medicine consultant on a patient under the care of another physician or specialist, interpreting the results and demonstrating an understanding of their limitations and complications:

Rotation-Specific Goals and Objectives
February 10th, 2015

1. Central venous catheter insertion
2. Lumbar puncture
3. Peripheral arterial catheter insertion
4. Abdominal paracentesis
5. Endotracheal intubation
6. Thoracentesis
7. Joint aspiration
8. Chest tube insertion
9. Electrocardiographic interpretation

1b. Communicator

Be able to effectively provide clear, concise, and timely verbal and written communication to the consulting physician and health care team (e.g. surgery, psychiatry, family medicine)

Be able to establish therapeutic relationships with patients and family

Be able to elicit a pertinent history from the patient and consulting physician and health care team

Be able to discuss the risk: benefit of diagnostic and therapeutic options in patients with multi-system illness, and/or in the setting of surgery

Be able to effectively define the role of a consultant to the patient and family in the context of the patient's overall medical care

Be able to effectively communicate to the patient and family one's medical assessment and proposed recommendations in the context of the patient's overall health plan

1c. Collaborator

Be able to identify and recognize the need to, and benefit of working closely with the consulting physician and health care team in providing optimal patient care

Be able to contribute effectively to interdisciplinary team activities (e.g. discharge planning)

Be able to aid the consulting physician and health care team in linking or transitioning patients to out-patient health care services

Be able to recognize limitations in skill and knowledge and consult sub-specialists for optimal patient care

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to facilitate the integration of patients with the health care team and the health care community

1d. Manager

Be able to effectively and efficiently manage the consult service often while attending to other clinical duties

Be able to effectively and efficiently manage an out-patient perioperative clinic while attending to other duties including teaching/supervising junior residents and medical students

Be able to prioritize requests for consults both in the in-patient and out-patient settings

Be able to demonstrate expertise in the coordination of multiple diagnostic and therapeutic interventions, often within a short period of time (e.g. investigation of thrombocytopenia in a patient with a hip fracture awaiting surgical repair)

Be able to demonstrate the ability to use available medical and technical resources effectively

Be able to allocate finite health care resources appropriately regarding efficient and optimal assessment of both in- and out-patients

Be able to demonstrate an understanding of human resource, financial and record keeping issues pertaining to running a perioperative medical office

Be able to set priorities and manage time to balance patient care, practice requirements, outside activities and personal life

Be able to demonstrate the ability to manage patient care information obtained in both acute and ambulatory care settings and ensure appropriate and timely follow-up

Be able to implement processes to ensure personal practice improvement

Be able to employ information technology appropriately for patient care

Be able to participate in systemic quality process evaluation and improvement, such as patient safety initiatives (e.g. hospital guideline on thromboprophylaxis in surgical patients)

1e. Health Advocate

Be able to identify the health needs of an individual patient

Be able to educate patients and their families regarding the factors that impact on their health

Be able to identify opportunities for advocacy, health promotion and disease prevention for surgical and psychiatric patients with chronic internal medicine conditions including hypertension, diabetes, and cardiovascular conditions

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to educate and counsel patients and their families regarding the factors that impact on their health and use the opportunity of the perioperative assessment to counsel patients on preventive health care including but not limited to:

1. Smoking cessation
2. Treatment of dyslipidemia
3. Hypertension management
4. Weight management
5. Nutrition
6. Promotion of an active lifestyle
7. Promotion of appropriate alcohol use
8. Avoidance of recreational drug use

Be able to facilitate the link between primary care, specialty and sub-specialty medicine to benefit the care of the patient

Be able to identify the determinants of health of the populations, including barriers to access to care and resources of patients assessed in an ambulatory setting who need urgent work-up prior to surgery

1f. Scholar

Be able to educate patients and their families regarding their medical condition

Be able to critically appraise sources of medical information

Be able to teach medical students, residents, and other health care professionals including the consulting physician and medical team who are managing the patient

Be able to develop, implement and monitor a personal continuing education strategy

1g. Professional

Be able to demonstrate a commitment to delivering the highest quality care and maintenance of competence

Be able to apply a knowledge of the professional and legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in patient care

Be able to recognize and deal with unprofessional behaviors in clinical practice

Be able to manage conflicts of interest

Be able to recognize limits in skills and knowledge in oneself

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to balance personal and professional priorities to ensure personal health and a sustainable practice

2. COMMUNITY HOSPITAL INTERNAL MEDICINE EXPOSURE

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her rotation in community medicine.

2a. Medical Expert

Be able to apply knowledge of the clinical and fundamental biomedical sciences relevant to General Internal Medicine including an understanding of investigation and management of internal medicine disorders, multi-system internal medicine disorders, risk reduction, perioperative care, obstetrical care medicine, and critical care medicine as they apply to the community care setting

Be able to perform a complete and appropriate assessment of a patient in a community setting

Be able to demonstrate effective consultation skills with respect to patient care and education in geographic areas that have limited access to sub-specialists

Be able to provide medical care in a variety of clinical settings (e.g. critical care unit, emergency room, and ambulatory care clinics)

Be able to use preventative and therapeutic interventions relevant to General Internal Medicine effectively

Be able to perform with expert skill and interpret the results of diagnostic procedures commonly performed by general internists in the community (e.g. exercise electrocardiography testing, ambulatory blood pressure monitoring)

Be able to ensure appropriate follow-up of procedures performed

Be able to understand the indications for transfer to a tertiary-care center for further patient care or work-up

Be able to determine the indications for consultation with sub-specialists often via telephone and/or videoconference

Be able to deliver expert patient-centered care effectively and in an ethical manner in a variety of clinical situations which may include:

1. General Internal Medicine Consultation (see General Internal Medicine Consultation Goals and Objectives)
2. Perioperative medical assessment (see Perioperative Medicine Goals and Objectives)
3. Pregnancy-related medical problems (see Medical Obstetrics Goals and Objectives)
4. Critical care (see Critical Care Goals and Objectives)
5. Common medical problems the ambulatory care setting (see Longitudinal Ambulatory Clinic Goals and Objectives)

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate expert knowledge in the diagnosis and management of the following:

1. Multi-system failure in the acute care setting (including critical care)
2. Chronic multi-system failure in the ambulatory care setting
3. Undifferentiated symptoms in the ambulatory care setting
4. Common medical problems in both the acute and ambulatory care setting
5. High acuity illness with disease in any one system complicated by other co-morbidities
6. An illness that spans multiple organ systems (e.g.sarcoidosis)

Be able to demonstrate knowledge and technical expertise in performing the following procedures that are sometimes performed in an in-patient/out-patient setting, interpreting the results and demonstrating an understanding of their limitations and complications:

1. Central venous catheter insertion
2. Lumbar puncture
3. Peripheral arterial catheter insertion
4. Abdominal paracentesis
5. Endotracheal intubation
6. Thoracentesis
7. Bone marrow biopsy and aspiration
8. Knee joint aspiration
9. Electrocardiographic interpretation

Be able to demonstrate knowledge and technical expertise in performing the following procedures that are sometimes performed in an in-patient/out-patient setting, and interpreting the results and demonstrating an understanding of their limitations and complications. Achieving expertise in these procedures will depend on the community setting wherein the resident is rotating:

1. Ambulatory blood pressure monitoring
2. Exercise stress testing (including nuclear tests)
3. Hemodynamic monitoring
4. Temporary pacemaker insertion
5. Ambulatory ECG monitoring
6. Elective cardioversion
7. Transthoracic pacing
8. Chest tube insertion
9. Skin biopsy
10. Joint aspiration and injection
11. Hemodialysis and peritoneal dialysis
12. Thyroid biopsy

2b. Communicator

Be able to develop rapport, trust, and ethical therapeutic relationships with patients and their families

Be able to effectively communicate with patients and their families with respect to their medical conditions

Be able to accurately elicit and synthesize relevant information and perspectives of patients and their families, colleagues and other professionals

Be able to convey relevant information and explanations accurately to patients and their families, colleagues and other professionals

Be able to transfer responsibility for patient care safely and appropriately by accurate, timely and context specific handover practices

Be able to communicate patient care needs to another facility emphasizing patient-centered needs and safe transportation

Be able to discuss the risk:benefit of diagnostic and therapeutic options in patients with multi-system illness, and/or in the setting of pregnancy and surgery

Be able to define the role of a consultant versus a primary care giver while involved in the care of surgical and obstetrical patients

Be able to maintain clear, concise, accurate and appropriate records of clinical encounters and plans

Be able to document the patient's admission and progress accurately with emphasis on the relevant issues

Be able to provide proficient sign-over, both written and verbal, for both in-patients and out-patients

Be able to interact effectively with other health care professionals, especially family physicians who will be managing the patients on a long-term basis

Be able to understand the need for and the benefits and limitations of telephone consultations for physicians in remote communities

2c. Collaborator

Be able to identify and recognize the need to, and benefit of working with other physicians and health care professionals, specifically with other family physicians who are providing primary care for patients

Be able to describe the specialist's roles and responsibilities to other professionals

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to describe the roles and responsibilities of other professionals within the health care team

Be able to contribute effectively to interdisciplinary team activities

Be able to aid the consulting health care team in linking patients to out-patient health care services

Be able to work with others to assess, plan, provide, and integrate care for individual patients or groups of patients

Be able to demonstrate skill in participation in inter-professional team meetings

Be able to demonstrate leadership in a health care team, as appropriate

Be able to implement a management plan in collaboration with a patient and their family

Be able to demonstrate a respectful attitude towards other colleagues and members of an inter-professional team

2d. Manager

Be able to prioritize requests for consults and learn to manage one's time efficiently

Be able to work collaboratively with others in their organizations to coordinate multiple diagnostic and therapeutic interventions

Participate in local systemic quality process evaluation and improvement, such as patient safety initiatives

Be able to describe the structure and function of the health care system in the community setting as it relates to General Internal Medicine

Be able to describe and navigate the corridors of care with tertiary-care centers

Be able to set priorities and manage time to balance patient care, practice requirements, outside activities, and personal life

Be able to manage patient care information obtained in both acute and ambulatory care settings and ensure appropriate and timely follow-up

Be able to use health care resources cost-effectively in the context of limited access to technological resources. In particular, the resident should gain experience and understanding with the transfer of patients to other centers for diagnostic tests and consultations with other sub-specialists

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to recognize the importance of just allocation of health care resources, balancing effectiveness, efficiency and access with optimal patient care in the community setting

2e. Health Advocate

Be able to identify the health needs of an individual patient

Be able to educate and counsel patients and families regarding the factors that impact on their health

Be able to identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care

Be able to promote and counsel preventive health care including but not limited to:

1. Smoking cessation
2. Treatment of dyslipidemia
3. Hypertension management
4. Weight management
5. Nutrition
6. Promotion of an active lifestyle
7. Promotion of appropriate alcohol use
8. Avoidance of recreational drug use

Be able to demonstrate techniques for, and knowledge of, mechanisms of interventions for long-term healthy behaviors and preventive health care including but not limited to smoking cessation, screening tests, immunization, exercise and nutrition

Be able to contribute to and improve the health of the local community (e.g. help implement social programs for alcohol and drug dependence)

Be able to identify opportunities for advocacy, health promotion and disease prevention in the communities that they serve, and respond appropriately

Be able to facilitate the link between primary care, specialty and sub-specialty medicine to benefit the care of general internal medicine patients in the community setting

Be able to identify the determinants of health of the populations, including barriers to access to care and resources and how links to tertiary-care centers may address these barriers

2f. Scholar

Be able to critically appraise sources of medical information in the context of limited access to sub-specialists

Be able to educate patients and their families regarding their medical condition

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to teach medical students, residents, and other health care professionals, especially family physicians who will be managing the patients as primary care givers

Be able to educate other health professionals including nurses in the community centers

Be able to develop, implement and monitor a personal continuing education strategy

2g. Professional

Be able to demonstrate a commitment to delivering the highest quality care and maintenance of competence

Be able to apply a knowledge of the professional and legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in patient care

Be able to recognize and deal with unprofessional behaviors in clinical practice

Be able to manage conflicts of interest

Be able to recognize limits in skills and knowledge in oneself

Be able to balance personal and professional priorities to ensure personal health and a sustainable practice

3. MEDICAL OBSTETRICS

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her rotation in medical obstetrics.

3a. Medical Expert

Be able to demonstrate expertise in the management of pregnancy-related medical problems

Be able to demonstrate an understanding of the physiological changes that occur in pregnancy

Be able to understand the impact of pregnancy and the postpartum period on chronic medical conditions

Be able to understand drug-prescribing in pregnancy and the postpartum period

Be able to be an effective consultant to obstetricians and gynecologists, family physicians, anesthesiologists, and critical care physicians

Be able to know when to consult maternal-fetal experts and/or medical sub-specialists

Be able to demonstrate expertise in the initial management of acute internal medicine emergencies in the obstetrical patient including thrombosis, cardiovascular, infectious, neurological and respiratory conditions

Be able to discuss which internal medicine conditions and medications need to be optimized prior to conception to optimize pregnancy outcomes

Be able to demonstrate expert knowledge in the diagnosis and management of medical conditions specific to pregnancy and/or the postpartum period such as:

1. Gestational hypertension
2. Preeclampsia
3. Eclampsia
4. Gestational diabetes
5. Cardiomyopathy of pregnancy
6. Liver disease: hyperemesis gravidarum, extra-hepatic cholestasis of pregnancy, HELLP, fatty liver of pregnancy
7. Postpartum thyroid dysfunction and transient hyperthyroidism of hyperemesis gravidarum
8. Venous thromboembolism
9. Hematological problems in pregnancy

Be able to demonstrate expert knowledge in the management of common medical disorders in the pregnant patient such as:

Rotation-Specific Goals and Objectives
February 10th, 2015

1. Chronic hypertension
2. Heart diseases (valvular heart disease)
3. Respiratory diseases (pneumonia, asthma)
4. Endocrine diseases (diabetes mellitus, thyroid storm, Grave's disease, Hashimoto's thyroiditis)
5. Renal diseases (acute and chronic renal disease, urinary tract infection)
6. Venous thromboembolic disease
7. Neurological disorders (migraines, seizures, multiple sclerosis)
8. Infectious (HIV, TB)
9. Gastrointestinal disease (inflammatory bowel disease, viral hepatitis, autoimmune hepatitis)
10. Collagen vascular diseases (rheumatoid arthritis and SLE)

Be able to understand the use of medications during pregnancy and lactation including the ability to:

1. Understand the known pregnancy and lactation risks of medications being used
2. Know the diagnostic indication of drug therapy during pregnancy and lactation
3. Consider the need for dose adjustment of medications during pregnancy and lactation
4. Know how to monitor drug levels in the pregnant patient
5. Know when to consult a geneticist to counsel the patient about the known risks of a medication during pregnancy

Be able to understand physiologic changes that occur in pregnancy with respect to blood volume, hemodynamics, cardio-respiratory physiology, and renal physiology

Be able to perform a physical exam and expertly interpret physical findings and symptoms in the pregnant patient such as fever, dyspnea, palpitations, and chest pain

Be able to understand the effect of imaging techniques on the pregnant patient

3b. Communicator

Be able to effectively communicate accurately with patients and their family's issues relating to their pregnancy, health, and fetal well-being

Be able to effectively provide clear, concise, and timely verbal and written communication to the consulting obstetrician/family physician and health care team

Be able to discuss the risk:benefit of diagnostic and therapeutic options in patients with multi-system illness, and/or in the setting of pregnancy

Be able to define the role of a consultant versus a primary care giver while involved in the care of obstetrical patients

3c. Collaborator

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to interact effectively with other health care professionals, specifically consulting obstetricians/family doctors, maternal-fetal experts, high-risk obstetrical units, and geneticists

Be able to facilitate the integration of the pregnant patient within the health care team and the health care community, including: transition from hospital care to the ambulatory care setting, transition from diagnostic care to therapeutic care in those situations where this involves alternate specialists, and provide support and advice for ongoing management of stable conditions by the primary care team

Be able to assist the health care team in helping organize social support for the pregnant patient and family, if necessary

Be able to describe their role and responsibilities to other professionals involved in the care of the pregnant patient

Be able to facilitate the care of patients through partnerships with other health care professionals on the obstetrical team

Be able to implement a management plan in collaboration with the pregnant patient and their family that spans both in-patient and out-patient care setting

3d. Manager

Be able to manage an effective in-hospital and out-patient consulting service in maternal-fetal health

Be able to work collaboratively with others in their organizations to coordinate multiple diagnostic and therapeutic interventions in the pregnant patient

Be able to effectively utilize resources such as medical sub-specialists and maternal-fetal experts

Be able to recognize patient safety issues in Medical Obstetrics, citing and integrating the best evidence and best practices

Be able to decrease patient safety concern at the time of transitions through safe sign-over and information transfer

Be able to describe the interactions between the obstetrical team and specialty system and how this impacts on the pregnant patient both in the in-patient and out-patient setting

3e. Health Advocate

Be able to identify the health needs of an individual pregnant patient

Be able to advise women on the importance of prenatal care on obstetrical outcomes such as maintaining a healthy weight, taking folic acid, and avoiding smoking, illicit drug use and alcohol

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to advise pregnant women with internal medicine problems of their healthcare needs following their pregnancy

Be able to counsel pregnant women with gestational hypertension, eclampsia, and gestational diabetes on long-term healthy behaviours and preventive health care regarding hypertension and diabetes

Be able to understand the needs of a new mother and her infant child when arranging follow-up care appointments

3f. Scholar

Be able to educate pregnant patients and their families regarding their medical condition

Be able to teach the consulting physician and medical team who are managing the pregnant patient

Be able to develop, implement and monitor a personal continuing education strategy in medical obstetrics

3g. Professional

Be able to demonstrate a commitment to delivering the highest quality care and maintenance of competence

Be able to apply a knowledge of the professional and legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviors in clinical practice

Be able to manage conflicts of interest

Be able to recognize limits in skills and knowledge and when to consult another specialist

4. CRITICAL CARE MEDICINE

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her rotations in critical care medicine (intensive care medicine and/or coronary care medicine).

4a. Medical Expert

Be able to demonstrate expert knowledge in critical care physiology and medicine

Be able to demonstrate expert skill and knowledge in invasive hemodynamic monitoring

Be able to diagnose and manage critical care patients often with complex multi-system medical problems

Be able to perform with expert skill procedures common in the critical care setting

Be able to demonstrate expert knowledge in resuscitation

Intensive Care Medicine

Be able to deliver expert care in the diagnosis and management of a variety of ICU-related situations, which may include:

1. Cardiac arrest
2. Respiratory failure
3. Clinical shock syndromes
4. Multi-organ failure
5. Cardiac arrhythmias
6. Acid-base disorders
7. Toxicology
8. Fluid and electrolyte disorders
9. Acute life threatening CNS disorders (e.g. meningitis, cerebral haemorrhage)
10. Acute renal failure
11. Infectious diseases (e.g. central venous catheter sepsis, nosocomial pneumonia)
12. Acute endocrine disorders (e.g. diabetic ketoacidosis, adrenal insufficiency)
13. Coagulopathies (e.g. disseminated intravascular coagulopathy)
14. Pregnancy-related critical illnesses (e.g. HELLP syndrome, eclampsia)
15. Nutrition and metabolism

Be able to expertly manage complex perioperative cases and high-risk cardiac surgery

Be familiar with mechanical hemodynamic support (e.g. intra-aortic balloon pumps, right and left ventricular assist devices, implantable left ventricular assist systems)

Be able to demonstrate an expert understanding of pharmacotherapeutics commonly used in the intensive care setting (e.g. vasopressors)

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate an expert knowledge of prognostic scoring systems commonly used in the critical care setting (e.g. APACHE II)

Be able to demonstrate expert knowledge in the various modes of dialysis and hemofiltration

Coronary Care Medicine

Be able to deliver expert care in the diagnosis and management of a variety of acute cardiac conditions, which may include:

1. Acute coronary syndrome and myocardial infarction
2. Congestive heart failure
3. Valvular heart disease and septal defects
4. Cardiomyopathies
5. Pulmonary hypertension
6. Arrhythmias
7. Cardiac tamponade
8. Cardiogenic shock

Be able to perform an adequate history and physical examination of the cardiovascular system

Be able to expertly manage a cardiac arrest and supervise the cardiac arrest team

Be able to know the indications, outcomes, and complications of interventional cardiac procedures such as coronary angioplasty and coronary arterial bypass surgery

Be able to demonstrate expert knowledge in the appropriate selection of investigative procedures (e.g. ECG, exercise stress testing, echocardiography, cardiac catheterization and angiography) according to the clinical scenario

Be able to know the indications, outcomes, and complications of the various non-invasive cardiac stress tests (see Non-Invasive Cardiology)

Be able to demonstrate an expert understanding of the pharmacology, therapeutic indications, adverse drug reactions and interactions of commonly used cardiovascular medications in the coronary care unit (e.g. vasopressors, thrombolytics)

Be able to demonstrate insight into the rehabilitation of the cardiac patient and advise the patient accordingly

Be able to demonstrate expertise in the performance of procedures common to the critical care setting:

1. Intubation and mechanical ventilation
2. Central venous line placement
3. Temporary Pacemaker insertion

Rotation-Specific Goals and Objectives
February 10th, 2015

4. Swann Ganz insertion
5. Arterial line insertion
6. Electrical cardioversion
7. Transthoracic pacing
8. Ultrasound guided procedures (thoracocentesis, abdominal paracentesis)
9. Chest tube insertion

4b. Communicator

Be able to effectively communicate with patients and especially their families on a daily basis, providing information on prognosis, test results, and therapeutic options

Be able to interact and communicate effectively with the critical care team

Be able to communicate information clearly, precisely, and compassionately to patient's families so that informed decisions regarding end of life can be made (e.g. withdrawing life support in a patient clinically brain dead)

Be able to provide a clear and concise summary of events and follow-up plan to the health care team that will be receiving the patient once discharged from the critical care setting

Be able to expertly evaluate medical house-staff (residents and medical students) and provide them with constructive feedback

Be able to transfer responsibility for patient care safely and appropriately by accurate, timely and context specific handover practices

Be able to discuss the risk:benefit of diagnostic and therapeutic options in patients with multi-system illness, and/or in the setting of pregnancy and surgery

Be able to communicate effectively with patients and their caregivers about patient-centered care options during critical illness

Be able to respect diversity and difference, including but not limited to the impact of gender, religion and cultural beliefs on decision-making about end of life and withdrawal of care

Be able to address challenging communication issues effectively, such as delivering bad news and leading withdrawal of care discussions

Be able to maintain clear, concise, accurate and appropriate records of clinical encounters and plans, including family meetings

Be able to provide proficient sign-over, both written and verbal, for both in-patients and out-patients

4c. Collaborator

Be able to participate effectively and appropriately in an inter-professional health care team

Be able to demonstrate a respectful attitude towards other colleagues and members of an inter-professional team

Be able to describe the roles and responsibilities of other professionals within the health care team including dietitians, occupational therapists, physiotherapists, pharmacists, social workers and bioethicists

Be able to work closely and effectively with critical care nurses, nutritionists, respiratory therapists, pharmacists, and consulting physicians

Be able to recognize difficult ethical issues and work closely with hospital ethicists

Be able to facilitate the care of patients through partnerships with other health care teams including but not limited to surgery and anesthesia

Be able to demonstrate skill in participation in inter-professional team meetings

Be able to function effectively in multi-disciplinary teams to ensure safe patient care transitions and avoid redundancy in investigations

Be able to demonstrate leadership in a health care team, as appropriate

Be able to implement a management plan in collaboration with other healthcare team members

4d. Manager

Be able to effectively manage, supervise, and direct the critical care health care team (students, junior and senior residents, and nurses)

Be able to demonstrate leadership in acute critical care situations

Be able to manage effectively health care resources in the critical care setting, such as bed allocation and prioritization of requests for admissions

Be able to effectively direct the transport of critical care patients from other hospitals

Be able to work collaboratively with others to coordinate multiple diagnostic and therapeutic interventions

Be able to participate in systemic quality process evaluation and improvement, such as patient safety initiatives

Be able to decrease patient safety concern at the time of transitions through safe sign-over and information transfer

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to appreciate the value of intervention in patients at end of life, and investigate, treat as appropriate, these special circumstances

Be able to describe the risk involved with transfer of patient care and plan methods to minimize this risk

4e. Health Advocate

Be able to educate and counsel patients and families regarding the factors that impact on their health

Be aware of potential candidates for organ transplant

Be able to respond to the health needs of their institutions regarding allocation of services toward critical care

Be able to explore individual patient support systems during withdrawal of care and end of life decisions

Be able to describe how healthcare policy regarding acute care service impacts on the health of the populations served

Be able to describe health care system deficiencies that may impact on patient care in the critical care setting and identify potential strategies for improvement

Be able to appreciate the possibility of conflict inherent in their role as gatekeeper of the critical care unit

Be able to employ collaborative negotiation to resolve conflicts and provide optimal care for the patient

4f. Scholar

Be able to direct the teaching curriculum of medical students and junior and senior residents

Be responsible for supervising residents performing procedures and giving them guidance and feedback on performance

Be able to promote and direct critical care teaching rounds

Be able to critically appraise sources of medical information with respect to critical care

Be able to educate patients and their families concerning their medical conditions and expected prognosis

Be able to educate other health professionals such as critical care nurses

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to develop, implement and monitor a personal continuing education strategy related to critical care medicine

Be able to participate in practice audits in the critical care unit

4g. Professional

Be able to demonstrate a commitment to delivering the highest quality care and maintenance of competence

Be able to apply a knowledge of the professional and legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in acute care medicine

Be able to recognize and deal with unprofessional behaviors in clinical practice

Be able to manage conflicts of interest in acute care medicine

Be able to recognize limits in skills and knowledge in oneself and more junior trainees and medical students

Be able to balance personal and professional priorities to ensure personal health and a sustainable practice in the critical care unit

5. JUNIOR CO-ATTENDING ON A CLINICAL TEACHING UNIT

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her rotation of junior co-attending on a clinical teaching unit.

5a. Medical Expert

Be able to demonstrate expert knowledge, skills and attitudes in the diagnosis, management, and treatment of medical conditions commonly admitted to a general internal medicine clinical teaching unit

Be able to manage patients who become unstable, and patients with chronic conditions on a clinical teaching unit

Be able to apply knowledge of chronic internal medicine conditions to balance drug interactions and optimize patient-centered care

Be able to describe the mechanisms of drug interactions and therapeutic drug monitoring to allow rational drug use, describe the hazards of poly-pharmacy and medication use in the elderly and in other patients with multiple comorbidities, and state and apply the principles of dose adjustment in renal disease and liver failure

Be able to elicit a history that is relevant, concise and accurate in a clinical teaching unit setting

Be able to perform a focused evidence-based physical examination that is relevant and accurate for the purposes of diagnosis and/or management

Be able to 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

Be able to show expert skills in the administration and management of an in-patient clinical teaching unit, as well as teach these skills to the senior residents

Be able to provide an excellent educational experience for the medical students and residents in conjunction with the senior residents and attending

Be able to evaluate and provide feedback to the medical students and residents in conjunction with the attending staff supervisor

Be able to seek appropriate consultation from other health professionals, recognizing the limits of their own expertise

Be able to recognize limitations in expertise in the junior residents and medical students and know when to intervene in order to provide continuous optimal patient care

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate knowledge and technical expertise in performing the following procedures (with ultrasound guidance where indicated) that are sometimes performed in an in-patient setting, interpreting the results and demonstrating an understanding of their limitations and complications:

1. Central venous line placement
2. Lumbar puncture
3. Peripheral arterial puncture for an arterial blood gas
4. Abdominal paracentesis
5. Endotracheal intubation
6. Thoracentesis
7. Bone marrow biopsy and aspiration
8. Joint aspiration and injection
9. Electrocardiographic interpretation

5b. Communicator

Be able to establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy, despite the involvement of several health care providers in the care of patients on clinical teaching units

Be able to observe and provide constructive feedback to students and junior residents on their physician-patient-family relationship

Be able to accurately elicit and synthesize relevant healthcare information from patients and families, and other professionals, including primary care providers, community pharmacists and social workers

Be able to convey relevant information and explanations accurately to patients and their families, colleagues and other professionals regarding the management plan

Be able to transfer responsibility for patient care to other services safely and appropriately by accurate, timely and context specific handover practices

Be able to communicate effectively with patients and their caregivers about patient-centered care options during critical illness or at the end of life

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

Be able to address challenging communication issues effectively, such as obtaining informed consent, delivering bad news, and addressing anger, confusion and misunderstanding

Be able to provide proficient sign-over, both written and verbal, for transfer of patients to other levels of care or to new medical team assuming care of the patient on the clinical teaching unit

5c. Collaborator

Be present and contribute to weekly inter-professional rounds in support of a multi-disciplinary approach to patient care

Be able to describe the roles and responsibilities of other professionals within the health care team

Be able to state when consultation with dietitians, occupational therapists, physiotherapists, pharmacists, social workers and educators is appropriate for optimal patient care

Be able to promote inter-professional care amongst medical students, interns, and residents, showing by example and by teaching how each member of the multi-disciplinary team contributes to the overall care of the patient

Be able to work closely and co-operatively with the attending physician, the head nurse, and the senior residents

Be able to facilitate the integration of patients within the health care team and the health care community, including: transition from hospital care to the ambulatory care setting; transition from diagnostic care to therapeutic care in those situations where this involves alternate specialists (e.g. surgery)

Be able to demonstrate skills in leadership of inter-professional team meetings

Be able to respect team ethics, including confidentiality, resource allocation and professionalism

Be able to work with other health professionals effectively to prevent, negotiate, and resolve inter-professional conflict

5d. Manager

Be able to participate in activities that contribute to the effectiveness of their health care organizations and systems

Be able to work collaboratively with others to coordinate multiple diagnostic and therapeutic interventions

Be able to assist the medical team in timely discharges on the clinical teaching unit

Be able to guide and assist the senior medical residents in the organization of daily ward activities such as teaching rounds, radiology rounds, and sign out rounds

Be able to guide students and residents in dealing with problems that often lead to inefficiency, such as expediting diagnostic procedures, facilitating transfers to other wards or hospitals, and calling consultants

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to participate in systemic quality process evaluation and improvement, such as patient safety initiatives

Be able to decrease patient safety concern at the time of transitions through safe sign-over and information transfer

Be able to set priorities and manage time to balance patient care, practice requirements, outside activities and personal life while co-attending on the clinical teaching unit

Be able to allocate finite health care resources appropriately on a clinical teaching unit and prioritizing patients for procedures and diagnostic testing

5e. Health Advocate

Be able to identify and respond to individual patient health needs and issues as part of patient care on a clinical teaching unit

Be able to identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care

Be able to promote discussions about end of life care with patients and their families

Be able to facilitate end of life care by advocating for services to patients who wish to remain in their homes

Be able to facilitate the link between primary care, specialty and sub-specialty medicine to benefit the care of General Internal Medicine patients

Be able to identify the determinants of health of the populations, including barriers to access to care and resources

Be able to identify vulnerable or marginalized populations within those served and respond appropriately

Be able to demonstrate appropriate negotiation while advocating for patients access to limited critical care, in-patient and/or diagnostic resources, transfer of patients to an alternate level of care, either more or less specialized, and the medical needs of patients undergoing surgical procedures

Be able to teach junior residents and medical students as part of the medical team the principles of health advocacy

5f. Scholar

Be able to maintain and enhance activities through on-going learning

Be able to describe the principles of maintenance of competence

Be able to describe the principles and strategies for implementing a personal knowledge management system

Be able to recognize and reflect on learning issues in practice

Be able to critically appraise sources of medical information

Be able to integrate critical appraisal conclusions into clinical care

Be able to facilitate the learning of patients, families, students, residents, and other health professionals

Be able to teach expertly and effectively both medical students and residents

Be able to provide effective feedback

Be able to encourage academic activity for students and residents, such as identifying and writing up of case reports and quality assurance projects

Participate in scholarly projects (e.g. quality assurance projects, practice audit) and be able to contribute to the development, dissemination, and translation of new knowledge and practices to other healthcare professionals

Be able to guide medical students and residents in literature appraisal

Be able to develop, implement and monitor a personal continuing education strategy

5g. Professional

Be able to demonstrate a commitment to delivering the highest quality care and maintenance of competence

Be able to apply a knowledge of the professional and legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in the care of an in-patient

Be able to recognize and deal with unprofessional behaviors in the care of an in-patient

Be able to manage conflicts of interest in a medical team

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to recognize limits in skills and knowledge in oneself and more junior trainees and medical students

Be able to balance personal and professional priorities to ensure personal health and a sustainable practice while co-attending on a clinical teaching unit

6. NON-INVASIVE CARDIOLOGY (CARDIAC STRESS TESTING, AND AMBULATORY ECG MONITORING)

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her rotation in non-invasive cardiac stress testing and ambulatory ECG monitoring.

6a. Medical Expert

Non-Invasive Cardiac Stress Testing

Be able to demonstrate expert knowledge in the methods of evaluation of the patient with suspected coronary artery disease, which include:

1. Exercise electrocardiography
2. Exercise echocardiography
3. Pharmacologic stress nuclear testing
4. Pharmacologic stress echocardiography

Be able to demonstrate an expert understanding of the indications and contraindications to cardiac stress testing

Be able to understand the diagnostic performance characteristics of the various cardiac non-invasive stress tests (sensitivity, specificity, positive and negative predictive value), as well as the limitations of each of these tests

Be able to understand the appropriateness of the various cardiac stress tests in various patient subsets according to established guidelines

Be able to show expert skill in the performance and interpretation of exercise electrocardiography stress testing

Ambulatory ECG Monitoring

Be able to demonstrate expert knowledge in ECG interpretation and should include: normal variants, arrhythmias and conduction abnormalities, chamber hypertrophy, acute ischemia/infarction, chronic ischemic changes and ECG abnormalities of other cardiovascular and non-cardiovascular diseases

Be able to understand the anatomy and physiology of the electrical conduction system including: The Sinus Node, Atrio-ventricular node and His Purkinje system

Be able to have expert knowledge on the diagnosis and mechanism of sinus and respiratory arrhythmias, sick sinus syndrome, entopic and re-entrant supraventricular and ventricular tachycardias

Be able to demonstrate knowledge of the criteria for diagnosis of the various arrhythmias in the ambulatory patient

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate an expert understanding of the indications for ambulatory monitoring, problems inherent in the technique, and clinical significance of abnormal findings

Be able to demonstrate an understanding of the clinical pharmacology and use of antiarrhythmic drugs

6b. Communicator

Be able to establish therapeutic relationships with patients and their families

Be able to advise patients on the potential risks and benefits of non-invasive cardiology testing

Be able to effectively provide clear, concise, and timely verbal and written interpretation of test results to the referring physician, and if necessary interventional cardiologist and/or cardiac surgeon

Be able to advise referring physician on subsequent course of investigation and/or treatment

Be able to communicate effectively to the patient the reasons, limitations, and potential complications of the non-invasive cardiac stress test, as well as the results

Be able to accurately communicate to patients their risk of coronary artery disease

6c. Collaborator

Be able to identify and recognize the need to, and benefit of working closely with referring physicians, as well as interventional cardiologists and cardiac surgeons

Be able to recognize limitations in skill and knowledge and consult cardiologists for optimal patient care

6d. Manager

Be able to prioritize effectively referrals for cardiac stress testing

Be able to work effectively and efficiently in a health care organization

Be able to utilize information technology to optimize patient care, life-long learning and other activities

6e. Health Advocate

Be able to educate patients and their families regarding the factors that impact on their cardiac health (e.g. smoking, obesity, diet, and exercise)

Be able to support and contribute to social programs aimed at decreasing cardiac disease (e.g. smoking cessation programs)

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to promote and participate in cardiac rehabilitation programs

Be able to identify cardioembolic risk in patients with atrial fibrillation and advocate for anticoagulation where appropriate

Be able to identify patients at risk for sudden cardiac death and advocate for ICD implantation where appropriate

6f. Scholar

Be able to develop, implement and monitor a personal continuing education strategy

Be up to date with evolving guidelines in non-invasive cardiac stress testing and ECG ambulatory monitoring

Be able to critically appraise sources of medical information

Be able to participate in ECG teaching of junior residents and peers

Be able to contribute to development of new knowledge

6g. Professional

Be able to demonstrate a commitment to delivering the highest quality care and maintenance of competence

Be able to apply knowledge of the professional and legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in the care of a patient undergoing non-invasive stress testing and/or ambulatory ECG monitoring

Be able to recognize and deal with unprofessional behaviors in the care of a patient undergoing non-invasive stress testing and/or ambulatory ECG monitoring

Be able to manage conflicts of interest

Be able to recognize limits in skills and knowledge in oneself

Be able to balance personal and professional priorities to ensure personal health and a sustainable practice

7. LONGITUDINAL AMBULATORY MEDICINE

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her longitudinal ambulatory medicine clinic rotation.

7a. Medical Expert

Be able to demonstrate expert knowledge in the diagnosis, investigation, and treatment of medical conditions often referred to an out-patient internal medicine clinic, which may include but not exclusive to:

1. Uncontrolled hypertension
2. Complications of diabetes mellitus
3. Work-up of new anemia
4. Increased liver enzymes
5. Hyper or hypothyroidism
6. New renal failure
7. Hypo- or hyperthyroidism
8. New atrial fibrillation

Be able to demonstrate an expert understanding of the indications to ambulatory blood pressure testing

Be able to understand the diagnostic performance characteristics of ambulatory blood pressure monitoring as well as the limitations

Be able to understand the appropriateness of ambulatory blood pressure monitoring in various patient subsets according to established guidelines

Be able to show expert skill in the performance and interpretation of ambulatory blood pressure monitoring

Be able to demonstrate expertise in the differential diagnosis of patients presenting with undifferentiated symptoms or acute illness of unknown etiology

Be able to clearly formulate a problem list and devise an appropriate plan for investigations and/or treatment using available resources in the out-patient setting

Be able to assess and manage complex multi-system medical problems in the out-patient setting and provide clear recommendations and directions to referring physicians

Be able to demonstrate expertise in medical perioperative care including risk stratification, risk modification and post-operative medical management

Be able to demonstrate the ability to maintain up to date knowledge of internal medicine and apply it to the care of patients

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate expertise in the diagnosis, investigation and management of patients with illnesses and conditions described in the individual sub-specialty rotation specific objectives to the level expected of a practicing General Internist

Be able to recognize poly-pharmacy, drug interactions and side-effects, especially in older patients

Be able to apply knowledge and technical expertise in performing the following procedures that may be performed in an ambulatory setting, interpreting the results and demonstrating an understanding of their limitations and complications:

1. Lumbar puncture
2. Abdominal paracentesis (with or without ultrasound guidance)
3. Thoracentesis(with or without ultrasound guidance)
4. Bone marrow biopsy and aspiration
5. Joint aspiration and injection
6. Electrocardiographic interpretation
7. Ambulatory BP monitoring
8. Thyroid biopsy

7b. Communicator

Be able to effectively provide clear, concise, and timely verbal and written communication to the consulting physician

Be able to interpret and convey ambulatory BP monitoring results to patients and their referring physicians

Be able to keep well-organized and eligible medical records

Be able to provide relevant and up-to-date medical information to referring physicians, using the consultation as an opportunity to teach the referring physician

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

Be able to convey relevant information and explanations accurately to patients and their families

Be able to communicate to the patient the potential risks and benefits of therapy and/or investigations in a clear and concise manner, using easy to understand language so that the patient can make informed decisions

Be able to communicate to the patient his/her role as a consultant

Be able to communicate effectively with patients and their caregivers about patient-centered care options at the end of life

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to interpret and convey ambulatory BP monitoring results to patients and their referring physicians

7c. Collaborator

Be able to identify and recognize the need to work closely with the referring physician

Be able to work closely with the patient and their family in forging an effective patient-family-physician relationship so as to promote cooperation and compliance

Facilitate the integration of patients with the health care team and the health care community, including:

1. Transition from hospital care to the ambulatory care setting
2. Transition from diagnostic care under a general internist to therapeutic care by another sub-specialist (e.g. treatment of newly diagnosed lung cancer)

7d. Manager

Be able to demonstrate understanding of human resource, financial and record keeping issues pertaining to running a medical office

Be able to use health care resources cost-effectively in the context of an ambulatory care setting where diagnostic tests are not always readily available

Be able to conduct and maintain a professional ambulatory care practice

Be able to direct and supervise effectively health-related professionals working with the resident, such as nurses, secretaries, and physician-assistants

Be able to supervise and teach effectively junior residents and medical residents in the ambulatory clinic setting while ensuring proper flow of the clinic

Be able to plan follow-up visits accordingly, so that both patient and referring physician are satisfied

Be able to coordinate multiple diagnostic and therapeutic interventions

Be able to recognize the importance of just allocation of health care resources, balancing effectiveness, efficiency and access with optimal patient care

Be able to set priorities and manage time to balance patient care, practice requirements, outside activities and personal life

Be able to demonstrate the ability to manage patient care information obtained in the ambulatory care setting and ensure appropriate and timely follow-up

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to implement processes to ensure personal practice improvement

Be able to employ information technology appropriately for patient care

Be able to appreciate the value of intervention (or not) in patients with terminal disease, and treat as appropriate to such special circumstances

Participate in systemic quality process evaluation and improvement, such as patient safety initiatives

Be able to take on a leadership role in the health care team when appropriate

7e. Health advocate

Be able to educate and counsel patients and families regarding the factors that impact on their health

Be able to provide health-related information and resources for patients, such as pamphlets describing general internal medicine, and patient-education articles and/or websites on common medical conditions such as hypertension

Be able to promote and counsel preventive health care including but not limited to:

1. Smoking cessation
2. Treatment of dyslipidemia
3. Hypertension management
4. Weight management
5. Nutrition
6. Promotion of an active lifestyle
7. Promotion of appropriate alcohol use
8. Avoidance of recreational drug use

Be able to state or refer to mechanisms for determining assistance programs with medication funding

Be able to counsel on potential avenues to pursue for assistance with funding for lifestyle change (fitness and nutrition)

Be able to implement preventive strategies such as vaccination, cancer screening and the treatment of osteoporosis

Be able to identify and discuss end of life issues and facilitate end of life care

Be able to promote discussions about end of life care

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate the ability to promote appropriate and timely care for the ambulatory general internal medicine patient

Be able to facilitate the link between primary care physicians, specialty, and sub-specialty medicine to benefit the care of the ambulatory general internal medicine patient

Be able to demonstrate an understanding of the principles of evaluation and management of patients with potential emerging and epidemic diseases (e.g. SARS)

Be able to demonstrate appropriate negotiation while advocating for patients access to limited critical care, in-patient and/or diagnostic resources, transfer of patients to an alternate level of care, either more or less specialized, and the medical needs of patients undergoing surgical procedures

7f. Scholar

Be able to formulate a program of personal continuing education, such as creating learning projects based on cases seen in the ambulatory clinic

Be able to recognize and reflect on learning issues in practice

Be able to understand the importance of personal practice audits

Be able to critically appraise the medical literature, and use this knowledge accordingly in complicated clinic cases

Facilitate the learning of patients, families, students, residents, other health professionals, in the ambulatory clinic

Be able to provide effective feedback to learners in the clinic

Be able to provide health promotion and disease prevention educational materials/sessions to patients and their families

Be able to participate in finding solutions for the health care needs of society

7g. Professional

Be able to demonstrate a commitment to delivering the highest quality care and maintenance of competence

Be able to apply knowledge of the professional and legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise amongst the personnel

Be able to recognize and deal with unprofessional behaviors amongst the personnel

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to manage conflicts of interest

Be able to recognize limits in skills and knowledge in oneself and when to involve another healthcare provider

Be able to balance personal and professional priorities to ensure personal health and a sustainable practice

8. PREOPERATIVE OUTPATIENT MEDICINE

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her rotation in preoperative outpatient medicine.

8a. Medical Expert

Be able to elicit, present and document a history that is relevant and appropriate to a broad variety of surgical patients

Be able to perform an accurate physical examination with emphasis on the appropriate systems

Be able to provide a reasonable approach to most of the following common scenarios and conditions:

- Cardiac
 - Application of evidence based risk indices (e.g. Revised Cardiac Risk Index) and identification of non-modifiable and modifiable risk factors for perioperative cardiac complications
 - Acknowledgment of limitations of current risk indices
 - Appropriately request and interpret EKGs
 - Identification and management of hypertension including which medications should/should not be continued in the perioperative period, what levels of hypertension should delay surgery
 - Identification and management of stable coronary artery disease including how to assess functional status, determine who needs further testing, predictive value of various testing modalities (exercise stress test, DIP-MIBI, dobutamine stress echocardiogram)
 - Identification and management of valvulopathies
 - Identification and management of arrhythmias
 - Identification and management of patients with recently placed cardiac stents
 - Identification and management of patients with Pacemakers or ICDs
 - Application of cardiac risk reduction strategies using beta blockers, statins, calcium channel blockers, alpha antagonists, revascularization, valve repair/replacement
 - Identify which cardiac patients are unfit for surgery
- Pulmonary
 - Application of pulmonary risk indices and identification of non-modifiable and modifiable risk factors for perioperative pulmonary complications
 - Identification and management of COPD
 - Identification and management of asthma
 - Identification and management restrictive lung disease
 - Identification and management of obstructive sleep apnea including identification of at-risk patients with screening tools and how to manage the patient who uses/does not use CPAP

Rotation-Specific Goals and Objectives
February 10th, 2015

- Identification and management of smokers including the benefits and potential risk of smoking cessation in the perioperative period
- Application of pulmonary risk reduction strategies including patient and procedure related factors
- Appropriately request and interpret pulmonary function tests and chest x-rays
- Identify which pulmonary patients are unfit for surgery
- Endocrine
 - Identification and management of type 1 diabetes, type 2 diabetes including medication/insulin management, strategies to avoid hyper- and hypoglycemia, appropriate glycemic targets in the perioperative period and when to resume usual medication/insulin
 - Identification and management of hyperthyroidism including which hyperthyroid patients are fit or unfit for surgery, how to recognize and treat thyroid storm
 - Identification and management of hypothyroidism including which hypothyroid patients are fit or unfit for surgery
 - Identification and management of a patient with known adrenal insufficiency
 - Identification patients with potential relative adrenal insufficiency and how to assess for perioperative adrenal insufficiency
 - Demonstrate appropriate use of perioperative stress-dose steroids
 - Identification and management of pheochromocytoma
- Hepatology
 - Identification and management of the patient with decompensated or compensated cirrhosis
 - Identification and management of the patient with hepatic transaminitis
- Renal
 - Identification and management of the patient with acute or chronic kidney disease and how to minimize perioperative renal insults
- CNS
 - Identification and management of unstable cerebrovascular conditions
 - Identification of risk factors for a perioperative CVA/TIA
 - Identification and management of Parkinson's disease including identification of operative risks and perioperative medication management
 - Identification and management of epilepsy/seizure disorder
 - Identification and management of patients with/at risk of malignant hyperthermia
- Hematology
 - Identification and management of patients on anticoagulant and antiplatelet medications
 - Identification and management of patients needing bridging anticoagulation

Rotation-Specific Goals and Objectives
February 10th, 2015

- Identification and management of anemia including appropriate workup and management with oral iron, IV iron, erythropoietin stimulating agents (ESA)
 - Identification and management of patients with thrombophilia (e.g. Factor V Leiden) and bleeding diatheses (e.g. von Willebrand disease, Hemophilia A/B)
 - Identification and management of appropriate VTE prophylaxis
- Rheumatology
 - Identification and management of patients with connective tissue disorders such as RA, SLE, scleroderma, dermatomyositis and their perioperative implications

Be able to advise patients and referring surgeons on the appropriate medication management in the perioperative period

Understand the indications for and complications of invasive intraoperative and postoperative hemodynamic monitoring: central venous catheter insertion, arterial BP monitoring, Swan-Ganz catheterization

Demonstrate an understanding of the issues surrounding the transfer of unstable patients to a monitored unit

8b. Communicator

Be able to effectively provide clear, concise, and timely verbal and written communication to the consulting surgeon)

Be able to establish therapeutic relationships with patients and family

Be able to elicit a pertinent history from the patient and consulting physician. Be able to discuss the risk:benefit of diagnostic and therapeutic options in patients with multi-system illness, and/or in the setting of surgery

Be able to effectively define the role of a consultant to the patient and family in the context of the patient's overall medical care

Be able to effectively communicate to the patient and family one's medical assessment and proposed recommendations in the context of the patient's overall health plan

8c. Collaborator

Be able to identify and recognize the need to and benefit of working closely with the consulting surgeon and health-care team in providing optimal health care

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to function and contribute effectively in a multi-disciplinary team

Be able to aid the consulting surgeon and health care team in linking or transitioning patients among outpatient health care services

Be able to recognize limitations in skill and knowledge and consult sub-specialists for optimal patient care

Be able to facilitate the integration of patients with the health care team and the health care community

8d. Manager

Be able to effectively and efficiently manage an outpatient perioperative clinic while attending to other duties including teaching/supervising junior residents and medical students

Be able to demonstrate expertise in the coordination of multiple diagnostic and therapeutic interventions, often within a short period of time (e.g. investigation of thrombocytopenia in a patient with awaiting surgery)

Be able to demonstrate the ability to use available medical and technical resources effectively

Be able to allocate finite health care resources appropriately regarding efficient and optimal assessment of outpatients

Be able to demonstrate an understanding of human resource, financial and record keeping issues pertaining to running a perioperative medical clinic

Be able to set priorities and manage time to balance patient care, practice requirements, outside activities and personal life

Be able to demonstrate the ability to manage patient care information obtained in the ambulatory care settings and ensure appropriate and timely follow-up

Be able to implement processes to ensure personal practice improvement

Be able to employ information technology appropriately for patient care

8e. Health Advocate

Be able to identify the health needs of an individual patient, and appropriately determine when a high surgical risk is and is not acceptable

Be able to educate patients and their families regarding the factors that impact on their health

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to identify opportunities for advocacy, health promotion and disease prevention for surgical patients with chronic internal medicine conditions including hypertension, diabetes, and cardiovascular conditions

Be able to educate and counsel patients and their families regarding the factors that impact on their health and use the opportunity of the perioperative assessment to counsel patients on preventive health care including but not limited to:

1. Smoking cessation
2. Treatment of dyslipidemia
3. Hypertension management
4. Weight management
5. Nutrition
6. Promotion of an active lifestyle
7. Promotion of appropriate alcohol use
8. Avoidance of recreational drug use
9. Management of obstructive sleep apnea

Be able to identify the determinants of health of the populations, including barriers to access to care and resources of patients assessed in an ambulatory setting who need urgent work-up prior to surgery

8f. Scholar

Be able to educate patients and their families regarding their medical condition and the impact this has on their surgical risk

Be able to critically appraise sources of medical information

Be able to teach medical students, residents, and other health care professionals including the consulting physician and medical team who have referred the patient

Be able to develop, implement and monitor a personal continuing education strategy

8g. Professional

Be able to demonstrate a commitment to delivering the highest quality care and maintenance of competence

Be able to apply a knowledge of the professional and legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in patient care

Be able to recognize and deal with unprofessional behaviors in clinical practice

Be able to manage conflicts of interest

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to recognize limits in skills and knowledge in oneself

Be able to balance personal and professional priorities to ensure personal health and a sustainable practice

9. RESEARCH

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her rotation in research.

9a. Medical Expert

Be able to demonstrate an ability to draw on clinical knowledge and experience to conduct research that is relevant.

Be able to demonstrate an ability to critically appraise all sources of information, regardless of source

Be able to demonstrate the ability and skills in all aspects of research (e.g. data gathering, data analysis, preparation of manuscripts)

Be able to demonstrate the ability to problem solve

Be able to demonstrate the ability to interpret results and provide appropriate conclusions

Be able to address clinical implications of study results

9b. Communicator

Be able to demonstrate effective interpersonal and written communication in a work or study environment

Be able to write timely and effective research reports and manuscripts

Be able to prepare effective formal and informal oral presentations

Be able to disseminate the findings of a study

9c. Collaborator

Be able to work well in inter-professional research teams

Be able to work well with supervisor(s) and other research experts (e.g. statistician) and seek guidance and feedback when appropriate

9d. Manager

Be able to set realistic timelines and meet commitments and deadlines in a timely fashion

Be able to manage and coordinate research and clinical activities effectively

Be able to manage research resources effectively

9e. Health Advocate

Be able to develop a clinically-important research question and recognize its clinical importance

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to conduct research activities with attention to clinical significance and social and cultural determinants of health, recognizing these as potentially important

9f. Scholar

Be able to demonstrate a general knowledge of the principles of research

Be able to demonstrate a basic understanding of specialized topics (e.g. study design, statistical analysis)

Be able to practice continuous self-directed learning

9g. Professional

Be able to acquire and demonstrate knowledge of ethical issues relevant to proposed research

Be aware of professional and legal codes that govern clinical research

Be able to understand and apply the principles of informed patient consent

Be able to conduct research activities honestly and ethically

Be able to report findings honestly and completely

Be able to demonstrate self-awareness and respond to feedback



GENERAL INTERNAL MEDICINE RESIDENCY PROGRAM

1. ALLERGY AND IMMUNOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in allergy and immunology.

1a. Medical Expert

Be able to acquire and practice the consultative skills expected of a General Internist in the provision of care to patients with allergic or immunologic disorders

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire time and experience in a consultative capacity in the specialty within an ambulatory subspecialty clinic or office setting

Be able to elicit, present and document a history that is relevant and appropriate to the immune system and related to allergic disorders

Be able to perform an accurate physical examination of the immune system, with emphasis on:

1. Lymph Nodes
2. Skin
3. Mucous membranes

Be able to provide a reasonable approach to the differential diagnosis, work-up and management of the following scenarios:

1. Angioedema
2. Urticaria

Be able to recognize the clinical presentation of congenital and acquired immunodeficiency syndromes (including T and B cell deficiencies, white cell abnormalities, and complement abnormalities) and to have an approach to the investigation and long-term management of these patients

Be able to recognize the immunologic manifestations of immuno-oncologic diseases

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to provide the indications for and complications of immunomodulating therapy (including DMARDS, cyclophosphamide and corticosteroids), desensitization therapy, and use of the “EpiPen”

Be able to provide a rational approach to the prevention of opportunistic infections in patients with primary or acquired defects of the immune system

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up and management of the following conditions:

1. Hypersensitivity reactions (including anaphylaxis)
2. Vasomotor rhinitis
3. Asthma
4. Auto-immune vasculitides

Be able to recognize the immunopathology of patients presenting with asthma

Be able to understand atopy and immunologic treatments available for asthma

Be familiar with the spirometry measurements and tests in the work-up of patients with immunologic pulmonary disorders including specific and non-specific inhalation challenges

Be able to interpret pulmonary function tests

Be able to demonstrate an approach to the investigation and treatment of patients with adverse drug reactions

Be familiar with the *challenge procedures* available in the investigation and treatment of a patient with a drug or food allergy

Be able to demonstrate the clinical manifestations and pathogenesis of atopic dermatitis

Be able to have an approach to the investigation and management of atopic dermatitis

Be able to recognize the clinical presentation of allergic rhinoconjunctivitis and appropriately investigate and manage patients with rhinoconjunctivitis

Be familiar with the immunologic laboratory testing and its application in clinical practice and understand the general methodology, advantages, and limitations of these tests

Be able to assess and perform emergency procedures in the acute management of a patient with anaphylaxis

1b. Communicator

Be able to conduct a complete occupational history

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to communicate effectively with patients and families with respect to their medical conditions

Be able to interact effectively with other healthcare professionals

Be able to accurately document the patient's condition and progress with emphasis on the relevant issues

Be able to provide accurate verbal and written reports to referring physician

1c. Collaborator

Be able to identify and recognize the need to, and benefit of consulting other physicians and healthcare professionals, specifically a general surgeon or a dermatologist when biopsy of lymph nodes or skin is being considered

Be able to contribute effectively to a multi-disciplinary team and its activities

Be able to understand the role of allied healthcare professionals in the management of occupational diseases

1d. Manager

Be able to use information technology to optimize patient care

Be able to use healthcare resources cost-effectively

Be able to work efficiently and effectively

1e. Health Advocate

Be able to educate and counsel patients and family regarding avoidance of allergen exposure and smoking cessation

Be able to identify opportunities for patient counselling and education regarding occupational diseases and their prevention

Be able to educate patients regarding workplace modifications that may prevent occupational diseases

1f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents and other healthcare professionals

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to contribute to the development of new knowledge, through the participation in completion of a research project

1g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues that arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

2. CARDIOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in cardiology.

2a. Medical Expert

Be able to demonstrate expert consultative skills expected of a General Internist in patients with cardiovascular illness

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services

Be able to acquire time and experience in a consultative capacity within an ambulatory subspecialty clinic or office setting

Be able to elicit, present, and document a history that is relevant and appropriate to the cardiovascular system

Be able to perform an accurate physical examination of the cardiovascular system, with emphasis on:

1. JVP determination
2. Heart sounds and murmurs: distinguishing normal from abnormal
3. Pulmonary hypertension
4. Peripheral vascular disease

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios:

1. Chest pain (atypical and angina)
2. Dyspnea
3. Syncope
4. Palpitations, arrhythmias, and syncope, including heart block
5. Systolic and diastolic murmurs
6. Coronary artery disease (medical management, indications for stress testing and angiography)
7. Role of thrombolysis – indications and contraindications
8. Pericarditis/Tamponade
9. Adult congenital heart disease (ASD, VSD, PDA, bicuspid aortic valve, coarctation of the aorta)

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of the following conditions:

Rotation-Specific Goals and Objectives
February 10th, 2015

1. Acute coronary syndromes and myocardial infarction (inferior, anterior, rhythm disturbances, post-infarct angina)
2. Congestive heart failure
3. Abnormal cardiac enzymes
4. Valvular diseases (how diseases affect heart sounds and how these change with the natural history of disease; management: medical and surgical)
5. Pulmonary hypertension
6. Cardiomyopathies
7. Aortic aneurysm and dissection
8. Infective endocarditis

Be able to demonstrate an understanding of post-myocardial risk stratification and the complications that may arise including heart failure, post-infarction angina and arrhythmias

Be able to demonstrate an understanding of the non-medical management of patients with common cardiac conditions:

1. Timing of resumption of activities (e.g. work, sexual activity, driving, exercise)
2. Changes in diet and lifestyle
3. Smoking cessation
4. Indications for referral to a cardiac rehabilitation program
5. Emotional issues associated with the diagnosis of cardiac disease

Be able to demonstrate an understanding of the indications/contraindications, side-effects, toxicity, and pharmacokinetics of the common classes of cardiovascular drugs:

1. Beta-blockers
2. Conventional and new antiplatelet and anticoagulant agents
3. ACE inhibitors
4. Vasodilator medications
5. Calcium channel blockers
6. Diuretics
7. Antiarrhythmic agents
8. Digoxin
9. Lipid lowering agents

Be able to demonstrate an understanding for the indications for various cardiovascular interventions:

1. PTCA and stent placement
2. CABG
3. Cardiac valve repair and replacement surgery
4. Pacemaker and defibrillator insertion
5. Repair of common congenital defects

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate an understanding of the principles and practice of perioperative cardiac risk assessment, including hypertension, coronary artery disease, arrhythmias, congestive heart failure, structural heart disease, and infective endocarditis prophylaxis

Be able to demonstrate an understanding of the indications for referral for cardiac transplantation

Be able to perform and interpret ECGs

Be able to perform central venous catheter insertion, peripheral arterial catheter insertion, transvenous pacemaker insertion, and endotracheal intubation

Be familiar with the role of procedural ultrasound in optimizing the safe performance of the above procedures

Be able to perform and interpret ECGs, exercise stress testing, and ambulatory ECG monitoring

Be able to perform transcutaneous or transvenous pacing

Be able to understand the indications for and complications of EST, 24 hr ECG monitoring, echocardiography (transthoracic and esophageal), DIP-MIBI, dobutamine echocardiography, cardiac catheterization with or without angioplasty, electrophysiologic testing, and transcutaneous or transvenous pacing

Be able to demonstrate an understanding of and be able to perform advanced cardiopulmonary resuscitation, including electrical cardioversion

Be able to demonstrate an understanding of the indications for admission to a monitored unit

Be able to demonstrate an understanding of the issues surrounding the transport of critically ill patients within the hospital and to other centers

Be able to perform investigations or procedures in the specialty of Cardiology that provide inadequate amount of training for independent practice, depending on the trainee's future practice location and pattern, individually arranged with the participation of the Program Director and rotation supervisor, and congruent with the scope of practice of a General Internist

2b. Communicator

Be able to communicate effectively information to patients and families regarding the common acute cardiac conditions (acute myocardial infarction, congestive heart failure, sudden cardiac death and other heart rhythm disturbances)

Be able to interact effectively with other health care professionals

Be able to document the patient's condition and progress accurately with emphasis on the relevant issues

2c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals, specifically cardiovascular surgeons when coronary artery bypass or other surgery is being contemplated

Be able to contribute effectively to interdisciplinary team activities

Be able to work effectively within a team in providing acute and convalescent cardiac care with an understanding of the role of other allied healthcare providers including pharmacy, nutrition, occupational and physical therapy, and nursing

2d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

2e. Health Advocate

Be able to educate and counsel patients and families regarding smoking cessation, exercise, nutrition, and other risk factors to optimize a patient's cardiac risk

Be able to identify the risk factors for atherosclerosis in individual patients and be aware of current guidelines for appropriate modification of these factors with particular emphasis on cardiac rehabilitation and lipid management

2f. Scholar

Be able to critically assess the literature regarding the management of common cardiac conditions with special attention to myocardial infarction, congestive heart failure, and arrhythmias

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition, specifically cardiovascular risk reduction

Be able to teach medical students, residents, and other health care professionals

2g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

3. CARDIAC ECHOCARDIOGRAPHY

The General Internal Medicine resident is expected to achieve competency in the areas described below during his/her 12 month rotation in cardiac echocardiography.

3a. Medical Expert

Be able to understand cardiovascular anatomy, hemodynamics and the physical principles and instrumentation of ultra sound including 2D, Doppler, harmonics and mechanisms and identification of artifacts

Be able to understand the indications, contraindications, strengths and weaknesses of echocardiography

Be able to demonstrate knowledge of the echocardiographic appearance of cardiac structures including cardiac chambers, valves and major blood vessels

Be able to correlate echocardiographic features with findings from other investigations including hemodynamic studies and surgical/pathological correlation

Be able to utilize the information provided by the echo study in clinical decision-making, including surgical indications, prognostic information, and guidance of medical therapy

Be able to perform and interpret (in the clinical context) transthoracic M Mode, 2D, pulse Doppler, continuous wave, and tissue Doppler and Colour Flow studies on patients with common cardiovascular illnesses

Be able to know the indications for different stress echo modalities as well as the strengths and weaknesses vis a vis other imaging modalities

Be able to perform exercise, dobutamine and dipyridamole stress echo, including recognition of complications and their management

Be able to demonstrate knowledge of the indications, contraindications and precautions regarding the performance of contrast studies, using both agitated saline, as well as echo contrast agents

Be able to apply the above skills and perform a comprehensive transesophageal examination to address the following cardiac conditions:

1. Left and right ventricular dysfunction – segmental and global, including systolic and diastolic dysfunction, including the assessment of dyssynchrony
2. Valvular heart disease including the assessment and quantitation of stenosis and regurgitation of all four cardiac valves
3. Pericardial disease including pericardial effusion, assessment of constrictive pericarditis (and its distinction from restrictive cardiomyopathy), cardiac tamponade and the use of echocardiography to guide pericardiocentesis

Rotation-Specific Goals and Objectives
February 10th, 2015

4. Selected congenital heart disease such as atrial septal defect, ventricular septal defect, Tetralogy of Fallot and Ebstein's Anomaly
5. Assessment of the aorta and its major branches to diagnose and evaluate dissection, intramural hematoma, aneurysm and atheromata
6. Pulmonary hypertension – including Doppler estimation of right ventricular and pulmonary artery pressures

3b. Communicator

Be able to demonstrate a good patient relationship during the examination with appropriate attention to comfort and personal privacy

Be able to interpret from the requisition the relevant questions to be answered by the echocardiographic examination

Be able to develop a report of all salient echocardiographic features

Be able to communicate the results of the examination to the patient when appropriate, as well as to the referring physician

3c. Collaborator

Be able to work closely with the staff in the echocardiographic department including technologists, assisting in the preparation, performance of the study, and discharge from the echo Lab

Be able to work with the staff cardiologists in an effective and professional manner

Be able to work with other physicians and allied health care professionals when performing echocardiographic examinations

3d. Manager

Be able to utilize the echocardiographic equipment, including equipment evaluation and troubleshooting, and utilize time in an efficient manner

Be able to respect and adhere to both the laboratory schedule and the patient's need for a timely examination

Be able to understand the indications and contraindications for cardiac echo

Be able to screen echocardiographic studies to prioritize for urgency, time management, interactions with para-professionals including sonographers, receptionists, clerical workers etc.

3e. Health Advocate

Be able to understand the role of echocardiography in diagnosing cardiovascular disease

Be able to use information from echocardiography to help patients modify cardiac risk factors

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to use echocardiography to help patients understand their cardiovascular illness

3f. Scholar

Be able to understand knowledge gaps in technical and interpretive skills in echocardiography

Be able to critically evaluate literature on topics related to echocardiography

Be able to assist in the teaching of more junior housestaff in the technical and interpretive skills of echocardiography

Be able to participate in rounds and presentations of echocardiographic topics

3g. Professional

Be able to interact with patients coming to the Echocardiography Laboratory with integrity, honesty and compassion

Be able to work with other physicians and allied health care professionals in an appropriate and professional manner

4. DERMATOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in dermatology.

4a. Medical Expert

Be able to demonstrate expert consultative skills expected of a General Internist in patients with primary skin disease and multi-system disease with dermatological manifestations

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire experience in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able to provide a reasonable approach to the differential diagnosis, work-up, and acute and long-term management of the following:

Cutaneous Rheumatology

1. Lupus erythematosus
2. Dermatomyositis
3. Scleroderma, Raynaud's phenomenon and related conditions
4. Vasculitis
5. Miscellaneous disorders with prominent features involving the skin and joints (i.e. rheumatoid arthritis, psoriatic arthritis, Behcet's disease, Sweet's syndrome, pyodermagangrenosum, bowel bypass-associated dermatitis/arthritis syndrome, Reiter's syndrome, Kawasaki's disease, gout)

Cutaneous Reaction Patterns

1. Urticaria
2. Erythema multiforme
3. Erythema nodosum and other panniculitides
4. Pruritis
5. Erythroderma
6. Purpura
7. Bullous diseases

Cutaneous Hematology and Oncology

1. Skin signs of internal malignancy including metastatic disease to skin
2. Cutaneous leukemia and lymphomas
3. Dysproteinemias, plasma cell disorders, and amyloidosis
4. Histiocytosis X
5. Vascular neoplasms

6. Pigmented skin lesions - benign and malignant

Cutaneous Endocrinology and Metabolic Diseases

1. Skin signs of diabetes mellitus
2. Thyroid disease and skin
3. Skin signs of dyslipoproteinemias
4. Adrenal, androgen-related, and pituitary disorders and the skin
5. Porphyrias

Cutaneous Gastroenterology

1. Cutaneous disease associated with GI abnormalities including Gardner's syndrome, pseudoxanthomas elasticum, Osler-Weber-Rendu syndrome, acrodermatitis enteropathica, dermatitis herpetiformis)
2. Cutaneous hepatology (cirrhosis, primary biliary cirrhosis, hemochromatosis,
3. Wilson's disease
4. Cutaneous signs of viral hepatitis
5. Cutaneous signs of nutritional disease

Cutaneous Infections

1. Cutaneous manifestations of systemic viral, bacterial, fungal infections, and protozoal diseases
2. Cutaneous manifestations of AIDS and other STD's
3. Cutaneous manifestations of sexually-transmitted diseases

Other Systemic Conditions with Cutaneous Manifestations

1. Cardiovascular disease
2. Cutaneous nephrology (i.e. calciphylaxis)
3. Transplant –associated skin disorders
4. Neurocutaneous diseases
5. Pregnancy-associated dermatoses
6. Mast cell diseases

Regional Disorders

1. Hair and nail disorders in systemic disease
2. Disorders of pigmentation
3. Oral mucous membrane changes in systemic disease
4. Leg ulcers

Miscellaneous Dermatologic Conditions

1. Life-threatening disorders (toxic epidermal necrolysis, Stevens-Johnson's syndrome, Pemphigus vulgaris, pustular psoriasis, erythroderma)

2. Cutaneous drug eruptions

Be able to demonstrate expert skills and know the indications and complications in the following procedures:

1. Skin punch biopsy
2. Skin scraping for fungal infections, scabies
3. Potassium hydroxide mounts
4. Tzanck smears

Be able to provide the indications for and complications of immunomodulating therapy (including DMARDs, cyclophosphamide and corticosteroids)

Be able to provide a rational approach to the prevention of opportunistic infections in patients with primary or acquired defects of the immune system

4b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to interact effectively with other health care professionals about individual patients

Be able to document the patient's clinical condition and plan accurately with emphasis on the relevant issues

4c. Collaborator

Be able to work effectively with other sub-specialists in the management of multi-system diseases with dermatological conditions

Be able to contribute effectively to interdisciplinary teams

4d. Manager

Be able to develop the ability to perform focussed histories and physical examination in the time-limited environment of the out-patient clinics

Be able to develop time management skills to reflect and balance priorities for patient care, sustainable practice, and personal life

4e. Health Advocate

Be able to identify opportunities for patient counselling and education regarding skin disease

Be able to educate patients regarding lifestyle modifications that may prevent skin disease, including avoidance of sun exposure, use of sunscreen

4f. Scholar

Be able to critically appraise sources of medical information

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

4e. Professional

Be able to apply a knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply a knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

5. ENDOCRINOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in endocrinology.

5a. Medical Expert

Be able to acquire and practice the consultative skills expected of a General Internist in the provision of care to patients with endocrinologic disorders

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire time and experience in a consultative capacity in the specialty within an ambulatory subspecialty clinic or office setting

Be able to elicit, present, and document a history that is relevant and appropriate to the clinical presentation

Be able to perform an accurate physical examination, with emphasis on:

1. Thyroid gland
2. Extrathyroidal signs of thyroid disease
3. Diabetic feet
4. Gynaecomastia
5. Signs of dyslipidaemia

Be able to provide a reasonable approach to the differential diagnosis, work-up, and acute and long-term management of the following scenarios:

1. Dyslipidaemias
2. Thyroid nodule and goiter
3. Pituitary nodule (including incidentaloma)
4. Chronic corticosteroid therapy
5. Incidental adrenal mass
6. Hypercalcaemia and hypocalcemia
7. Hypogonadism, male and female (including amenorrhoea and loss of libido)
8. Hirsutism
9. Galactorrhea and gynaecomastia
10. Weight gain and loss
11. Fatigue and malaise
12. Obesity
13. Amenorrhoea and loss of libido

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of the following conditions:

Rotation-Specific Goals and Objectives

February 10th, 2015

1. Diabetes mellitus 1 and 2: first visit, treatment, follow-up, complications, perioperative and in-hospital management, management of diabetes in pregnancy
2. Diabetic ketoacidosis and hyperosmolar non-ketotic states
3. Hypoglycaemia
4. Hyperthyroidism (including Graves' disease and thyroid storm)
5. Hypothyroidism (including myxoedema coma)
6. Acromegaly
7. Adrenal insufficiency (including Addisonian crisis and perioperative management)
8. Cushing's syndrome (including Cushing's disease)
9. Pheochromocytoma
10. Conn's disease
11. Osteoporosis
12. Hyperparathyroidism and hypoparathyroidism
13. Paget's disease
14. Panhypopituitarism
15. Prolactinoma
16. Porphyrias
17. Diabetes insipidus
18. Hyper- and hypo-gonadism
19. Pancreatic endocrine tumors

Be able demonstrate an approach to the diagnosis and management of diseases of the thyroid including:

1. Thyroid nodule
2. Hypothyroidism
3. Hyperthyroidism
4. Thyroid storm
5. Myxoedema coma

Be able to demonstrate an approach to diagnosis and management of hyperlipidemia with an understanding of current studies and their application to clinical practice guidelines

Be able to demonstrate an understanding of the indications to investigate for endocrine causes of hypertension

Be able to demonstrate an understanding of appropriate screening tests for endocrine causes of hypertension

Be able to demonstrate an understanding of the indications to screen for adrenal insufficiency and the interpretation of the screening tests

Be able to provide an approach to the investigation of the incidentally discovered adrenal nodule

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate expertise in skills of home blood glucose monitoring and insulin injection devices

Be able to demonstrate expert skills in and understand the indications for and complications of:

1. Thyroid fine needle aspiration biopsy
2. Use of radioactive iodine to treat thyroid disease

Be able to interpret common endocrine laboratory results, including dynamic testing

Be able to understand the indications for and complications static and dynamic testing of pituitary, thyroid, and adrenal function

5b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to interact effectively with other health care professionals about individual patients

Be able to document the patient's clinical condition and plan accurately with emphasis on the relevant issues

Be able to demonstrate counselling skills to explain self-care for patients with adrenal and pituitary insufficiency diseases

Be able to demonstrate counselling skills to assist diabetic patients in the self-management of their diabetes

5c. Collaborator

Be able to contribute effectively to an interdisciplinary endocrine program

Be able to work with referring (family) physicians to optimize and share care, namely with nurse educator, dietician, psychologist, social work as required

Be able to work with other physicians involved in endocrine care (e.g. surgeons, radiologist, nuclear medicine, obstetrics and gynaecology and neurosurgeons)

5d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

5e. Health Advocate

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to educate and counsel patients and families regarding the role of lifestyle modification in the control of diabetes mellitus and osteoporosis

5f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

5g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

6. GASTROENTEROLOGY AND HEPATOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in gastroenterology and hepatology.

6a. Medical Expert

Be able to acquire and practice the consultative skills expected of a General Internist in the provision of care to patients with gastroenterologic disorders

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire time and experience in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able to elicit, present, and document a history that is relevant and appropriate to the clinical presentation

Be able to perform an accurate physical examination of the gastroenterological system, with emphasis on:

1. Peripheral signs of cirrhosis
2. Differentiate kidney from spleen
3. Ascites
4. Extra-intestinal manifestations of IBD, including eye, skin, and articular findings
5. Venous drainage of abdomen in normal and disease states
6. Signs of malnutrition
7. Full abdominal examination, including liver and spleen examination

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios:

General Gastroenterology	Hepatology
Upper GI Bleed	Abnormal liver enzymes
Lower GI Bleed	Spontaneous bacterial peritonitis
Recurrent gastric and/or duodenal ulcer	Hepatic encephalopathy
Oesophagitis	Jaundice
Dyspepsia	Ascites
Nausea & vomiting	Hepatitis
Dysphagia	Cirrhosis and its complications
Diarrhoea, acute and chronic	Esophageal varices
Constipation, acute and chronic	Indications for referral for liver transplantation
Abdominal pain, acute and chronic	
Malabsorption	
Weight loss	

Rotation-Specific Goals and Objectives
February 10th, 2015

Melena, haematochezia Pancreatitis Abnormal transaminases Abnormal cholestatic liver enzymes	
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Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and acute and long-term management of the following conditions:

1. Peptic ulcer disease, including helicobacter pylori
2. Esophageal dysmotility, in particular achalasia
3. Gastroparesis
4. Crohn's disease
5. Ulcerative colitis
6. PBC/Sclerosis cholangitis
7. Viral hepatitis
8. Non-alcoholic steatohepatitis
9. Haemochromatosis
10. Alcoholic liver disease
11. Cirrhosis
12. Ischaemic bowel
13. Coeliac disease
14. Whipple's disease
15. Neoplasia (oesophageal, gastric, intestinal, colonic, pancreatic, hepatoma)

Be able to demonstrate an approach to the investigation and management of idiopathic inflammatory bowel disease:

1. To be able to differentiate Crohn's disease from ulcerative colitis
2. To be knowledgeable about extra-intestinal manifestations of IBD
3. To be knowledgeable about treatment options
4. Indications for surgery
5. To be aware of the complications and treatment

Be able to demonstrate an approach to the investigation and management of enteric infections:

1. Bacterial infections
2. Protozoal infections
3. Pseudomembranous colitis

Be able to demonstrate an approach to the investigation and management of functional bowel disease:

1. Non-ulcer dyspepsia
2. Irritable bowel syndrome

Be able to demonstrate an approach to the investigation and management of cholelithiasis:

Rotation-Specific Goals and Objectives
February 10th, 2015

1. Awareness of the spectrum of presentation of gallstone disease
2. Diagnostic options for gallstone disease
3. Management of complications of gallstone disease (i.e. pancreatitis)

Be able to demonstrate an approach to the investigation and management of pancreatitis:

1. Acute and chronic pancreatitis
2. To be able to assess severity of acute pancreatitis
3. To be able to demonstrate knowledge about the complications of pancreatitis

Be able to demonstrate an approach to the investigation and management of malabsorption

Be able to demonstrate an approach to the investigation and management of acute liver failure:

1. To develop an approach to the differential diagnosis
2. To understand indications for transplantation

Be able to demonstrate an approach to the investigation and management of chronic liver failure:

1. Definitive management of alcoholic liver disease
2. Management of hemochromatosis-associated liver disease
3. To understand the pathophysiology of portal hypertension
4. Variceal bleeding/hepatic encephalopathy/ascites
5. Renal disease in the setting of chronic liver disease

Be able to demonstrate an approach to the investigation and management of infectious and non-infectious (non-alcoholicsteatohepatitis, alcoholic, drug-related) hepatitis:

1. To understand the pathophysiology of infections with various hepatitis viruses
2. To be able to interpret hepatitis B serology
3. Treatment options for HBV and HCV infections

Be able to demonstrate an approach about liver transplantation:

1. Indications for transplantation
2. Complications of transplantation including rejection, malignancy, and infection

Be able to demonstrate an approach to the investigation and management of nutrition

Be able to demonstrate an understanding of different forms of enteric and parenteral nutrition and to be aware of complications of parenteral nutrition

Be able to demonstrate an approach to the management of benign colonic polyps

Be able to demonstrate knowledge of the risk factors and epidemiologic associations for certain GI malignancies

Be aware of screening recommendations for colon cancer

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate an approach to the investigation of vascular diseases of the bowel:

1. Risk factors for mesenteric ischemia
2. Management of mesenteric ischemia

Be able to demonstrate expert knowledge and technical skills related to both diagnostic and therapeutic paracentesis

Be able to understand the indications for and complications of gastroscopy, colonoscopy, ERCP, liver biopsy, and paracentesis

Be able to perform procedures in the specialty of Gastroenterology (e.g. endoscopy) that provide an adequate amount of training for independent practice, depending on the trainee's future practice location and pattern, individually arranged with the participation of the /Program Director and rotation supervisor, and congruent with the scope of practice of a General Internist

6b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to interact effectively with other health care professionals

Be able to document the patient's clinical condition and plan accurately with emphasis on the relevant issues

Be able to effectively communicate information regarding risks and benefits of treatments and procedures to patients

6c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals. Specifically, be able to initiate a referral for a pre-transplant assessment in cases of cirrhosis

Be able to contribute effectively to interdisciplinary team activities

6d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

6e. Health Advocate

Be able to educate and counsel patients and families regarding the role of lifestyle modification in the control of peptic ulcer disease, gastroesophageal reflux disease, inflammatory bowel disease, cirrhosis, and coeliac disease

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to counsel and educate patients and families regarding the moderation of alcohol consumption

Be able to counsel and educate patients and their families on factors that can decrease transmission of HBV and HCV

6f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

6g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

7. HEMATOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in hematology.

7a. Medical Expert

Be able to acquire and practice the consultative skills expected of a General Internist in the provision of care to patients with hematological disorders

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire time and experience in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios:

1. Anemia
2. Leukopenia
3. Thrombocytopenia
4. Polycythemia
5. Leukocytosis
6. Thrombocytosis
7. Abnormal coagulation tests (including PT, PTT, and Factor levels)
8. Monoclonal gammopathy
9. Splenomegaly
10. Lymphadenopathy
11. Petechiae/purpura

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following conditions:

1. Iron deficiency anemia
2. Haemolytic anemias
3. Myeloproliferative disorders: Polycythemia, essential thrombocytosis, CML and myelofibrosis
4. Myelodysplasia
5. Leukemias (AML, ALL, CLL, CML)
6. Hodgkin's disease
7. Non-Hodgkin's lymphoma
8. Multiple myeloma

Rotation-Specific Goals and Objectives
February 10th, 2015

9. ITP
10. DVT/pulmonary embolism: prevention, prophylaxis, short and long term management
11. DIC

Be able to demonstrate an understanding of the indications, risks, and potential benefits of transfusion of major blood products (PRBCs, platelets, plasma, cryoprecipitate, coagulation concentrates, albumin, immunoglobulin)

Be able to demonstrate an understanding of alternatives to transfusion of blood products (erythropoietin, darbepoetin, vitamin K, octaplex, iron/vitamin replacement)

Be able to demonstrate an expert approach and management of the following emergency situations:

1. Febrile neutropenia
2. Hyperleukocytosis syndrome
3. Tumour lysis syndrome
4. Hypercalcemia
5. Spinal cord compression
6. Acute bleeding in the hemophilic patient
7. Heparin-induced thrombocytopenia
8. TTP
9. Transfusion reactions
10. Massive pulmonary embolism

Be able to demonstrate an understanding of the value of translational research in patient care by observing new and rapidly emerging treatment modalities in cancer care (immunotherapy, allogenic and autologous stem cell transplant, humoral growth factors, etc.)

Be able to demonstrate expert knowledge and skills in the following:

1. Recognize the major blood film findings of anaemia and leukocytosis
2. Know indications and risks of bone marrow biopsy
3. Be able to competently perform bone marrow aspiration and biopsy

Be able to demonstrate an understanding of the indications for admission to hospital

7b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to communicate to patients and their families the risks associated with allogenic transfusions

Be able to obtain informed consent regarding allogenic transfusion productions

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate sensitivity towards patient and family concerns in the context of hematologic malignancy

Be able to interact effectively with other health care professionals in a multi-disciplinary environment

Be able to document the patient's clinical condition and plan accurately with emphasis on the relevant issues

7d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

7e. Health Advocate

Be aware of the community resources available to patients with hematological malignancy

Be able to educate and counsel patients and families regarding the role of lifestyle modification on the management of their cancer and its possible complications

7f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

7g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

8. IMMUNODEFICIENCY ROTATION

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in immunodeficiency. The emphasis of this rotation is to expose Internal Medicine residents to the out-patient care of patients infected with HIV in a multi-disciplinary environment.

8a. Medical Expert

Be able to demonstrate expert consultative skills expected of a General Internist in patients with immunodeficiency states

Be able to acquire experience in a consultative capacity in the specialty within an ambulatory subspecialty clinic or office setting

Be able to elicit, present, and document a history that is relevant and appropriate to the presenting problem in HIV-infected patients

Be able to perform an accurate physical examination that is relevant to the presenting problem

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios in HIV-infected patients:

1. Fever (in patients with variable CD4 counts)
2. Weight loss
3. Respiratory: dyspnea, cough, hemoptysis
4. GI: dysphagia, odynophagia, diarrhea, abdominal pain
5. Hematology: anemia, thrombocytopenia, leukopenia
6. Nephrology: acute and chronic renal failure
7. Neurology: confusion, headache, cerebral masses

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of the following conditions in HIV-infected patients:

1. Respiratory: pneumonia, including PCP pneumonia
2. GI: oro-pharyngeal thrush, CMV/HSV esophagitis, CMV enteritis
3. Hematology: HIV-associated monopenias
4. Nephrology: HIV nephropathy
5. Neurology: primary CNS lymphoma, CNS toxoplasmosis, meningitis (including cryptococcal infections)
6. MAC infection
7. TB, including pulmonary and extra-pulmonary
8. Malignancies, including lymphoma, melanoma, and gynecological neoplasms
9. Immunoreconstitution syndrome

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to understand the management of patients at all stages of their disease, from new diagnosis to chronic infection to end-stage disease

Be able to understand the indications for the measurement of viral load, viral genotyping, and CD4 count

Be able to understand the value of translational research in patient care through observing new and rapidly emerging treatment modalities in the care of patients with HIV

Be able to recognize the indications for hospital admission

8b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to interact effectively with other health care professionals

Be able to document the patient's clinical condition and plan accurately with emphasis on the relevant issues

8c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals

Be able to contribute effectively to interdisciplinary team activities

8d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

8e. Health Advocate

Be able to educate and counsel patients and families regarding factors that can decrease the risk of transmission of HIV and minimize their risk of opportunistic infections

Be able to educate patients and their families and friends regarding HIV and its treatment

8f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to teach medical students, residents, and other health care professionals

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

8g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice. In particular, be able to recognize and deal with issues surrounding discrimination based on sero-positivity status, and advance directives and end of life issues in the context of patients with end-stage disease

Be able to recognize and deal with unprofessional behaviours in clinical practice

9. INFECTIOUS DISEASES

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in infectious diseases.

9a. Medical Expert

Be able to demonstrate expert consultative skills expected of a General Internist in patients with infections and infectious diseases

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to demonstrate experience in a consultative capacity in the specialty within an ambulatory subspecialty clinic or office setting

Be able to understand the pathogenesis, diagnosis, treatment and management of the following infectious diseases/syndromes:

1. Fever of unknown origin
2. Fever in the hospitalized or ICU patient
3. Fever in the immunocompromised host including the patient with febrile neutropenia
4. Opportunistic fungal infections such as aspergillosis
5. Fever in the post-surgical patient
6. Fever in the post-partum patient
7. Community-acquired pneumonia
8. Hospital and ventilator-acquired pneumonia
9. Infective endocarditis including the indications for antibiotic prophylaxis
10. *Staphylococcus aureus* bacteremia
11. Candidemia
12. Prosthetic device infections including mechanical heart valves, prosthetic joints and central venous access devices
13. Osteomyelitis and septic arthritis
14. Diabetic foot ulcers and infections
15. Skin and soft tissue infections including cellulitis, erysipelas, necrotizing fasciitis
16. Streptococcal toxic shock syndrome
17. Human and animal bites
18. Performance and interpretation of the tuberculin skin test
19. Tuberculosis including pulmonary and extrapulmonary tuberculosis and the management of tuberculosis in pregnancy
20. Sexually transmitted diseases including herpes simplex infection, gonorrhoea, chlamydia, and syphilis
21. The interpretation and management of a positive VDRL

Rotation-Specific Goals and Objectives
February 10th, 2015

22. Fever in the returning traveller including malaria, typhoid fever, dengue fever, and viral hepatitis syndromes

Be able to demonstrate an understanding of the major classes of antibiotics including their mechanisms of action, their spectrum of activity, mechanisms of resistance, major adverse reactions (including allergies):

1. Beta-lactam antibiotics including penicillins, cephalosporins, and carbapenems
2. Macrolide antibiotics
3. Lincosamide antibiotics including clindamycin
4. Quinolone antibiotics
5. Aminoglycosides
6. Glycopeptide antibiotics including vancomycin
7. Metronidazole
8. Antimetabolite antibiotics including trimethoprim-sulfamethoxazole
9. Antifungal antibiotics including amphotericin b and azole agents

Be able to understand the appropriate timing of oral antibiotic step-down therapy

Be able to understand which antimicrobial agents are safe to use in pregnancy

Be able to understand the role of dose adjustment of anti-infectives in the setting of renal or hepatic failure

Be able to provide an approach to cost effective antibiotic use

Be able to demonstrate a framework for the interpretation of results from the microbiology lab in the context of clinical care:

1. Limitations of culture techniques
2. Recognition of colonization vs. infection
3. Interpretation of the gram-stain
4. Interpretation of common serological tests including serologies for HBV, EBC, toxoplasmosis
5. Interpretation of antibiotic susceptibility testing
6. Limitations of antibiotic susceptibility testing
7. Awareness of newer rapid diagnostic tests used in microbiology including EIA, PCR, latex agglutination tests

Be able to demonstrate an understanding of the microbiologic tests used for the identification and classification of bacteria including coagulase testing in staphylococci

Be able to demonstrate an understanding of the principals and practices of infection control:

1. The importance of hand washing

Rotation-Specific Goals and Objectives
February 10th, 2015

2. The significance of drug-resistant organisms including MRSA, VRE, and extended-spectrum beta-lactamase producing organisms
3. Management of exposures to varicella zoster virus in the healthcare worker
4. Management of varicella zoster virus exposures during pregnancy
5. Management of occupational exposures to blood-borne pathogens (needle stick injuries) including HIV, HBV, and HCV
6. Isolation procedures for respiratory including tuberculosis, varicella
7. Isolation procedures for enteric pathogens including *C. difficile*

Be able to demonstrate an approach to the investigation and management of HIV infections:

1. Understand the interpretation of HIV serologic testing
2. Pre and post-test counselling
3. Indications and interpretation of CD4 count measurement
4. Indications and interpretation of viral load measurement
5. Understand the classes, mechanisms of action, and common toxicities of the antiretroviral drugs
6. Approach to initial and subsequent antiretroviral therapy
7. Approach to the treatment and prophylaxis of common opportunistic infections including PCP, toxoplasmosis, and oral candidiasis
8. Understand the principles of management of antiretroviral therapy in pregnancy

Be able to demonstrate an approach to the principles and practices of adult immunization:

1. Knowledge of the vaccines that are available
2. Knowledge of the immunoglobulin preparations and immunoglobulin preparations that are available for the prevention and management of common and/or serious infectious diseases including hepatitis A virus, HBV, rabies, pneumococcal disease and influenza

Be able to interpret PPDs

Be able to prescribe antimicrobial agents in an appropriate fashion based upon a thorough clinical assessment of the patient, taking into account the spectra of the antibiotics available

Be able to demonstrate an understanding of hospital infection control practices and apply these to the care of patients

Be able to demonstrate an understanding of the indications for admission to and discharge from hospital, in particular the indication for admission to an intensive care setting with the sepsis syndrome

9b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to interact effectively with other health care professionals

Be able to document the patient's clinical condition and plan accurately with emphasis on the relevant issues

Be able to demonstrate effective tools for gathering historical information from patients

Be able to perform pre and post-test counselling for patients undergoing HIV testing

Be able to effectively communicate recommendations to other physicians in the role of consultant

9c. Collaborator

Be able to identify and recognize the need to, and benefit of consulting other physicians and healthcare professionals, specifically a general or plastic surgeon when debridement or biopsy is indicated

Be able to contribute effectively to interdisciplinary team activities

Be able to understand the role of allied healthcare professionals in the management of patients with infectious diseases including the infection control practitioner

Be able to communicate to patients and their families' factors that decrease transmission of HIV, HBV, HCV, and TB

Be able to communicate with public health agencies regarding reportable diseases

9d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

Be able to prioritize urgency of multiple consultation requests

9e. Health Advocate

Be able to educate and counsel patients and families regarding risk factors for disease transmission, admeasures to reduce their spread, including hand washing

Be able to identify opportunities for patient counselling and education regarding health promotion including recommendations for immunization

Be able to educate patients about safer sexual practices

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to participate in contact tracing with public health care officials and institute prophylaxis treatments in patient contacts (e.g. meningococcal meningitis, TB)

9f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

9g. Professional

Be able to apply knowledge of the professional codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues that arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice. In particular, be able to recognize and deal with issues surrounding discrimination based on sero-positivity status of HIV

10. MEDICAL ONCOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in medical oncology. The emphasis of this rotation is to expose Internal Medicine residents to the out-patient care of patients with cancer.

10a. Medical Expert

Be able to demonstrate expert consultative skills expected of a General Internist in patients with cancer

Be able to acquire experience in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to elicit, present, and document a history that is relevant and appropriate to the presenting problem in oncology

Be able to perform an accurate physical examination that is relevant to the presenting problem

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios:

1. Febrile neutropenia
2. Adenocarcinoma and neoplasia of unknown primary site
3. Oncologic emergencies, including hypercalcemia, spinal cord compression, brain metastases, pleural effusions, and cancer pain syndromes

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of the following conditions:

1. Breast cancer
2. Oesophageal, gastric, intestinal, colonic, pancreatic, hepatoma
3. Lung cancer
4. Ovarian cancer
5. Endometrial
6. Cervical
7. Renal cell cancer
8. Transitional cell cancer
9. Prostate cancer
10. Male germ cell tumours (seminomatous and NSGCT)
11. Thyroid cancer
12. Melanoma

13. Paraneoplastic syndromes

Be able to understand the indications and controversies surrounding screening for the following malignancies: breast, colorectal, lung, ovarian, and prostate

Be able to understand the most important risk factors for breast, colorectal, lung, ovarian, and prostate

Be able to know the most current evidence for screening of breast, colorectal, lung, ovarian, and prostate

To be aware of methods of genetic testing for susceptibility to certain cancers and their major limitations of screening

Be able to understand the indications for and complications of various biopsy techniques in order to arrive at a tissue diagnosis

Be able to understand the indications for CT, MRI, PET, bone and gallium scans, and other tests in patients being worked up or followed for malignancy

Be able to understand general principles of goals of therapy for cancer (i.e. curative, neoadjuvant, adjuvant, palliative)

Be able to demonstrate knowledge of the basic classification of chemotherapeutic agents

Be aware of common side-effects of chemotherapy and how to manage them, including nausea, vomiting, mucositis, diarrhoea, bone marrow suppression, febrile neutropenia

Be able to know important toxicities of commonly used chemotherapeutic agents (i.e. adriamycin - cardiotoxicity; cisplatinum- nephrotoxicity)

Be able to understand general mechanisms of actions and common toxicities of hormonal agents used for treatment of breast and prostate cancer

Be able to demonstrate a rational approach to management of cancer pain with analgesics, including narcotics, understand the common side-effects of narcotic analgesics/NSAID's, and their management, and be aware of non-analgesic modalities available for management of cancer pain

Be able to recognize and quantify the performance status of patients with cancer

Be able to gain an understanding of the value of translational research in patient care by observing new and rapidly emerging treatment modalities in cancer care

Be able to recognize the indications for hospital admission

10b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to demonstrate sensitivity towards patient and family concerns in the context of oncological practice

Be able to effectively communicate information regarding treatments and other side effects to patients

Be able to interact effectively with other health care professionals in a multi-disciplinary environment

Be able to document the patient's clinical condition and plan accurately with emphasis on the relevant issues

Be able to effectively deliver bad news with compassion

Be able to effectively discuss end of life issues

10c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals, including surgeons when resection is being considered

Be able to contribute effectively to interdisciplinary team activities

10d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

10e. Health Advocate

Be able to educate and counsel patients and families regarding the role of lifestyle modification on the management of their cancer and its possible complications

Be able to educate patients regarding lifestyle modifications that may reduce the risk of cancer (e.g. smoking cessation)

Be aware of and utilize the community resources available to patients with cancer

10f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

10g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice. In particular, be able to recognize and deal with end of life issues in the context of patients with cancer

Be able to recognize and deal with unprofessional behaviours in clinical practice

11. NEPHROLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in nephrology.

11a. Medical Expert

Be able to demonstrate expert consultative skills expected of a General Internist in patients with renal disease

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to demonstrate expertise in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able to elicit, present and document a history that is relevant and appropriate to the renal system

Be able to perform an accurate physical examination with emphasis on:

1. Volume status, including JVP determination and peripheral edema
2. Distinguish the kidney from the spleen on examination
3. Signs of uremia: pleuropericarditis, asterixis, congestive heart failure, and Kussmaul's breathing

Be able to provide a reasonable approach to the differential diagnosis, work-up and management of the following scenarios:

1. Be able to provide an approach to the patient with hematuria:
 - Urologic vs. nephrologic causes
 - Urine microscopy
 - Recognize cells and casts, and understand their significance
2. Be able to provide an approach to the patient with generalized oedema:
 - Differential diagnosis
3. Be able to provide an approach to the patient with proteinuria:
 - Understand the limits of dipstick testing
 - Understand the significance of nephrotic range proteinuria
 - Demonstrate the ability to judge completeness of 24 hour urine collection
 - Approach to investigations
4. Be able to provide an approach to disorders of sodium:
 - Recognize disorders of sodium as disorders of water metabolism
 - Approach to differential diagnosis
 - Recognize the urgency of treatment predicated on the acuteness of presentation

Rotation-Specific Goals and Objectives
February 10th, 2015

- Be able to manage hyponatremic crises
- 5. Be able to provide an approach to disorders of potassium:
 - Approach to differential diagnosis
 - Be able to recognize potassium-associated emergencies (ECG changes)
 - Management of emergent and non-emergent levels of hyperkalemia
- 6. Be able to provide an approach to disorders of calcium:
 - Understanding of calcium metabolism
 - Approach to differential diagnosis
 - Awareness of calcium/albumin interactions
- 7. Be able to provide an approach to the patient with acute renal failure:
 - Approach to differential diagnosis
 - Understanding of urine sodium concentration and its significance in this setting

Be able to recognize cells and casts on microscopy and to understand their significance:

1. Approach to investigations
2. Non-dialytic treatments to acute renal failure (i.e. K⁺ binders)
3. Indications for dialysis

Be able to provide an approach to the patient with chronic renal failure

Be able to distinguish acute from chronic renal failure

Be able to understand mechanisms of progression of chronic renal failure:

1. Treatment of hypertension
2. Drug dosing in chronic renal failure
3. Indications for dialysis
4. Indications for referral to a nephrologist

Be able to provide an approach to common poisonings

Be aware of presentation syndromes of common poisonings (ASA, acetaminophen, methanol, ethylene glycol)

Be able to order and interpret drug screens and biochemical footprints of poisonings (acid-base disturbances, anion gap, osmolar gap)

Be able to emergently manage poisonings

Be able to demonstrate knowledge about poison control centres

Be able to provide an approach to the diagnosis and management of acid-base disturbances:

Rotation-Specific Goals and Objectives
February 10th, 2015

1. Approach to blood gas analysis

Be able to provide an approach to the renal transplant patient including complications of transplantation:

1. Acute and chronic rejection
2. Infection
3. Post-transplantation malignancies
4. Immunosuppressive agents
5. Awareness of the prevalence of premature cardiovascular morbidity and mortality

Be able to demonstrate an understanding of the issues related to dialysis therapy:

1. Awareness of hemodialysis and peritoneal dialysis and their mechanisms
2. Concepts of ultra-filtration vs. solute clearance
3. Awareness of the prevalence of premature cardiovascular morbidity and mortality

Be able to demonstrate an understanding of pregnancy-associated renal disease:

1. The risks of undertaking a pregnancy with co-existent renal disease
2. Normal ranges of creatinine concentration and blood pressure during pregnancy
3. Proteinuria/hypertension/decreased renal function in pregnancy
4. Awareness of postpartum renal failure

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up and management of the following conditions:

1. Acute tubular necrosis (including contrast nephropathy)
2. Acute renal failure secondary to NSAID's
3. Allergic interstitial nephritis
4. Renovascular hypertension
5. Renal tubular acidosis
6. Diabetic Nephropathy
7. Hypertensive glomerulosclerosis
8. Rhabdomyolysis

Be able to interpret urinalysis, urinary sediment microscopy, and urinary electrolytes

Be able to understand the indications for and complications of renal ultrasonography, renal scan, and renal biopsy

Be able to demonstrate an understanding of the indications and complications of different modes of renal replacement therapy

Be able to demonstrate an understanding of the indications for renal transplantation

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to demonstrate an understanding of the indications for admission to and discharge from hospital

11b. Communicator

Be able to communicate effectively with patients and families with respect to their medical conditions

Be able to interact effectively with other health care professionals

Be able to document the patient's condition and progress accurately with emphasis on the relevant issues

11c. Collaborator

Be able to identify and recognize the need to, and benefit of consulting other physicians and healthcare professionals, specifically surgeons when access for dialysis or transplantation is being contemplated

Be able to contribute effectively in a multi-disciplinary team

11d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

11e. Health Advocate

Be able to educate and counsel patients and families regarding smoking cessation, nutrition, exercise and other risk factors to optimize preservation of renal function and reduce cardiac risk

Be able to identify opportunities for disease prevention and health promotion in the patient with chronic renal failure (e.g. pneumococcal vaccination)

11f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents and other healthcare professionals

Be able to contribute to the development of new knowledge, through the participation in completion of a research project

11g. Professional

Rotation-Specific Goals and Objectives

February 10th, 2015

Be able to apply knowledge of the professional codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues that arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

12. NEUROLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in neurology.

12a. Medical Expert

Be able to demonstrate expert consultative skills expected of a General Internist in patients with neurological presentations, symptoms, or illness

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire time and experience in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able to elicit, present, and document a history that is relevant and appropriate to the clinical presentation

Be able to demonstrate experience in the consultative role of the sub-specialty

Be able to demonstrate skills in eliciting and interpreting abnormal neurological signs

Be able to demonstrate knowledge of neuroanatomy and neurophysiology required to localize lesions and recognize abnormalities of function

Be able to assess and initiate diagnostic and management plans for the patient with the following conditions:

1. Upper vs. lower motor neuron findings
2. Tremors
3. Pupils (Adie's, Argyll-Robertson, Marcus-Gunn)
4. Examination of all cranial nerves, including palsies of all nerves with common causes
5. Focused mental status examination
6. Cerebellar examination
7. Posterior column examination
8. Compare/demonstrate radiculopathy and peripheral nerve disease (C5, C6, C7, L4, L5, S1 nerve roots and appropriate peripheral nerves)
9. Interpret gait abnormalities
10. Altered level of consciousness (including Glasgow Coma Scale)

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios:

1. Tremors
2. Autonomic Insufficiency

Rotation-Specific Goals and Objectives
February 10th, 2015

3. Polyneuropathy, mononeuritis multiplex, and peripheral neuropathy
4. Seizure: first episode, recurrent, and status epilepticus
5. Dementia, including normal pressure hydrocephalus
6. Acute spinal cord compression
7. Alcohol abuse and withdrawal
8. Subarachnoid hemorrhage
9. Acute neuromuscular weakness
10. Brain tumours
11. Stroke
12. Altered mental status

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of the following conditions:

1. Approach to stroke/transient ischemic attacks (and stroke syndromes): diagnosis, primary and secondary prevention, treatments
2. Multiple Sclerosis: findings, diagnosis, treatment
3. Parkinson's Disease
4. Myasthenia Gravis
5. Guillain-Barre syndrome
6. Amyotrophic Lateral Sclerosis
7. Meningitis and encephalitis
8. Acute spinal cord compression

Be aware of the criteria for and methods to determine brain death

Be able to demonstrate knowledge of the pharmacological agents used in the treatment of neurological disorders including antiepileptic medications

Be able to demonstrate knowledge of the neurological symptoms caused by pharmacological agents

Be able to demonstrate expert technical skills related to the practice of neurology, such as:

1. Performance and interpretation of the neurologic examination
2. Performance of lumbar puncture
3. Interpretation of CSF examination results
4. Performance of the Dix-Hallpike manoeuvre for positional vertigo
5. Interpretation of the results of physiological tests including EEG, EMG/NCS, evoked potentials, visual fields, audiograms, and vestibular function tests
6. Interpretation of the results of imaging studies including CT, MRI, myelography, angiography, SPECT scanning, skull and spinal radiographs

12b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to interact effectively with other health care professionals

Be able to document the patient's condition and progress accurately with emphasis on relevant neurological issues

12c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals, including neurosurgeons if surgery is being contemplated

Be able to contribute effectively to interdisciplinary team activities

12d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

12e. Health Advocate

Be able to educate and counsel patients and their families regarding the factors that impact on their health, in particular factors that impact on their risk of stroke

12f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals, especially family physicians who will be managing the patients as primary care givers

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

12g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

13. PALLIATIVE CARE

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in palliative care.

13a. Medical Expert

Be able to acquire expert consultative skills expected of a General Internist in the provision of care to patients requiring palliative care

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services

Be able to experience in a consultative capacity within an ambulatory sub-specialty clinic or office setting, and in a home visit setting if appropriate

Be able to elicit, present and document a history that is relevant and appropriate to the clinical presentations of palliative care patients

Be able to recognize the physical, psychological, social, and functional consequences of end-stage diseases

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following symptoms and conditions while demonstrating an understanding of their pathophysiology:

1. Pain, both acute and chronic, of various origins (bone, neuropathic, etc.)
2. Constipation
3. Edematous states, including lymphedema
4. Nausea and vomiting
5. Delirium
6. Dyspnea
7. Nutritional deficiencies (anorexia and cachexia)
8. Cough
9. Fever
10. Anxiety and depression

Be able to recognize and manage terminal delirium

Be able to understand the pharmacology of drugs used to manage symptoms associated with terminally ill patients. In particular, develop an expertise in the management of opioid medications for the treatment of pain

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to assess pain and other symptoms that might cause distress to the patient or family effectively via a pain history, appropriate physical examination, and relevant investigations appropriate to the patient's current and anticipated condition and course of illness

Be able to understand the pathophysiology of cancer and non-malignant palliative conditions, particularly with respect to their ability to cause symptoms and/or distress to the patient at the end of life

Be able to accurately diagnose the acute symptomatic presentations or syndromes that are likely in a patient receiving palliative care for malignant or non-malignant conditions, and to make appropriate decisions about the need, or not, for definitive investigations, congruent with the principles of comfort and palliation at the end of life

Be able to propose evidence-based opioid and non-opioid therapies, including effective prescribing, titration, breakthrough dosing, and prevention of side effects to patients at the end of life

Be able to list and justify adjuvant modalities and medications for the alleviation of pain

Be able to understand how to adequately monitor the efficacy of treatment plans

Be able to distinguish between physician-assisted suicide and euthanasia, and palliative/terminal sedation/symptom management

Be able to distinguish between withholding and withdrawing of therapy

Be able to create and record holistic treatment plans for patients at the end of life

Be able to effectively assess psychosocial and spiritual issues in end of life care, including grief

Be able to self-assess one's own attitudes and beliefs in caring for the dying

13b. Communicator

Be able to deliver understandable information to patients, families, and other caregivers regarding prognosis, expected disease course, expected complications, and process of progressive levels of palliative care to patients at the end of life and their families and other caregivers - including the ability to sensitively communicate bad news

Be able to participate effectively in patient, family, and caregiver meetings and with the entire patient care (allied health) team

Be able to provide education of patients, families, and other care givers in collaboration with other members of the palliative care team, about end of life care issues and pain and symptom management

Be able to keep appropriate and comprehensive medical records

13c. Collaborator

Be able to work effectively as a team in providing end of life care with an understanding of the roles of other allied healthcare providers including pharmacy, nutrition, occupational and physical therapy, chaplaincy, pain service team members, and nurses

Be able to demonstrate an interdisciplinary care approach with formal and informal teams, and to establish these teams as needed in an outpatient, home, in-hospital, or specialized palliative care unit setting

13d. Manager

Be able to develop time management skills to reflect and balance priorities for patient care, sustainable practice, and personal life

Be able to coordinate and lead the palliative care team, if necessary, in the provision of a complex source and network of care to the patient and support to the family at the end of life - this may require the organization and management of resources in an ambulatory, at-home, in-hospital, or specialized palliative care unit setting

Be able to propose advance care plans, including the development and discussion of advance directives with patients and families

Be able to have the ability to describe, utilize, and put into practice models of end of life care with increasing complexity and increasing use of resources, as appropriate to the patient's progressive condition and amount of family support, in ambulatory, at-home, in-hospital, or specialized palliative care settings

13e. Health Advocate

Be able to describe, diligently anticipate, and effectively work towards the amelioration of the elements of suffering in end of life care situations for patients, families, and caregivers

Be able to describe and implement a supportive approach to the suffering of patients, families, and other care givers at the end of life

Be aware of the available and appropriate resources accessible to patients, families, and other caregivers at the end of life and to link with the provision of these resources effectively

13f. Scholar

Be able to critically assess the literature regarding the management of end of life care issues, pain and symptom management

Be able to read around the knowledge objectives outlined at the beginning of the sub-specialty rotation in the standard palliative care textbooks and in recent authoritative review articles in the medical literature

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to read around case material and special topics of interest in greater depth, and apply the principles of critical appraisal of the current medical literature to patient care

Be able to supervise more junior house staff

Be able to assume more responsibility to impart core knowledge and critical appraisal methods to junior colleagues

13g. Professional

Be able to apply knowledge of the professional codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice, particularly:

1. Competency
2. Surrogate decision-makers
3. Goals of care and cardiopulmonary resuscitation
4. Confidentiality
5. Resource allocation

Be able to recognize and deal with unprofessional behaviours in clinical practice

Be able to demonstrate cultural and religious sensitivity in addressing and delivering end of life care

14. RADIOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in radiology.

14a. Medical Expert

Be able to understand the indications for, and be able to interpret chest X-rays and CT scan of thorax, with emphasis on:

1. Solitary lung nodule
2. Pleural effusion
3. Congestive heart failure
4. Lobar collapse
5. Interstitial vs. airspace disease
6. Pulmonary fibrosis
7. Pulmonary hypertension
8. Hilaradenopathy

Be able to understand the indications for, and be able to interpret abdominal X-rays and CT scan of the abdomen, with emphasis on:

1. Small/large bowel obstruction
2. Bowel edema/inflammation (colitis, ileitis, etc.)
3. Liver masses/cysts
4. Renal masses/cysts

Be able to understand the indications for, and be able to interpret CT scan of the head, with emphasis on:

1. Masses/cysts
2. Hemorrhage
3. Ischemic infarcts

Be able to understand the indications for:

1. MRI
2. Angiograms/interventional radiology procedures
3. Bone/Gallium scans
4. Other nuclear medicine scans
5. Ultrasounds
6. PET scans

14b. Communicator

Be able to interact effectively with other health care professionals and discuss the results of various radiological tests

14c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals

14d. Manager

Be able to use information technology to optimize patient care

Be able to use healthcare resources cost-effectively

Be able to work efficiently and effectively

14e. Health Advocate

Be able to educate and counsel patients and their families regarding the factors that impact on their health

14f. Scholar

Be able to critically appraise sources of medical information

Be able to teach medical students, residents, and other health care professionals

14g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

15. RESPIROLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in respirology.

15a. Medical Expert

Be able to acquire and practice the consultative skills expected of a General Internist in the provision of care of patients with respiratory diseases and disorders

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire time and experience in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able to conduct a respiratory history, including occupational history

Be able to perform a full respiratory physical examination, and have an approach to interpretation of chest X-rays and CT scans

Be able to generate a differential diagnosis for respiratory symptoms, including cough, hemoptysis, chest pain, chronic sputum production, and wheezing

Be able to interpret pulmonary function tests and arterial blood gases

Be aware of the role and indications for diagnostic procedures such as V/Q scans, pulmonary angiography, bronchoscopy, and lung biopsy

Be able to demonstrate knowledge of the pathophysiology, diagnosis, and management of COPD and asthma

Be able to demonstrate familiarity with emergency and ambulatory management of COPD

Be able to understand the indications for the use of bronchodilators, anti-inflammatory agents, antibiotics, and oxygen therapy

Be able to demonstrate an understanding of the presentation, etiological microbiology, and complications of pneumonia

Be able to select empiric antibiotic therapy for likely pathogens based on history, chest X-ray, and epidemiologic risk factors

Be able to diagnose and to be familiar with the causes of bronchiectasis

Be able to provide an approach to the investigation and management of a patient with

Rotation-Specific Goals and Objectives
February 10th, 2015

Bronchiectasis

Be able to understand the etiology, predisposing factors, and presentation of thromboembolic disease

Be able to demonstrate a diagnostic and management approach for the patient with suspected pulmonary embolism

Be able to recognize the signs and symptoms of pulmonary hypertension

Be able to form a differential diagnosis for pulmonary hypertension

Be able to provide an approach to the investigation and management of pulmonary hypertension

Be able to recognize and form a differential diagnosis for a patient with a pulmonary infiltrate

Be familiar with the presentation, prognosis, and management of idiopathic pulmonary fibrosis

Be able to demonstrate an understanding of the presentation, investigation, and management of sarcoidosis, Wegener's granulomatosis, pulmonary eosinophilia, and Goodpasture's syndrome

Be able to demonstrate knowledge of cell types, staging, prognosis, and treatment of bronchogenic carcinoma

Be able to provide an approach to the patient with suspected bronchogenic carcinoma

Be able to perform a pre-operative assessment of the patient who is a candidate for lung resection

Be able to conduct a sleep history, and to be familiar with the causes and effects of sleep apnoea

Be able to demonstrate an approach to the investigation and management of sleep apnoea

Be able to recognize and form a differential diagnosis of respiratory failure

Be able to demonstrate an approach to the acute assessment and management of the patient with respiratory failure

Be able to demonstrate an understanding of the etiology and presentation of occupational lung diseases

Be familiar with the causes and presentation of hypersensitivity pneumonitis

Be able to recognize drug-related pulmonary disease

Be familiar with the pulmonary changes in connective tissue disorders

Rotation-Specific Goals and Objectives

February 10th, 2015

Be able to demonstrate an approach to the investigation of the immunocompromised patient with an abnormal chest X-ray

Be able to demonstrate an approach to the investigation and differential diagnosis of a pleural effusion

Be able to demonstrate an approach to a patient with a mediastinal mass

Be able to demonstrate technical skills related to the practice of respirology:

1. Be able to demonstrate an understanding of the indications, techniques, limitations, and complications of inhaled therapy (MDI, dry power inhalers, nebulizers)
2. Be able to perform and interpret ABG's
3. Be able to interpret PFT's
4. Be able to perform thoracentesis
5. Be able to understand the appropriate indications for bronchoscopy

Be able to perform procedures in the specialty of Respirology (i.e. bronchoscopy) that provide an adequate amount of training for independent practice, depending on the trainee's future practice location and pattern, individually arranged with the participation of the Program Director and rotation supervisor, and congruent with the scope of practice of a General Internist

15b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to interact effectively with other health care professionals

Be able to document the patient's condition and progress accurately with emphasis on relevant pulmonary issues

15c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals, including thoracic surgeons if surgery is being contemplated

Be able to contribute effectively to interdisciplinary team activities

15d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

15e. Health Advocate

Be able to educate and counsel patients and their families regarding the factors that impact on their health, particularly with respect to smoking cessation

15f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals, especially family physicians who will be managing the patients as primary care givers

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

15g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

16. RHEUMATOLOGY

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in rheumatology.

16a. Medical Expert

Be able to acquire and practice the consultative skills expected of a General Internist in the provision of care to patients with rheumatological and collagen-vascular diseases and disorders

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire time and experience in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able to elicit, present and document a history that is relevant and appropriate to the clinical presentations of various rheumatologic complaints and conditions

Be able to perform an accurate physical examination, with emphasis on:

1. Examination of the peripheral joints (foot and ankle, knee, hip, hand and wrist, elbow, shoulder) and axial skeleton (cervical, thoracic, and lumbosacral including sacroiliac joints)
2. Extra-articular manifestations of rheumatoid arthritis, lupus, ankylosingspondylosis
3. Examination for scleroderma
4. Examination for low back pain

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios:

1. Acute monoarthritis
2. Acute polyarthritis
3. Chronic polyarthritis
4. Sacroileitis
5. Low back pain (with emphasis on the danger signs prompting early evaluation)
6. Vasculitis
7. Complications of chronic corticosteroid use
8. Interpretation of ESR, CRP, and autoantibodies
9. Interpretation of bone mineral densitometry

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of the following conditions:

1. Gout and pseudogout
2. Septic arthritis
3. Osteoarthritis

Rotation-Specific Goals and Objectives
February 10th, 2015

4. Rheumatoid arthritis and Sjogren's syndrome
5. Sero-negative arthropathies
6. Systemic lupus erythematosus
7. Ankylosing spondylitis
8. Scleroderma
9. Dermatomyositis/Polymyositis
10. Raynaud's phenomenon and disease
11. Temporal arteritis and Polymyalgia Rheumatica
12. Fibromyalgia
13. Osteoporosis, particularly in the patient on corticosteroids
14. Soft-tissue rheumatic pain, including tendonitis and bursitis

Be able to perform arthrocentesis of the knee and shoulder and interpret the results of synovial fluid analysis

Be able to understand the indications for and complications of anti-inflammatory, DMARDs, and immunosuppressive drugs in the treatment of rheumatologic conditions

Be able to understand the indications for and complications of arthrocenteses for all joints, joint X-RAYS, joint scans, and bone-gallium scans

Be able to interpret joint fluid microscopy

Be able to provide an approach to interpreting bone and joint radiographs

16b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions

Be able to interact effectively with other health care professionals

Be able to document the patient's condition and progress accurately with emphasis on the rheumatological issues

16c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals, including orthopedic surgeons if surgery is being contemplated

Be able to contribute effectively to interdisciplinary team activities

16d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

16e. Health Advocate

Be able to educate and counsel patients and their families regarding the factors that impact on their health, including the benefits of weight loss and exercise for prevention and management of osteoarthritis

16f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals, especially family physicians who will be managing the patients as primary care givers

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

16g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice

17. THROMBOSIS MEDICINE

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in thrombosis medicine.

17a. Medical Expert

Be able to demonstrate the requisite knowledge and skills to function as a thrombosis consultant in the in-patient and out-patient setting

Be able to perform clinical assessments that are accurate, concise and relevant

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of conditions as they relate to thrombosis and its treatment

Be able to understand the indications for, and be able to interpret commonly used diagnostic modalities in Thrombosis Medicine

Be able to perform an accurate physical examination, with emphasis on:

1. Findings of deep vein thrombosis (DVT) of the lower extremity and upper extremity
2. Findings of superficial vein thrombosis (SVT)
3. Findings of pulmonary embolism (PE)
4. Findings of PE with hemodynamic instability
5. Findings of phlegmasia cerulea dolens
6. Findings of post-thrombotic syndrome (PTS) of the lower extremity and upper extremity
7. Findings of chronic thromboembolic pulmonary hypertension (CTEPH)
8. Findings of heparin skin allergy
9. Findings of warfarin-induced skin necrosis

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios:

1. Suspected DVT of the lower extremity, upper extremity
2. Suspected SVT
3. Suspected PE
4. Suspected PTS
5. Suspected CTEPH
6. Suspected heparin-induced thrombocytopenia (HIT)
7. Suspected HIT with thrombosis (HITT)
8. Suspected unusual site DVT
9. Bleed on heparin (low molecular weight heparin; unfractionated heparin)
10. Bleed on vitamin K antagonists
11. Elevated INR without bleeding
12. Bleed on new oral anticoagulants, e.g. dabigatran, rivaroxaban

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of the following conditions:

1. DVT of the lower extremity and upper extremity
2. Anatomically extensive DVT
3. SVT
4. PE
5. Cancer-associated DVT, PE
6. Unprovoked DVT, PE
7. Pregnancy related DVT, PE
8. Unusual site DVT
9. PTS
10. CTEPH
11. Heparin-induced thrombocytopenia (HIT)
12. HIT with thrombosis (HITT)
13. Thrombophilia-inherited and acquired
14. Prevention of venous thromboembolism (VTE) in different patient risk groups (e.g. surgical, medical, pregnant)
15. Bridging therapy for patients on chronic anticoagulation
16. Long-term management of warfarin, new oral anticoagulants
17. Bleed on heparin (low molecular weight heparin; unfractionated heparin)
18. Bleed on vitamin K antagonists
19. Elevated INR without bleeding
20. Bleed on new oral anticoagulants, e.g. dabigatran, rivaroxaban

Be able to understand the indications for, and be able to interpret:

1. Chest X-rays, CTPA and VQ scans in patients with suspected PE and CTEPH
2. Venous ultrasounds, venograms and CT venograms in patients with suspected DVT
3. Venous ultrasounds in patients with suspected SVT
4. Coagulation testing for monitoring of heparin and vitamin K antagonists
5. D-dimer testing in the work-up and management of patients with VTE
6. Thrombophilia testing in the work-up and management of patients with VTE or arterial thrombosis
7. Limited vs. extensive work-up for underlying cancer in a patient with unprovoked thrombosis
8. Platelet counts and HIT assays in the work-up and management of patients with HIT

Be able to understand the indications for, and complications of thrombolytic approaches to the management of severe PE and DVT

17b. Communicator

Be able to communicate effectively with patients and their families with respect to their thrombotic or bleeding conditions

Be able to interact effectively with other health care professionals

Be able to document the patient's condition and progress accurately with emphasis on relevant thrombosis and/or anticoagulation issues

17c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals, including radiologists and vascular surgeons

Be able to contribute effectively to interdisciplinary team activities

17d. Manager

Be able to effectively and efficiently manage the consult service

Prioritizes requests for consultation and follow-up

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

17e. Health Advocate

Be able to educate and counsel patients and their families regarding the factors that impact on their health, particularly with respect to thrombosis prevention and safe anticoagulation care

Be able to recognize and respond to those issues where advocacy is appropriate

17f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals, especially family physicians who will be managing the patients as primary care givers

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

17g. Professional

Be able to apply knowledge of the professional codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to recognize and resolve ethical issues as they arise in clinical practice, including dealing with unprofessional behaviours in colleagues

Be able to meet deadlines and be punctual

Be able to evaluate personal abilities, knowledge, and skills and recognizes personal limitations

Be able to demonstrate integrity, honesty, compassion, and respect for diversity

18. TROPICAL MEDICINE

The General Internal Medicine resident is expected to achieve competency in the areas described below while attending his/her rotation in tropical medicine.

18a. Medical Expert

Be able to acquire and practice the consultative skills expected of a General Internist in the provision of care to patients with tropical disorders

Be able to perform consultations in the emergency room, to surgical services, to the intensive care unit, and to other medical services as appropriate to the discipline

Be able to acquire time and experience in a consultative capacity in the specialty within an ambulatory sub-specialty clinic or office setting

Be able to elicit, present, and document a history that is relevant and appropriate to the clinical presentation

Be able to perform an accurate physical examination, with emphasis on:

1. Skin rashes, lesions, ulcers and their associations with tropical diseases

Be able to provide a reasonable approach to the differential diagnosis, work-up, and management of the following scenarios:

1. Fever
2. Diarrhea (acute and chronic, returning traveler)
3. Dysentery
4. Eosinophilia

Be able to demonstrate an understanding of the pathophysiology, manifestations, diagnostic work-up, and management of the following conditions:

1. Intestinal helminths
2. Intestinal protozoa
3. Cestodes (hydatid, cystocercus, tapeworms)
4. Trematodes (schistosoma, clonorchis, fasciola)
5. Systemic protozoa (malaria, toxoplasma, leishmania, trypanosomes, pneumocystis)
6. Systemic helminths (filaria)
7. Bacterial infections (typhoid, leptospirosis, leprosy)
8. Viral infections (arbovirus, viral hemorrhagic fevers)
9. Rickettsia

Be able to understand the indications for, be able to perform, and be able to interpret the results of the following clinical procedures:

1. Filarial skin snips

Rotation-Specific Goals and Objectives
February 10th, 2015

2. Schistosoma rectal snips
3. Leprosy skin slit smears

Be able to understand the indications for and be able to interpret the results of the following laboratory procedures:

1. Microscopic identification of ova, cysts, trophozoites and worms found in urine or stools specimens
2. Microscopic examination of blood for malaria (thick and thin smears)
3. Microscopic examination of skin parasites
4. Staining techniques (Giemsa, Quick, Hematoxylin, Kinyoun)
5. Culture techniques
6. Concentration techniques (formal ether, zinc sulfate, sucrose flotation)

18b. Communicator

Be able to communicate effectively with patients and their families with respect to their medical conditions. In particular, be able to communicate with patients from different ethnic backgrounds and language groups, keeping in mind cultural contexts

Be able to interact effectively with other health care professionals

Be able to document the patient's condition and progress accurately with emphasis on relevant tropical medicine issues

18c. Collaborator

Be able to identify the need to, and benefit of consulting other physicians and health care professionals

Be able to contribute effectively to interdisciplinary team activities

18d. Manager

Be able to use information technology to optimize patient care

Be able to use health care resources cost-effectively

Be able to work efficiently and effectively

18e. Health Advocate

Be able to educate and counsel patients and their families regarding the factors that impact on their health, particularly with respect to transmission of disease and prevention of disease while travelling

18f. Scholar

Be able to critically appraise sources of medical information

Be able to apply the principles of critical appraisal of the current medical literature to patient care

Rotation-Specific Goals and Objectives
February 10th, 2015

Be able to educate patients and their families regarding their medical condition

Be able to teach medical students, residents, and other health care professionals, especially family physicians who will be managing the patients as primary care givers

Be able to contribute to the development of new knowledge, through the completion of or participation in a research project

18g. Professional

Be able to apply knowledge of the professional and ethical codes and norms of behaviour that govern the behaviour of physicians in clinical practice

Be able to apply knowledge of the legal codes and norms of behaviour that govern the behaviour of physicians in clinical practice, such as reporting certain diseases to public health authorities

Be able to recognize and resolve ethical issues as they arise in clinical practice

Be able to recognize and deal with unprofessional behaviours in clinical practice