DALHOUSIE UNIVERSITY

FACULTY OF MEDICINE
Department of Family Medicine

Family Medicine Resident Objective Book

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PURPOSE

The residency program in Family Medicine at Dalhousie University has undergone revisions to become a Triple C Competency Based Curriculum[1].

A number of steps have been taken in this process. There has been a complete revision of the program's **Curriculum Objectives**. The **field notes** have been revised and integrated with **In Training Assessment Reports (ITARs).**

This document will introduce these core elements of the program's curriculum. It will also give you information on:
- CanMEDS FM;
- The structure of the Academic Curriculum;
- Guidelines around the Resident Project.

RESPONSIBILITY

Resident: To review the relevant objectives prior to each clinical learning experience and determine with the supervisor what can and should be achieved.

Supervisor/Preceptor: To review the relevant objectives prior to each clinical learning experience and determine with the resident what can and should be achieved.

Site and Program: To ensure that each site provides the learning opportunities and structured evaluation stated in this document.

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[1] Triple C **Comprehensive**, **Centered** in Family Medicine, **Continuity** of Patient Care, Learning Environment and Curriculum

PREAMBLE TO THE CURRICULUM DOCUMENT FOR RESIDENTS

The delivery of the Dalhousie Family Medicine Residency Program is based on the provision of both strong clinical experiences and a focused academic curriculum. This delivery is grounded in the Four Principles of Family Medicine[2] and now structured around the CanMEDS FM roles as developed by the CFPC National Working Group on the Postgraduate Curriculum. Please refer to http://www.cfpc.ca to view the CanMEDS-Family Medicine: A Framework of Competencies in Family Medicine. In this framework, the Family Medicine Expert integrates the competencies included in the roles of Communicator, Collaborator, Manager, Health Advocate, Scholar and Professional.

The CFPC Evaluation Objectives is the other document that has a major influence on the curriculum. It incorporates the Phases of the Clinical Encounter, the Skill Dimensions, the Priority Topics with their Key Features, and the Themes of Communication and Professionalism with their Observable Behaviours.

It is important to differentiate *curriculum objectives* and *assessment objectives*. It is the curriculum objectives that define the broad knowledge base that is required for residents to gain over the 24 months of the training program. It is the assessment objectives that form the basis of assessment of competency in a sampling of these areas. Thus it is appropriate that the Priority Topics drive our curriculum to a certain extent, but residents are expected to know more than what is included in the Key Features under each Priority Topic. Key Features are considered when planning the objectives of every seminar.

Residents are assessed on their participation and presentation in seminars and workshops, as well as in many other facets of the program. Please see the Bi-Annual Review document for a full list. Much of the assessment is accomplished in real clinical situations based on the clinical objectives in each clinical learning experience. We focus on assessment *for* learning as well as assessment *of* learning. This means that we use all assessment tools to stimulate your learning and to see how you are doing at the same time. Documentation of the in training assessment occurs with the use of Field Notes - which provide a narrative of what went well, with suggestions for improvement, with common reflection on multiple encounters from multiple observers. This information is summarized later to help populate the In Training Assessment Reports (ITARs) for each clinical learning experience. Your preceptor will help you create a personalized learning plan with the completion of each Narrative ITAR. This and other information, with some of your reflections, will be used twice per year by your Site Director or their designate to complete the Bi-Annual Resident Performance Review. A learning plan will also be developed to stimulate your learning and to help you achieve competence as quickly and efficiently as possible.

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[2]
1) The Family Physician is a skilled clinician
2) The Family Physician is community-based
3) The Family Physician is a resource to a defined community
4) The doctor-patient relationship is central to the role of Family Physician

THE TRIPLE C COMPETENCY-BASED CURRICULUM

The Dalhousie Family Medicine academic curriculum was extensively re-organized in 2013. This reflected the national movement of all post-graduate Family Medicine Residency Programs to adopt the CFPC's Triple C competency-based curriculum.

The curriculum is divided into 11 domains (derived from those established by the CFPC National Working Group on Postgraduate Curriculum Review):

- Behavioural Medicine and Mental Health Care
- Care of Adults
- Care of Children and Adolescents
- Care of the Elderly
- Global Health and Care of the Vulnerable and Underserviced
- Maternal and Newborn Care
- Men's Health Care
- Palliative Care
- Procedural and Surgical Skills
- Professional Competencies
- Women's Health Care

Within each domain the structure (headings and sub-headings) reflects the CanMEDS FM roles (again as developed by the Working Group on the Postgraduate Curriculum). Each sub-heading is written in language that emphasizes that it is the program's responsibility to provide a learning opportunity to the resident to accomplish the following objectives. The implication, of course, is that it is the residents' responsibility to avail themselves of the opportunity.

At the level of individual objectives, each objective is written in a competency-based manner. That is, completion of a certain clinical learning experience or having a certain clinical experience is no longer the goal. The goal is to achieve the clearly stated desired outcome.
In addition, wherever possible, the objective will reference the applicable Priority Topic/Key Feature (developed by the CFPC National Working Group on Certification). This will be indicated by a bracketed reference (e.g. Elderly 2 would obviously reference the second Key Feature in the Priority Topic: Elderly)

Behavioural Medicine/Mental Health

Family Medicine Expert

1. The learning environment will provide opportunities for residents to demonstrate integration of all the CanMEDS-FM roles in order to function effectively as a generalist in the provision of behavioural medicine and mental health care.
2. The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required to meet the needs of patients in the areas of behavioural medicine and mental health.
2.1. The family medicine resident will recognize and diagnose mental health problems commonly found in family practice including anxiety disorder (Anxiety 1-5), mood disorders (Depression 1-10), schizophrenia (Schizophrenia 1-8), personality disorders (Personality Disorder 1-5), post-traumatic stress disorder, phobic states, eating disorders (Eating Disorders 1-6), somatization disorders (Somatization 1-4), chronic pain syndromes and addiction (Substance Abuse 1-9). They will be able to:
2.1.1. Demonstrate familiarity with the DSM diagnostic criteria for these common disorders.
2.1.2. Demonstrate ability to appropriately screen for these disorders in high-risk groups.
2.1.3. Demonstrate ability to assess cognitive status with an appropriate instrument (MMSE or MOCA).
2.1.4. Take an appropriate history to generate differential diagnoses for symptoms, which also includes medical causes and contributors to rule out serious organic pathology.
2.1.5. Assess patient's suicide risk, homicide risk and judgment.
2.1.6. Identify comorbid psychiatric conditions.
2.1.7. Identify the functional impact of the symptoms to help guide and evaluate treatment.
2.1.8. The resident will develop a management plan and provide appropriate follow up for these disorders, including the ability to:
2.1.8.1. Offer appropriate treatment in a way that promotes full discussion of options and patient's own decision-making.
2.1.8.2. Use a multidisciplinary approach to treatment and management and refer appropriately.
2.1.8.3. Use a multifaceted approach to treatment.
2.1.8.4. Include psychosocial support as part of the treatment plan.
2.1.8.5. Demonstrate knowledge of indications, side effect profile, common interactions and monitoring requirements of psychopharmacological agents such as antidepressants, antianxiety medications, mood stabilizers, antipsychotics and other commonly used agents.
2.1.8.6. Demonstrate knowledge of different forms of therapy (including brief psychotherapy, couples and family therapy, behavior therapy, long-term psychotherapy) and the selection of patients for each modality.
2.1.8.7. Demonstrate ability to skillfully and appropriately counsel for behaviour change using techniques of motivational interviewing (Counselling 1-3).
2.1.8.8. Monitor response to treatment using functional benchmarks, adjusting and augmenting as clinically indicated.
2.1.8.9. Diagnose and treat serious complications and side effects of medications.
2.1.9. The resident will develop the confidence and skills to manage difficult or emotionally intense situations or interactions, including:
2.1.9.1. When confronted with difficult patient interaction seek out information about patient's life circumstances, current context and functional status to better understand the patient's frame of reference.
2.1.9.2. Identify own attitudes and beliefs, which may be contributing to the situation.
2.1.9.3. Look for and attempt to limit the impact of personal feelings [e.g. anger, frustration] and remain vigilant for new symptoms and physical findings to be sure they receive adequate attention.
2.1.9.4. Work towards establishing common ground and an atmosphere of safety and trust.
2.1.9.5. Screen for abuse and domestic violence and assess the level of risk for all members of the household, generating an emergency plan if needed (Domestic Violence 1,3).

2.1.9.6.   Anticipate possible violent or aggressive behaviour and recognize the warning signs (Violent/Aggressive Patient 1).

2.1.9.7.   Develop a plan within your practice environment to deal with patients who are verbally or physically aggressive (Violent/Aggressive Patient 1,4).

2.1.9.8.   Set clear boundaries with respect to appointment length, prescribing practices and accessibility especially with those patients who have a personality disorder (Personality Disorder 1).

2.1.9.9.   Take steps to end the physician-patient relationship when it is in a patient's best interests and do so according to accepted guidelines.

Communicator

3.   The learning environment will provide opportunities for residents to develop rapport, trust and ethical therapeutic relationships with patients and families.

4.   The learning environment will provide opportunities for residents to accurately elicit and synthesize information from and perspectives of patients and their families as well as colleagues and other professionals.

5.   The learning environment will provide opportunities for residents to accurately convey needed information and explanations to patients and their families as well as colleagues and other professionals.

6.   The learning environment will provide opportunities for the resident to develop a common understanding on issues, problems and plans with patients and families, colleagues and other professionals to develop, provide and follow-up on a shared plan of care.

7.   The learning environment will provide opportunities for the resident to convey effective oral and written information.

Collaborator

8.   The learning environment will provide opportunities for residents to participate in a collaborative team-based model and with consulting health professionals in the care of patients.

9.   The learning environment will provide opportunities for residents to engage patients as active participants in their own behavioural and mental health care.

10.   The learning environment will provide opportunities for residents to appropriately incorporate families and other caregivers in the care of patients while abiding by the ethical standards of patient autonomy and consent.

Manager

11.   The learning environment will provide opportunities for residents to participate in activities that contribute to the effectiveness of their own practice, healthcare organizations and systems.

12.   The learning environment will provide opportunities for residents to manage their practice and career effectively.

Health Advocate

13.   The learning environment will provide opportunities for residents to recognize those patients in need of mental health care as a potentially vulnerable population requiring support from health, education and social service sectors and be able to provide appropriate support and referral.

14.   The learning environment will provide opportunities for residents to demonstrate awareness of community resources to help patients in the community. The resident will recognize the indications for these services and advocate effectively.

15.   The learning environment will provide opportunities for residents to appreciate the particular impact of the social determinants of health on mental health and prepare to advocate accordingly.

Scholar

16.   The learning environment will provide opportunities for residents to develop evidence-based practices for behavioural and mental health care and methods for ongoing continuing medical education.

17. The learning environment will provide opportunities for residents to critically evaluate medical information, its sources and its relevance to the provision of behavioural medicine and mental health care.
18. The learning environment will provide opportunities for residents to be aware of standards of care and recommendations from the College of Family Physicians of Canada for the provision of behavioural medicine and mental health care.
19. The learning environment will provide opportunities for residents to facilitate the education of patients as well as their families, trainees, other health professional colleagues, and the public.

Professional

20. The learning environment will provide opportunities for residents to recognize unique professional obligations in the provision of behavioural medicine and mental health care.
21. The learning environment will provide opportunities for residents to be knowledgeable in obligations to report patients at risk of harm to themselves or others.
22. The learning environment will provide opportunities for residents to demonstrate understanding of privacy legislation and physician confidentiality and consent as it pertains to the provision of behavioural medicine and mental health care.

Care of Adults

Family Medicine Expert

1. The learning environment will provide opportunities for residents to demonstrate integration of all the CanMEDS-FM roles in order to function effectively as a generalist in the care of adults.
2. The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required to meet the needs of adult patients.
2.1. The family medicine resident will be able to address health promotion, screening and disease prevention, while considering racial, cultural and gender differences, in the areas of:
2.1.1. Well Adult Care
2.1.1.1. Do a periodic health assessment in a proactive or opportunistic manner (Periodic Health Assessment/Screening 1).
2.1.1.2. Selectively adapt the periodic health examination to that patient's specific circumstances (Periodic Health Assessment/Screening 2).
2.1.1.3. Address lack of physical activity with a structured approach including assessment and exercise prescription.
2.1.1.4. Inquire about safe levels of alcohol consumption and screen for use of other substances.
2.1.2. Cardiovascular disease.
2.1.2.1. Treat modifiable risk factors in patients at risk of stroke and other cardiovascular disease and offer antithrombotic treatment in appropriate populations. (Ischemic Heart Disease 2)
2.1.2.2. Screen appropriate patients for hyperlipidemia. In patients with hyperlipidemia, establish target lipid levels, identify modifiable factors, give appropriate lifestyle advice, and periodically assess compliance (Hyperlipidemia 1-6).
2.1.3. Cancer
2.1.3.1. Be opportunistic in giving cancer prevention advice and apply the periodic health examination where indicated (Cancer 1, 2).
2.1.4. Dermatology
2.1.4.1. Be opportunistic discussing skin cancer prevention
2.1.5. Endocrinology
2.1.5.1. Screen appropriately for diabetes (Diabetes 1).
2.1.5.2. Screen for and diagnose obesity, establish readiness to change and address with motivational interviewing and follow-up. Advise about treatment options (Obesity 1, 5, 6).
2.1.6. Gastroenterology
2.1.6.1. Counsel patients at high risk for hepatitis; vaccinate and offer post-exposure prophylaxis appropriately (Hepatitis 7).
2.1.7. Infectious disease
2.1.7.1. Promote immunization as appropriate (Immunization 1-3)
2.1.8. Respirology
2.1.8.1. Take preventive measures in high-risk groups e.g. influenza and pneumococcal vaccination (Upper Respiratory Tract Infection 7; Chronic Obstructive Pulmonary Disease 5).
2.1.8.2. Regularly evaluate and document smoking status, continuously adopt a multiple strategy approach to facilitating smoking cessation (Smoking Cessation 1-3).
2.2. The family medicine resident will correctly diagnose and manage common problems in the following areas:
2.2.1. Allergy
2.2.1.1. Recognize potential allergic symptoms (skin, ophthalmologic, ENT, systemic) and manage using allergy testing, avoidance, pharmacotherapy, and desensitization where appropriate. (Allergy 2,3,4,10)
2.2.1.2. Document allergies to medication, environment and food. (Allergy 1)
2.2.2. Cardiovascular Disorders
2.2.2.1. Take an adequate history to make a specific diagnosis of life-threatening conditions in the patient with chest pain and begin timely treatment. (Chest Pain 1,2,3,5)

2.2.2.2.	Have knowledge of the impact of valvular heart disease on long-term management including prognosis, appropriate medication and follow-up.
2.2.2.3.	Screen for hypertension, measure blood pressure correctly, and make a diagnosis on multiple visits, and investigate appropriately to rule out secondary causes. Be able to treat hypertension with pharmacological means. For patients with the diagnosis of hypertension assess periodically for end-organ complications (Hypertension 1,2,3,4,7,9).
2.2.2.4.	Recognize and treat hypertensive crisis in timely fashion. Recognize need for workup for secondary hypertension (Hypertension 8).
2.2.2.5.	Demonstrate the ability to diagnose ischemic heart disease that is classic or atypical, and develop a plan in collaboration with the patient to reduce modifiable risk factors. (Ischemic Heart Disease 1, 2)
2.2.2.6.	Manage a patient with stable ischemic heart disease in a timely manner according to the severity of the disease, and coordinate appropriate follow-up (Ischemic Heart Disease 4,5).
2.2.2.7.	Assess a patient who presents with a painful or swollen leg in terms of his/her risk for ischemic vascular disease or DVT, investigate appropriately and be aware of treatment options including outpatient management of DVT (Deep Vein Thrombosis 1,2,4,5).
2.2.2.8.	Assess cardiovascular function, determine the underlying cause, and appropriately treat patients with heart failure (systolic and diastolic).
2.2.2.9.	Have an approach to arrhythmia with emphasis on common arrhythmias such as Atrial Fibrillation and PVCs.
2.2.3.	Cancer
2.2.3.1.	Be aware of and actively inquire about side effects or expected complications of cancer treatment (Cancer 5).
2.2.3.2.	Include recurrence or metastatic disease in the differential diagnosis in patients with a distant history of cancer who present with new symptoms (Cancer 6).
2.2.3.3.	Know the management of common medical complications of patients with malignancy, including effusions, pathological fractures, hypercalcemia, neutropenia, and infections.
2.2.3.4.	Know how to manage cancer pain, including the use of narcotics and co-analgesics (Palliative Care 4).
2.2.3.5.	Understand the psychosocial issues facing cancer patients and how they might be addressed (Cancer 4).
2.2.4.	Ears, Nose and Throat Disorders
2.2.4.1.	Diagnose otitis media upon visualization of the TM and include pain referred from other sources in the differential diagnosis of an earache (e.g. Tooth abscess, trigeminal Neuralgia, TMJ dysfunction, pharyngitis, etc.). Treat otitis media in an evidence-based fashion (Earache 1,2,4,5,6).
2.2.4.2.	Consider serious causes in the differential diagnosis of an ongoing earache (e.g. tumors, temporal arteritis, mastoiditis) (Earache 3).
2.2.4.3.	Differentiate viral from bacterial sinusitis and bronchitis and appropriately prescribe antibiotics (Upper Respiratory Tract Infections 2,3).
2.2.4.4.	Use an evidence-based approach to diagnosing pharyngitis; consider mononucleosis in investigating and managing patients with a sore throat (Upper Respiratory Tract Infection 6).
2.2.4.5.	Demonstrate an approach to vertigo with knowledge of benign and serious causes (BPV, stroke, labyrinthitis) (Dizziness 1,2).
2.2.5.	Endocrinology
2.2.5.1.	Manage diabetes both in and out of hospital appropriately using lifestyle, oral agents, and insulin and provide patient and family education. Monitor for and manage complications (Diabetes 2,4,5).
2.2.5.2.	Appropriately investigate and manage patients suspected with thyroid disease and limit testing for thyroid disease to patients with a significant pre-test probability of abnormal results. In patients with diagnosed hypothyroidism, check thyroid-stimulating hormone levels only at appropriate times (Thyroid 1,2).
2.2.6.	Gastrointestinal Disorders

2.2.6.1.	Demonstrate the ability to diagnose and manage adult abdominal pain. Be able to distinguish between acute and chronic abdominal pain, generate a differential diagnosis and order appropriate investigations in a timely manner (Abdominal Pain 1,2).

2.2.6.2.	Appropriately investigate and manage a patient presenting with upper or lower gastrointestinal bleeding (non-life threatening) (Gastrointestinal Bleed 1,2,4,5,6).

2.2.6.3.	Identify patients at high risk of GI bleed and modify treatment appropriately (Gastrointestinal Bleed 3).

2.2.6.4.	Recognize extra intestinal manifestations in a patient with a diagnosis of inflammatory bowel disease (IBD) (Abdominal Pain 8).

2.2.6.5.	Include cardiac causes and other conditions as part of the differential diagnosis in patients presenting with dyspepsia and rule out serious conditions (Dyspepsia 1,2,3).

2.2.6.6.	Diagnose and manage specific pathology commonly seen in primary care (e.g.. gastroesophageal reflux disease, peptic ulcer disease, ulcerative colitis, Crohn's disease, diverticulitis, pancreatitis, irritable bowel syndrome, biliary disease) (Abdominal Pain 2).

2.2.6.7.	Establish a diagnosis (e.g.. infectious, malabsorption, immune, irritable bowel) and develop a management plan given a patient with acute or chronic diarrhea (Diarrhea 1,2,3,4,6,7).

2.2.6.8.	Have an approach to diagnosis in a patient with abnormal liver enzymes differentiating hepatocellular and obstructive patterns (Hepatitis 1,2).

2.2.6.9.	Assess infectivity and HIV status in patients with Hepatitis B and C, counsel regarding harm reduction, and monitor for complications (Hepatitis 4,9).

2.2.7.	Hematologic Disorders

2.2.7.1.	Investigate the cause of low hemoglobin and classify the types of anemia, assess the risk of decompensation of anemic patients, and determine the iron status and investigate the causes of iron deficiency if present (Anemia 1,2,3,4,8).

2.2.7.2.	In patients with macrocytic anemia consider the possibility of a vitamin B12 deficiency and look for other manifestations of the deficiency (e.g. neurologic symptoms)(Anemia 6).

2.2.7.3.	Demonstrate some knowledge of common hematological malignancy (leukemia, lymphoma, myeloma) including the presenting symptoms, investigations and basic management.

2.2.7.4.	Be able to investigate and manage a patient presenting with a bleeding disorder, or an acute coagulopathy (warfarin overdose, liver disease, sepsis, etc.).

2.2.8.	Infectious Disease

2.2.8.1.	Demonstrate an awareness of serious and common causes of fever. Investigate patients with fever of unknown origin appropriately and treat fever resulting from serious causes in a timely fashion (e.g. meningitis) (Fever 4,5,6).

2.2.8.2.	Recognize and triage serious infection (pyelonephritis, cellulitis, meningitis, osteomyelitis, sepsis, pneumonia) including antibiotic choice based on the patient's individual risk factors and a decision about hospital admission (Infections 2,3,4).

2.2.8.3.	Use a selective approach in ordering cultures and make rational antibiotic choices in a timely fashion. In a febrile patient with a viral infection, do NOT prescribe antibiotics (Infections 1,2; Fever 2,3).

2.2.8.4.	Recognize that infections in the elderly may present atypically (Fever 8).

2.2.9.	Musculoskeletal

2.2.9.1.	Use history and physical examination to rule out serious causes in a patient with low back or neck pain (Low-back Pain 1; Neck Pain 1,2).

2.2.9.2.	Use conservative management for back and neck pain including exercise, posture, and pain medication when necessary (Low-back pain 2,3,5; Neck Pain 3).

2.2.10.	Neurologic Disorders

2.2.10.1.	Diagnose stroke and differentiate, if possible, hemorrhagic from embolic/thrombotic stroke and assess patients presenting with neurological deficits in a timely fashion to determine eligibility for thrombolysis (Stroke 2,3).

2.2.10.2.	Involve the patient, the family, and other professionals as needed in decisions about intervention in patients with stroke. Evaluate the resources and supports needed to improve function, and include prevention of complications of stroke. Provide realistic prognostic advice (Stroke 4,5,7).

2.2.10.3.	Have an approach to diagnosis and management of the patient who presents with loss of consciousness, altered level of consciousness, or delirium, including recognition of reversible conditions (shock, hypoxia, hypoglycemia, drug overdose) (Loss of Consciousness 2,3,4,5,6,8).
2.2.10.4.	Differentiate delirium due to general medication from dementia, drug intoxication/withdrawal, and psychotic disorders (Dementia 2).
2.2.10.5.	Distinguish between pre-syncope/syncope and vertigo in patients with dizziness, generate an appropriate differential diagnosis and rule out serious conditions, review medications, and investigate appropriately.
2.2.10.6.	Differentiate different types of tremors, i.e. resting tremor, intention tremor (Parkinsonism 4).
2.2.10.7.	Accurately distinguish between idiopathic and atypical Parkinson's disease, involve other health care professionals to enhance the patient's functional status, assess and anticipate side effects of anti-Parkinson medications, and look for other coexisting conditions (Parkinsonism 1,5,6).
2.2.10.8.	Be able to recognize and appropriately investigate benign versus life-threatening causes of headaches (trauma, subarachnoid hemorrhage, meningitis)(Headache 1,2).
2.2.10.9.	Diagnose and manage the common causes of headaches (e.g. migraine, tension, cluster)(Headache 3,5).
2.2.11.	Ophthalmologic Disorders
2.2.11.1.	Distinguish serious from non-serious causes of a red eye always using a Snellen chart for visual acuity as well as fluorescein when necessary. Consider underlying systemic causes, when the diagnosis is iritis (Red Eye 1,2,9).
2.2.11.2.	Distinguish allergic, viral and bacterial conjunctivitis and provide pseudomonas coverage for those with bacterial conjunctivitis using contact lenses (Red Eye 6,7).
2.2.11.3.	Diagnose and manage other common eye lesions such as hordeolum, chalazion, pterygium, pingueculum.
2.2.12.	Renal and Urologic
2.2.12.1.	Have an approach to patients presenting with dysuria, identify high-risk patients (DM, underlying renal disease) investigate for UTI, STIs, prostatitis, vaginitis, etc. when appropriate and manage (Dysuria 1,2,3,4).
2.2.12.2.	Have an approach to acute renal failure, including underlying cause, understand acute and chronic management and monitoring for complications.
2.2.12.3.	Understand presentation, investigations and management (medical and surgical) or renal calculi.
2.2.13.	Respirology
2.2.13.1.	Include asthma and COPD as part of the differential diagnosis in a patient with respiratory symptoms (Asthma 1; Chronic Obstructive Pulmonary Disease 1).
2.2.13.2.	Objectively determine the severity of asthma or COPD (i.e. pulmonary function testing), and manage acute exacerbations appropriately including assessment for hospitalization (Asthma 4; Chronic Obstructive Pulmonary Disease 2,3,8).
2.2.13.3.	Effectively use monitoring, pharmacotherapy and lifestyle change to manage COPD and asthma (Asthma 5,6; Chronic Obstructive Pulmonary Disease 4,6,7).
2.2.13.4.	Generate a broad differential diagnosis for cough (i.e. GERD, asthma, rhinitis, presence of a foreign body, medications, malignancy, pertussis) in patients with an acute, persistent or recurrent cough (Cough 1,3).
2.2.13.5.	Assess the patient with pneumonia with regard to: risks for unusual pathogens, underlying neoplasia, identification of the appropriate patient population for hospitalization, rational antibiotic choices and arranging contact tracing where appropriate (Pneumonia 3,5,7,11).
2.2.14.	Rheumatologic
2.2.14.1.	For patient presenting with joint pain, distinguish benign from serious pathology, using history and investigating appropriately (Joint Disorder 1).
2.2.14.2.	Have an approach to patients presenting with non-specific MSK complaints, to make the diagnosis of rheumatologic conditions, fibromyalgia, soft tissue injury and consider sources of referred pain (Joint Disorder 2,4).
2.2.14.3.	Identify non-articular symptoms of rheumatic disease (Joint Disorder 8).
2.2.14.4.	In patients experiencing musculoskeletal pain actively inquire about the impact of the pain, treat with appropriate analgesics and consider aids and community resources (Joint Disorder 9).

2.2.15.   Skin Disorders
2.2.15.1.   Distinguish benign from serious pathology (e.g. Melanoma, pemphigus, cutaneous T-cell lymphoma) by physical examination and appropriate investigations (e.g. Biopsy or excision) (Skin Disorder 2).
2.2.15.2.   Understand the cutaneous manifestations of systemic disease and be able to diagnose using history, physical and appropriate investigations (Skin Disorder 3).
2.2.15.3.   Have an approach to diagnosis and management of other common primary care dermatologic problems such as eczema, acne, skin infections (viral, bacterial, fungal, parasitic), psoriasis, allergic/contact conditions, skin ulcers (vascular, pressure).
2.2.16.   Undifferentiated and/or multiple
2.2.16.1.   Investigate and manage weakness appropriately, differentiating generalized and specific weakness and identifying neurologic and other causes.
2.2.16.2.   Assess all spheres of function in a disabled patient and offer a multifaceted approach (rehabilitation, community support, lifestyle modification) (Disability 4,5).
2.2.16.3.   In patients presenting with multiple medical problems take an appropriate history and prioritize to develop a mutually agreed agenda (Multiple Medical Problems 1,2).
2.2.16.4.   In patients complaining of fatigue consider depression, adverse effects of medication and other medical causes (Fatigue 1,2,3).
3.   The learning environment will provide opportunities for residents to assess and manage adults using the patient-centred clinical method.
4.   The learning environment will provide opportunities for residents to attend to complex clinical situations effectively in adults.
4.1.   To recognize and appropriately manage acute, urgent and emergent presentations.
4.1.1.   Awareness and management of anaphylaxis (Allergy 4,7,8,9).
4.1.2.   Appropriate management of acute presentations of chest pain (Chest Pain 1,2,3,5).
4.1.3.   Recognize and manage the acutely ill, new or diagnosed diabetic patient and manage appropriately, including management of hypoglycemia, DKA, and hyperglycemia (Diabetes 3,6,7).
4.1.4.   Recognize and manage potentially life-threatening upper respiratory presentations such as epiglottitis and retropharyngeal abscess (Upper Respiratory Infection 1).
4.1.5.   Appropriate management of epistaxis (Epistaxis 1-7).
4.1.6.   Appropriate management of poisoning including recognition of important toxidromes (Poisoning 2-7).
4.1.7.   Appropriate investigation and management of the febrile patient (Fever 4-7).
4.1.8.   Appropriate assessment, management and, if necessary, referral of patients presenting with potential fracture (Fractures 1-8), lacerations (Lacerations 1-7), bite wounds and burns.
4.1.9.   Appropriate assessment, stabilization, management and referral of patients presenting with multiple or complicated trauma (Trauma 1-10).
4.1.10.   Appropriate assessment, investigation and management of acute abdominal pain (Abdominal Pain 1,4,6) and GI bleed (Gastro-intestinal Bleed 1-6).
4.1.11.   Appropriate first line management of common infections (Fever 2,3; Infections 1-6).
4.1.12.   Appropriate investigation and management of dehydration and electrolyte disturbances (Dehydration 2-5).
4.1.13.   Appropriate investigation and management of delirium (Dementia 2) and loss of consciousness (Loss of Consciousness 1-11).
4.1.14.   Appropriate assessment and management of new-onset headache (Headache 1,2)
4.1.15.   Appropriate assessment, stabilization, investigation and management of an acute seizure episode (Seizures 1-4)
4.1.16.   Appropriate recognition, assessment, management and referral of ophthalmologic emergencies (red eye (Red Eye 1-9), acute visual loss, trauma etc.).
4.2.   To develop a comprehensive approach to Domestic Violence (Domestic Violence 1-4).
4.3.   To develop a comprehensive approach to Sexual Assault (Sexual Assault (Rape/Sexual Assault 1-5).
4.4.   To develop a compassionate and effective approach to patients in crisis (Crisis 1-11).
4.5.   To develop a compassionate and effective approach to the Difficult Patient (Difficult Patient 1-8).

5. The learning environment will provide opportunities for residents to demonstrate proficiency and evidence-based use of procedural and physical exam skills.
6. The learning environment will provide opportunities for residents to manage medical issues related to the workplace.
6.1. Demonstrate awareness of reporting requirements and appropriate communication with employers, Workers Compensation boards and other third parties regarding:
6.1.1. Fitness for work
6.1.2. Work-related injuries and disease
6.1.3. Return to work after work-related and non-work-related illness and injury
6.2. Demonstrate a basic knowledge of common occupationally related diseases and injuries and their management.
6.3. Recognize the importance of work in overall health, supporting appropriate rehabilitation and reintegration into the workplace

Communicator

7. The learning environment will provide opportunities for residents to develop rapport, trust and ethical therapeutic relationships with adult patients and their families.
8. The learning environment will provide opportunities for residents to accurately elicit and synthesize information from and perspectives of adult patients and their families as well as colleagues and other professionals.
9. The learning environment will provide opportunities for residents to accurately convey needed information and explanations to adult patients and their families as well as colleagues and other professionals.
10. The learning environment will provide opportunities for residents to develop effective motivational interviewing skills in counselling adults around lifestyle issues and prevention of disease (Lifestyle 2-5).
11. The learning environment will provide opportunities for the resident to develop a common understanding on issues, problems and plans with adult patients and their families, colleagues and other professionals to develop, provide and follow-up on a shared plan of care.
12. The learning environment will provide opportunities for the resident to convey effective oral and written information.

Collaborator

13. The learning environment will provide opportunities for residents to participate in a collaborative team-based model and with consulting health professionals in the care of adults.
14. The learning environment will provide opportunities for residents to engage adults and their families as active participants in their care.

Manager

15. The learning environment will provide opportunities for residents to participate in activities that contribute to the effectiveness of their own practice, healthcare organizations and systems.
16. The learning environment will provide opportunities for residents to manage their practice and career effectively.

Health Advocate

17. The learning environment will provide opportunities for residents to demonstrate awareness of community resources to help adults in the community. The resident will recognize the indications for these services and advocate effectively.
18. The learning environment will provide opportunities for residents to recognize the role of Social Determinants of Health in the health of their adult patients and to advocate accordingly.

Scholar

19. The learning environment will provide opportunities for residents to develop evidence-based practices for the medical care of their adult patients and methods for ongoing continuing medical education.
20. The learning environment will provide opportunities for residents to critically evaluate medical information, its sources and its relevance to the care of adults.
21. The learning environment will provide opportunities for residents to be aware of standards of care and recommendations from the College of Family Physicians of Canada.
22. The learning environment will provide opportunities for residents to facilitate the education of adults as well as their families, trainees, other health professional colleagues, and the public.

Professional

23. The learning environment will provide opportunities for residents to demonstrate understanding of privacy legislation and physician confidentiality and consent as it pertains to their adult patients.
24. The learning environment will provide opportunities for residents to demonstrate ethical practice and a recognition of their own strengths and limitations.

Care of Children and Adolescents

Family Medicine Expert

1. The learning environment will provide opportunities for residents to demonstrate integration of all the CanMEDS-FM roles in order to function effectively as a generalist in the provision of care to children and adolescents.
2. The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required to meet the needs of children and adolescents in the practice.
2.1. Recognize and manage common illnesses and conditions in children and adolescents.
2.1.1. Allergies: Evaluate and manage allergies to medications, environment and food.
2.1.2. Behavioural Issues:
2.1.2.1. Evaluate and manage excessive crying and colic in infancy.
2.1.2.2. Evaluate and manage feeding problems in infancy and food-related behavioural issues in childhood.
2.1.2.3. Evaluate and manage bed wetting on an age-appropriate basis.
2.1.3. Ear, nose and throat disorders: Diagnose, manage and refer when appropriate the following conditions: otitis externa, otitis media (Earache 1,4,7,8), sinusitis and pharyngitis (Upper Respiratory Tract Infection 2-4,6).
2.1.4. Gastrointestinal Disorders: Diagnose and manage chronic GI conditions - constipation, chronic diarrhea, gastroesophageal reflux, lactose intolerance, chronic abdominal pain.
2.1.5. Infectious Disease: Demonstrate knowledge of reportable diseases and parameters for interim exclusion from school and recreational activities.
2.1.6. Musculoskeletal Disorders:
2.1.6.1. Evaluate and manage a child presenting with limp, intoeing, alignment abnormalities/scoliosis, joint instability, swelling or pain.
2.1.6.2. Evaluate fractures involving the growth plate and fractures/dislocations more common in children.
2.1.7. Neurologic Disorders:
2.1.7.1. Diagnose and manage common headaches in children.
2.1.7.2. Distinguish simple from complex febrile seizures and investigate/manage appropriately.
2.1.8. Psychiatric Disorders: Recognize the high prevalence of eating disorders in adolescents and manage appropriately (Eating Disorders 1).
2.1.9. Respiratory Disorders: Diagnose and manage common respiratory conditions (e.g. croup, asthma)
2.1.10. Skin disorders: Recognize and manage common skin conditions (e.g. atopic dermatitis, acne, viral exanthems, candidiasis, impetigo, seborrheic dermatitis, and cellulitis).
2.2. Recognize early signs of less common but serious problems.
2.2.1. Recognize important rashes and investigate for possible serious underlying illness (petechiae, purpura, erythema nodosum, erythema migraines, café au lait spots).
2.2.2. Recognize potential anaphylaxis, educate parents and patients and prescribe Medicalerts and EpiPen appropriately (Allergy 9).
2.2.3. Recognize and evaluate precocious puberty and primary amenorrhea.
2.2.4. Recognize atypical presentations of common GI complaints (abdominal pain, vomiting, and constipation) that may suggest rare but serious complications.
2.2.5. Recognize the significance of dysmorphism, congenital anomalies or developmental delay and refer for assessment.
3. The learning environment will provide opportunities for residents to assess and manage children and adolescents using the patient-centred clinical method.
4. The learning environment will provide opportunities for residents to provide comprehensive and continuing care throughout childhood and adolescence incorporating appropriate preventative, diagnostic and therapeutic interventions.
4.1. Employ case-finding as well as evidence based surveillance and screening tools (e.g. Rourke Baby Record) to detect illness, deviation from normal growth and development and prevent injury (Well-baby Care 1).

4.2.   Understand and be able to counsel parents about normal nutritional needs at different ages. Effectively monitor growth and suggest intervention as necessary (Well-baby Care 2).
4.3.   Learn to administrate an organized vaccination program within family practice including routine vaccinations and those for travel and special populations. Discuss benefits, safety and side effects of vaccinations with parents (Well-baby care 2, 6; Immunization 1, 2, 4).
4.4.   Provide education and advice on injury prevention and common behavioural and family issues. Provide suggestions to encourage motor, language and social development (Well-baby Care 4).
5.   The learning environment will provide opportunities for residents to attend to complex clinical situations effectively in the care of children and adolescents.
5.1.   For children of all ages, evaluate home, school and recreational environments in terms of supports and stressors and intervene appropriately. Recognize the impact of domestic violence on children and adolescents (Domestic Violence 1,4).
5.2.   Recognize, diagnose using appropriate clinical tools, refer and collaboratively manage Attention Deficit/Hyperactivity Disorder (Behavioural Problems 1-3).
5.3.   When caring for adolescents, review and counsel about substance abuse, peer issues, home environment, diet/eating disorders, academic performance, social stress/mental illness and sexuality/STDs/contraception.
5.4.   Have an approach to obesity in childhood including guidance on exercise and diet (Obesity 7, 8).
6.   The learning environment will provide opportunities for residents to demonstrate proficiency and evidence-based use of procedural and physical exam skills.
6.1.   Be familiar with critical care techniques (ex. cardiopulmonary resuscitation in infants and children, lumbar puncture, intraosseous lines, catheterization).
6.2.   Distinguish innocent and abnormal cardiac murmurs.
6.3.   Assess hydration status and direct oral or parenteral fluid resuscitation when appropriate.
6.4.   Evaluate severity of respiratory distress and manage respiratory emergencies (ex. epiglottitis, retropharyngeal abscess, anaphylaxis, foreign body aspiration, pneumonia, pneumothorax and status asthmaticus).

Manager

7.   The learning environment will provide opportunities for residents to participate in activities that contribute to the effectiveness of their own practice, healthcare organizations and systems.
7.1.   Demonstrate the ability to organize a practice to promote maintenance of health and recognition of risk factors for illness.
7.2.   Use evidence-based pediatric flow sheets for prevention and screening of infants and children (Well-baby Care 1).
8.   The learning environment will provide opportunities for residents to manage their practice and career effectively.
9.   The learning environment will provide opportunities for residents to engage children, adolescents and their families as active participants in their care.

Communicator

10.   The learning environment will provide opportunities for residents to use the patient centred clinical method to effectively communicate with children and adolescents.
10.1.   Accurately elicit and synthesize information from and perspectives of children, adolescents and their families as well as colleagues and other professionals.
10.2.   Accurately convey needed information and explanations to children, adolescents and their families as well as colleagues and other professionals.
10.3.   Adapt communication methods based on the age of the child always attempting to maximize the child's participation in their medical care.
10.4.   Effectively evaluate the illness experience and influence on relationships for children and their families especially for children with chronic conditions or critical illness.

10.5.   Find common ground with children and adolescents as well as parents in managing medical or developmental issues cognizant of personal/cultural differences in parenting.

Collaborator

11. The learning environment will provide opportunities for residents to participate in a collaborative team-based model and with consulting health professionals in the care of children and adolescents.
12. The learning environment will provide opportunities for residents to engage children, adolescents and their families as active participants in their care.

Health Advocate

13. The learning environment will provide opportunities for residents to recognize children as a potentially vulnerable population requiring support from health, education and social service sectors and be able to provide support and referral for growth and development.
14. The learning environment will provide opportunities for residents to demonstrate awareness of community resources to help children meet their greatest potential in the community. The resident will recognize the indications for these services and advocate effectively.

Professional

15. The learning environment will provide opportunities for residents to recognize unique professional obligations important for the care of children.
16. The learning environment will provide opportunities for residents to be knowledgeable in obligations to report child abuse and neglect.
17. The learning environment will provide opportunities for residents to demonstrate understanding of privacy legislation and physician confidentiality and consent as it pertains to children and adolescents.
18. The learning environment will provide opportunities for residents to demonstrate awareness of their own ideas and beliefs about parenting and how this may influence their advice to families.

Scholar

19. The learning environment will provide opportunities for residents to develop evidence-based practices for pediatric care and methods for ongoing continuing medical education.
20. The learning environment will provide opportunities for residents to critically evaluate medical information, its sources and its relevance to the care of children and adolescents.
21. The learning environment will provide opportunities for residents to be aware of standards of care and recommendations from the College of Family Physicians of Canada and from the Canadian Pediatric Society for the care of children and adolescents.
22. The learning environment will provide opportunities for residents to facilitate the education of children and adolescents as well as their families, trainees, other health professional colleagues, and the public.

Care of the Elderly

Family Medicine Expert

1. The learning environment will provide opportunities for residents to integrate all the CanMEDS-FM roles in order to function effectively as a generalist in the provision of care to the elderly.

1.1 Discuss the aging process and the implications of the biological changes associated with aging, the concepts of successful aging and the importance of a comprehensive approach to care.

1.2 Focus on key determinants of health and their interrelationships in the elderly (eg. biological, psychological, socioeconomic).

2. The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required to meet the needs of the elderly.

3. The learning environment will provide opportunities for the resident to demonstrate proficient assessment and management of the elderly using the patient-centred clinical method.

3.1 Differentiate between normal changes of aging and those changes that are pathological

3.2 Describe the developmental challenges faced by the older person (e.g. dealing with loss, coping with chronic disease).

3.3 Demonstrate a functional approach to history taking and treatment planning.

3.3.1 Discuss the functional impact of illness in elderly patients including:
- Diagnoses often correlate poorly with function.
- Functional impairment may be a first sign of illness. (Elderly 4).

3.3.2 Describe and be able to assess the concepts of Basic Activities of Daily Living (BADL's) and Instrumental Activities of Daily Living (IADL's).

3.3.3 Use functional assessment tools such as the Katz ADL Index and incorporate this information into a comprehensive geriatric assessment including:
- Physical Health
- Mental Health including cognitive status and competency
- Socioeconomic status
- Environmental factors
- Level of Care
- Belief system

3.3.4 Use functional rating scales in clinical situations

3.4 Include an assessment of social support available to the elderly patient.

3.5 Obtain corroborative information where appropriate from families or caregivers.

3.6 Perform a comprehensive geriatric assessment including:
- Identify the patient's problems using a comprehensive patient problem list
- Establish the patient's diagnosis(es)
- Identify the patient's problem(s) associated with the diagnosis(es)
- Rank the impact and importance of the problem
- Be able to deal with multiple interacting problems
- Identify the patient's perspective
- Establish realistic goals

3.7 Recognize and describe the non-specific presentation of the disease in the elderly (Elderly 5).

3.8 Demonstrate the ability to adapt their interviewing techniques to enable elderly people to understand and communicate with the resident.

3.9 Establish the expectations of the elderly person and reach common ground with regards to goals for management.

3.10   Help a patient establish and document their advance directives.

3.11   Describe the role and impact of the family or caregiver on the care of the elderly and be able to effectively recognize and manage problems that caregivers might encounter.

3.11.1   Describe the importance of corroborative information in providing effective care for elderly patients.

3.11.2   Discuss family dynamics (roles, conflict, role reversal) and their impact on the care provided to elderly patients.

3.11.3   Describe signs of caregiver stress and fully assess caregiver needs.

3.11.4   Manage and participate in family care conferences to see the value of information sharing, assessment of family supports and the opportunity to provide education and comfort to families in need.

3.12   Be able to identify signs of elder abuse and neglect and understand the importance of reporting these findings to the appropriate authorities.

4.   The learning environment will provide opportunity for residents to provide comprehensive and continuing care to the elderly incorporating appropriate preventive, diagnostic and therapeutic interventions.

4.1   Understand the key issues in health maintenance of the elderly and apply these in clinical practice.

4.1.1   Describe the central role of the family physician in educating regarding health promotion and disease prevention.

4.1.2   Effectively counsel elderly patients about lifestyle factors that promote healthy living, such as smoking cessation, moderation of alcohol consumption, eating a balanced diet, aerobic and resistance exercise and optimizing socialization opportunities.

4.1.3   Discuss the evidence-based principles of prevention and early detection as detailed by the Periodic Health Exam Task Forces in Canada.

4.1.4   Adapt the periodic health exam recommendations to suit a given patients personal health goals, age, sex, co-morbid medical illness ad family history.

4.2   Discuss the major geriatric clinical problem areas:
- Confusion or memory failure
- Falling or postural instability
- Reduced mobility
- Incontinence of urine
- Constipation and fecal incontinence
- Difficulties in activities of daily living

4.3   Demonstrate a knowledgeable clinical approach to common and important medical conditions:
- Hypertension/postural hypotension
- Cerebrovascular disease
- Cardiovascular disease; particularly
  Ischemic heart disease and Congestive heart failure
- Chronic obstructive lung disease
- Infectious diseases; particularly pneumonia
  and UTIs
- Movement disorders; particularly
  Parkinson's disease
- Osteoporosis
- Alcoholism
- Endocrine disease; particularly Diabetes
  and Thyroid Disease
- Injuries; particularly hip fractures
- Delirium
- Dementia
- Arthritis
- Depression, being aware of unique presentations

4.4   Safely prescribe medications to elderly patients taking into account the following issues:

4.4.1   The pharmacodynamic and pharmacokinetic properties of commonly used medications in the

elderly (e.g. antidepressants, beta blockers, oral hypoglycemics, NSAIDs, diuretics).
4.4.2   A safe approach to drug dosing in the elderly, including required adjustments in renal impairment.
4.4.3   The importance of drug monitoring, as well as strategies for enhancing treatment adherence.
4.4.4   The dangers of polypharmacy in the elderly and learn to effectively monitor for hazardous drug-drug interactions as well as adverse drug reactions (Elderly 1).
4.4.5   The need to safely stop commonly used drugs and monitor for signs of withdrawal (e.g. SSRIs, benzodiazepines).
4.4.6   The need to choose drugs within a class that offer the best balance between therapeutic benefit and adverse effects
4.4.7   The importance of using non-pharmacological alternatives to drug therapy in the elderly wherever appropriate.
4.4.8   The over-the-counter drugs the patient may be using (Elderly 2)
4.4.9   The potential for substance abuse
5.   The learning environment will provide opportunities for residents to effectively attend to complex clinical situations in caring for elderly patients.
5.1   The learning environment will provide the opportunity for residents to have discussions with patients and their families around end of life planning for the frail (non-palliative) patient.
6.   The learning environment will provide opportunities for residents to develop proficient and evidence-based use of procedural and physical exam skills
6.1   Undertake a Cognitive Assessment including:
6.1.1   Recognizing signs of declining cognitive function in elderly individuals, such as poor hygiene, memory complaints from patients of their family members and difficulty with IADLs such as banking and meal preparation.
6.1.2   The use of cognitive assessment tools in appropriate situations and recognize their limitations in assessing cognition.
6.2   Undertake a Competency Assessment
6.2.1   Describe the fundamental aspects of a competency assessment (e.g. Medical competence, financial competence, housing competence).
6.2.2   Describe the laws pertaining to competence (e.g. POA, Public Guardian and Trusteeship, the Mental Health Act).
6.2.3   Identify impaired and intact decision making abilities as some may be retained in a given individual.
6.3   Accurately assess the following physical findings
6.3.1   Postural blood pressure readings.
6.3.2   Abnormalities of heart rate and rhythm.
6.3.3   Cardiac murmurs
6.3.4   Gait, posture and balance
6.3.5   Neurologic exam with focus on findings that may signify disease in the frail elderly
6.3.6   Examination of the feet for signs of skin breakdown, pulses, edema, nail care and hygiene.
6.3.7   Examination of the ears for cerumen and decreased hearing ability.
6.3.8   Signs of fecal impaction
6.3.9   Visual acuity
6.4   Perform the following procedures in elderly patients
6.4.1   Wound care
7.   The learning environment will provide opportunities for residents to provide coordination of patient care including collaboration and consultation with other health professionals and caregivers.

Manager

8.   The learning environment will provide opportunities for residents to participate in activities that contribute to effective care for elderly patients in the office, at home, in hospital and in nursing homes.
8.1   Work collaboratively with health care professionals and community organizations to provide coordinated care for the elderly.

8.2	Develop an approach to team based discharge planning and importance of communication in transfer of care.
8.3	Participate in quality improvement and safety initiatives at the clinic, hospital and nursing home level.
9.	The learning environment will provide opportunities for residents to manage their practice and career effectively.
9.1	Manage time effectively in the care of the elderly.
9.2	Utilize IT systems and EMRs to assist in the care of the elderly.
10.	The learning environment will provide opportunities for residents to serve in leadership roles, or have these roles modeled, in the care of the elderly
10.1	To participate in committees or administrative roles in nursing homes.
10.2	To serve as a resource to community organizations supporting the elderly.

Communicator

11.	The learning environment will provide opportunity for residents to develop rapport, trust and ethical therapeutic relationships with elderly patients and their families.
12.	The learning environment will provide opportunities for residents to accurately convey needed information and explanations to elderly patients and families, colleagues and other professionals.
13.	The learning environment will provide opportunities for residents to develop a common understanding on issues, problems and plans with elderly patients and families, colleagues and other professionals to develop, provide and follow-up on a shared plan of care, with emphasis on the importance of discharge planning.
14.	The learning environment will provide opportunities for residents to convey effective oral and written information in the care of the elderly.

Collaborator

15.	The learning environment will provide opportunities for residents to participate in a collaborative team-based model and with consulting health professionals in the care of the elderly.
15.1	Consult appropriately with other members of the health care team.
15.2	Incorporate contributions from inter-professional team members into a thorough functional assessment.
15.3	Recognize the role of the family physician as part of an inter-professional team in Long Term Care.
16.	The learning environment will provide opportunities for residents to maintain a positive working environment with consulting health professionals, health care team members and community agencies in the care of the elderly.
16.1	Awareness of the role, scope and limitations of rehabilitation and behavioural therapy for the elderly.
17.	The learning environment will provide opportunities for residents to engage the elderly and their families as active participants in their care.

Health Advocate

18.	The learning environment will provide opportunities for residents to respond to individual patient health needs and issues as part of care of the elderly.
19.	The learning environment will provide opportunities for residents to respond to the communities that they serve.
19.1	Identify community opportunities for advocacy, health promotion and disease prevention for the elderly.
20.	The learning environment will provide opportunities for residents to identify the determinants of health for the elderly.
20.1	Identifying elderly patients who are vulnerable or marginalized and assist them in issues (e.g. housing, mobility, nutrition, access to financial resources etc.) that promote their health.
20.2	Identifying elderly at risk because of social, family or other health situations; work appropriately with adult protective services.

Scholar

21. The learning opportunity will provide opportunities for residents to maintain and enhance professional activities through ongoing self-directed learning based on reflective practice in care of the elderly.
22. The learning opportunity will provide opportunities for residents to critically evaluate medical information, its sources, and its relevance to care of the elderly and apply this information to practice decisions.
23. The learning opportunity will provide opportunities for residents to facilitate the education of patients, families, trainees, other health professional colleagues, and the public, as appropriate in issues of care of the elderly, with emphasis on the importance of teaching in clinical medicine.
24. The learning opportunity will provide opportunities for residents to contribute to the creation, dissemination, application and translation of new knowledge and practices in the care of the elderly.

Professional

25. The learning opportunity will provide opportunities for residents to demonstrate a commitment to their patients, profession, and society through ethical practice in the care of the elderly.
26. The learning opportunity will provide opportunities for residents to demonstrate a commitment to their patients, profession, and society through participation in profession-led regulation.
27. The learning opportunity will provide opportunities for residents to demonstrate a commitment to physician health and sustainable practice.
28. The learning opportunity will provide opportunities for residents to demonstrate a commitment to reflective practice.

Global Health and Care of the Vulnerable and Underserviced

Family Medicine Expert

1. The learning environment will provide opportunities for residents to demonstrate integration of all the CanMEDS-FM roles in order to function effectively as a generalist in global health care and the care of the vulnerable and underserviced.
2. The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required in global health care and the care of the vulnerable and underserviced.
2.1 The family medicine resident will acquire medical knowledge around basic travel medicine (Travel Medicine 1-8):
2.1.1 To advise a patient on appropriate immunizations prior to overseas travel.
2.1.2 To make recommendations concerning malaria prophylaxis, and other health precautions including those around potable water and traveler's diarrhea.
2.1.3 To demonstrate an approach to the management of fever in the returning traveler.
2.2 The family medicine resident will acquire key medical knowledge around the health of immigrants to Canada (Immigrants 1-6):
2.2.1 To demonstrate awareness of overseas screening for immigrants and refugees to Canada.
2.2.2 To apply appropriate screening recommendations, including assessment of vaccination status and updates as appropriate, for newly arrived landed immigrants.
2.2.3 To inquire and maintain openness to the use of alternative healers, practices and medications.
2.2.4 To demonstrate a knowledge of the demographics of new immigrants to Canada.
2.2.5 To demonstrate an approach to finding information on diseases less commonly seen in Canada.
2.3 The family medicine resident will acquire knowledge of the epidemiology of different underserviced groups in Canada, including aboriginal populations and inner-city/street health populations:
2.3.1 To demonstrate knowledge of the epidemiology of aboriginal health issues, including diabetes mellitus, metabolic syndrome, substance abuse and domestic violence.
2.3.2 To describe key differences between aboriginal communities on and off reserves, including issues of inadequate housing and unclean water supply.
2.3.3 To demonstrate knowledge of the epidemiology of inner-city populations, including mental health concerns, substance abuse, impact of homelessness, lack of preventative medical care.
2.4 The family medicine resident will be familiar with basic global burden of disease, including the major causes of mortality worldwide:
2.4.1 To demonstrate a basic clinical and epidemiological knowledge of diarrheal disease, HIV, malaria and tuberculosis.
2.4.2 To demonstrate a basic understanding of the impact on health of individuals of migration, forced displacement, war and armed conflict.
3 The learning environment will provide opportunities for residents to assess and manage underserviced and vulnerable patients using the patient-centred clinical method.

Communicator

4 The learning environment will provide opportunities for residents to develop rapport, trust and ethical therapeutic relationships with patients and families.
5 The learning environment will provide opportunities for residents to accurately elicit and synthesize information from and perspectives of vulnerable and underserviced patients and their families as well as colleagues and other professionals.
6 The learning environment will provide opportunities for residents to accurately convey needed information and explanations to vulnerable and underserviced patients and their families as well as colleagues and other professionals.
6.1 The family medicine resident will be skilled in the proper use of interpreters:
6.1.1 To demonstrate the appropriate use of a medical interpreter in patient encounters.
6.1.2 To demonstrate a working knowledge of the translation resources in the community.

6.2   The family medicine resident will recognize the communication needs, both verbal and written, of patients who are illiterate, semi-literate or who are literate in a language other than English:

6.2.1   To constantly maintain awareness that a patient may not be able to read distributed materials, prescription information, etc. and to avoid putting the patient into an uncomfortable position with respect to his/her literacy.

6.2.2   To provide materials appropriate to patient's literacy level and linguistic ability, when possible.

7   The learning environment will provide opportunities for the resident to develop a common understanding on issues, problems and plans with patients and families, colleagues and other professionals to develop, provide and follow-up on a shared plan of care.

8   The learning environment will provide opportunities for the resident to convey effective oral and written information**.**

Collaborator

9.   The learning environment will provide opportunities for residents to participate in a collaborative team-based model and with consulting health professionals in the care of the vulnerable and underserviced.

9.1.   To demonstrate an openness to and respect for appropriate communication with other professionals, including cultural interpreters and translators, legal aid workers, CAS workers, social workers, and members of other community support groups with regards to their patients.

9.2.   To organize and participate in team meetings as appropriate.

9.3.   To demonstrate appropriate and thorough documentation of any conversations or meetings held about a particular patient.

10.   The learning environment will provide opportunities for residents to engage the vulnerable and underserviced as active participants in their care.

10.1.   To enlist patients and their families as participants in their healthcare while identifying tensions and role differences in the process, and while maintaining confidentiality.

Manager

11.   The learning environment will provide opportunities for residents to participate in activities that contribute to the effectiveness of their own practice, healthcare organizations and systems.

12.   The family medicine resident will develop a basic literacy in different healthcare systems and the international approach to primary healthcare:

12.1.   To discuss the structure and outcome differences between different levels of public and private healthcare systems in high and low income countries.

12.2.   The family medicine resident will integrate into their practice an awareness of appropriate resource utilization and priority setting:

12.2.1.   To balance the individual patient's concerns against the responsible use of public resources.

12.2.2.   To discuss the impact of high-resource vs. low-resource public health interventions on population health.

13.   The learning environment will provide opportunities for residents to manage their practice and career effectively**.**

Health Advocate

14.   The learning environment will provide opportunities for residents to recognize vulnerable populations requiring support from health, education and social service sectors and be able to provide support and referral.

15.   The learning environment will provide opportunities for residents to demonstrate awareness of community resources to help vulnerable and underserviced populations meet their greatest potential in the community.

15.1.   The resident will recognize the indications for these services and advocate effectively.

15.2.   The family medicine resident will acquire familiarity with the social services sector as a resource to patients:

15.2.1.   To demonstrate appropriate use of resources, including letters advocating for clients, appropriate completion of forms, access to drug coverage, and various forms allowing patients to access special coverage.
15.3.   The family medicine resident will acquire familiarity with local resources available to patients who have no healthcare coverage or no access to a primary health care provider.
16.   The family medicine resident will recognize the impacts of Social Determinants of Health on the health status of all their patients and be able to advocate in this regard.

Scholar

17.   The learning environment will provide opportunities for residents to develop evidence-based practices for care and methods for ongoing continuing medical education.
18.   The learning environment will provide opportunities for residents to critically evaluate medical information, its sources and its relevance to the care of the vulnerable and underserviced.
19.   The learning environment will provide opportunities for residents to be aware of standards of care and recommendations from the College of Family Physicians of Canada for the care of the vulnerable and underserviced.
20.   The family medicine resident will develop an awareness of important geopolitical trends which will affect their patients' health. Examples of such trends would include:
20.1.   Climate change
20.2.   Global food crisis
20.3.   Global patterns of migration
20.4.   Economic globalization
20.5.   Global patterns of conflict
20.6.   Patterns of income redistribution within Canada
21.   The family medicine resident will develop an awareness of the concept of health as a human right.
22.   To demonstrate knowledge of the Canadian Charter of Rights and Freedoms and the Universal Declaration of Human Rights as they pertain to health.

Professional

23.   The learning environment will provide opportunities for residents to recognize unique professional obligations important for global health and the care of the vulnerable and underserviced.
24.   The family medicine resident will develop a sense of cultural humility which enables constructive, helpful and professional provision of medical care to members of different cultural and socioeconomic groups:
24.1   To demonstrate an awareness and sensitivity to the patient's culture, beliefs values, gender and age.
24.2   To demonstrate empathy in interactions with underserved patients to foster a sense of partnership.
24.3   To define her or his own background, culture, beliefs, values and biases and the impact these may have on interactions with patients
25   The family medicine resident will develop an awareness of professional opportunities available to physicians interested in a career in Global Health:
25.1   To demonstrate an awareness of opportunities for Global Health work in Canada (including in aboriginal populations, inner cities, and with immigrant and refugee populations).
25.2   To demonstrate an awareness of opportunities for Global Health work overseas.

Maternal and Newborn Care

Family Medicine Expert

1.   The learning environment will provide opportunities for residents to integrate all the CanMEDS-FM roles in order to function effectively as a generalist in the provision of care to neonates and to women at all stages of their pregnancy and post-partum.
2.   The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required to meet the needs of pregnant women and their neonates.
3.   The learning environment will provide opportunities for residents to assess and manage pregnant women using the patient-centred clinical method.
3.1.   Ask the woman and her partner open-ended questions about feelings, worries, expectations at routine visits, prenatally, intra-partum and post-partum.
3.2.   Inform the woman and her partner about common positive and negative emotional experiences during and after pregnancy, such as body image, sexuality, ambivalent feelings about pregnancy and baby, fear of abnormalities, "baby blues," intense attachment to baby, etc.
3.3.   Discuss emotional and organizational preparation for the baby.
3.4.   Discuss parenting with the woman and her partner including their own experiences growing up, their expectations/philosophy of raising children.
3.5.   Discuss benefits to mother & baby of breastfeeding; explore the woman's and her partner's feelings and concerns about breastfeeding at least twice during the pregnancy.
3.6.   Discuss circumcision
4.   The learning environment will provide opportunities for residents to provide comprehensive and continuing care to women during pregnancy, the intra-partum and postpartum periods
4.1.   Counsel a healthy woman who is planning a pregnancy (Pregnancy 1).
4.2.   Counsel women with specific risks (Pregnancy 1) including:
4.2.1.   Women over 35 or with a family history of genetic abnormalities.
4.2.2.   VBAC
4.2.3.   Women with specific medical diseases (diabetes, hypertension, multiple sclerosis, inflammatory bowel disease, etc.) during pregnancy.
4.2.4.   Women with a poor past obstetrical history i.e. (preterm labour, 2nd trimester pregnancy loss).
4.3.   Diagnose and manage complications of early pregnancy (threatened & inevitable abortion, ectopic pregnancy, trophoblastic disease).
4.4.   Conduct a first prenatal visit, discuss the rationale for all tests, explain routine prenatal visits (Pregnancy 4).
4.5.   Screen all pregnant women for abuse (Pregnancy 5).
4.6.   Conduct a prenatal visit in the first, second, and third trimester including maternal and fetal high risk factors which influence prenatal morbidity and mortality.
4.7.   Counsel a woman re indications and timing for ultrasound.
4.8.   Manage common pregnancy symptoms.
4.9.   Counsel a woman regarding signs of labour.
4.10.   Take a detailed history on a new patient presenting in labour.
4.11.   Describe normal rate of progress in nulliparous and multiparous patients.
4.12.   Describe indications for induction or augmentation of labour (Pregnancy 8).
4.13.   Describe indications for continuous electronic fetal monitoring.
4.14.   Manage a normal labour.
4.15.   Demonstrate ability to interpret fetal heart rate patterns.
4.16.   Describe the indications, risks, and prerequisites for low forceps, vacuum extraction.
5.   The learning environment will provide opportunities for residents to:
5.1.   Counsel a breastfeeding mother regarding initiation of breast feeding.
5.2.   Counsel a woman and her partner regarding normal neonatal/post- partum course prior to discharge from hospital including the normal sequence of the attachment process.
5.3.   Perform a 6 week post-partum exam.
5.4.   Diagnose and manage endometritis, subinvolution, infected episiotomy (Pregnancy 10).

5.5.   Counsel a mother post C-section (e.g., activity, resuming intercourse, etc.).

6. The learning environment will provide opportunities for residents to effectively attend to complex clinical situations during pregnancy, labour and delivery, and the post-partum and neonatal periods.

7. The learning environment will provide opportunities for residents to become proficient in evidence-based use of procedural and physical exam skills.

7.1.   Judge uterine size in early pregnancy - differentiate 8, 10, 12 week size uterus

7.2.   Assess fetal presentation

7.3.   Auscultate fetal heart

7.4.   Diagnose small-for-dates, large-for-dates

7.5.   Assess a woman's breasts and nipples for potential problems with breast feeding

7.6.   Skillfully perform a normal vaginal delivery

7.7.   Repair second degree perineal tears

7.8.   Recognize 3rd and 4th degree tears

7.9.   Recognize indications for episiotomy

7.10.   Do and repair an episiotomy

7.11.   Do ARM (artificial rupture of membrane)

7.12.   Apply scalp electrode

7.13.   Use a vacuum extractor or low forceps for failure to progress in the second stage

7.14.   Manage shoulder dystocia

7.15.   Manage cord prolapsed, unexpected breech

7.16.   Manage important complications of the third stage such as retained placenta and postpartum hemorrhage, uterine inversion

7.17.   Recognize uterine rupture in VBAC

7.18.   Assist at a caesarean section

8. The learning environment will provide opportunities for residents to provide coordination of patient care including collaboration and consultation with other health professionals and caregivers.

8.1.   Evaluate and manage important complications of pregnancy.

8.2.   Identify the indications for consultation/referral.

8.3.   Participate in shared care with an obstetrician.

8.4.   Counsel a woman in the third trimester on the use of analgesia, anaesthesia in labour, effects on the mother and fetus.

8.5.   Counsel a woman regarding expectations for labour and delivery: ambulation, different positions for delivery, early mother-infant contact.

8.6.   Counsel a woman regarding the potential for operative intervention such as forceps, caesarean section.

9. The learning environment will provide opportunities for residents to provide comprehensive and continuing care to neonates.

9.1.   Recognize and manage the adverse effects labour and delivery may have on full-term and preterm infants, i.e. asphyxia – (causes, prevention, detection, sequelae), trauma, drugs, especially analgesia and anaesthesia.

9.2.   Describe the principles and procedures for neonatal resuscitation (Newborn 3).

9.3.   Perform a neonatal resuscitation, including bagging, insertion of ET tube (insertion of umbilical vein catheter is optional) (Newborn 3,4).

9.4.   Describe indications and preparations for transport of a neonate especially with regards to temperature, humidity, oxygen, need for IV, etc.

9.5.   Describe the processes of normal adaptation to extra-uterine life with respect to the various systems.

9.6.   Independently examine a newborn and recognize variants of normal (Newborn 1).

9.7.   Provide normal newborn care.

9.8.   Describe current neonatal screening programs,

9.9.   Recognize congenital anomalies and abnormalities, such as Down's Syndrome.

9.10.   Diagnose and manage common neonatal diseases and conditions.

9.10.1.   Jaundice

9.10.2.   Sepsis

9.10.3.   Murmurs

9.10.4.   Hypoglycemia

9.10.5.   Respiratory distress

9.10.6.   Orthopedic abnormalities

9.10.7.   IUGR

9.11.   Manage the issues surrounding the care of newborns of mothers with medical/non-medical conditions (i.e. diabetes, drug abuse, auto-immune diseases, medication use, social issues, AIDS, etc.).

9.12.   Diagnose and manage common breastfeeding problems (i.e. sore nipples, engorgement, "not enough milk", difficulties latching on).

9.13.   Describe the nutritional needs and normal growth pattern in the first weeks following birth for premature and full term infants.

Manager

10.   The learning environment will provide opportunities for residents to manage their time effectively to attend to women in labour and to incorporate daily postpartum neonatal rounds.

11.   The learning environment will provide opportunities for residents to demonstrate understanding of hospital maternal/newborn care planning and policy-making.

Communicator

12.   The learning environment will provide opportunities for residents to:

12.1.   Develop rapport, trust and ethical therapeutic relationships with patients and families.

12.2.   Accurately elicit and synthesize information from, and perspectives of, patients and families, colleagues and other professionals.

12.3.   Accurately convey needed information and explanations to patients and families, colleagues and other professionals.

12.4.   Develop a common understanding on issues, problems and plans with patients and families, colleagues and other professionals to develop, provide and follow-up on a shared plan of care.

12.5.   Convey oral and written information effectively.

Collaborator

13.   The learning environment will provide opportunities for residents to:

13.1.   Work collaboratively in different models of maternity care including team based approaches:

13.2.   Engage patients and families as active participants in their care.

13.3.   Consult appropriately with other members of the maternity care team.

13.4.   Demonstrate effective team work even in high stress, urgent situations during labour and delivery.

Health Advocate

14.   The learning environment will provide opportunities for residents to respond to individual patient health needs and issues as part of patient care including:

14.1.   Identifying prenatal patients who are vulnerable or marginalized and assist them in issues (e.g., occupational issues, special diet application forms, etc.) that promote their health.

14.2.   Identifying newborns at risk because of social, family or other health situations; work appropriately with children's protective services.

Scholar

15.   The learning environment will provide opportunities for residents to maintain and enhance professional activities through ongoing self-directed learning based on reflective practice in maternity and newborn care.

16.   The learning environment will provide opportunities for residents to evaluate medical information, its sources, and its relevance to maternity and newborn care, and apply this information to practice decisions.

17.   The learning environment will provide opportunities for residents to facilitate the education of patients, families, trainees, other health professional colleagues, and the public, as appropriate in issues of maternity care.

Professional

18. The learning environment will provide opportunities for residents to demonstrate commitment:
18.1. To their patients, profession, and society through ethical practice.
18.2. To physician health and sustainable practice.
18.3. To reflective practice.
19. The learning environment will provide opportunities for residents to demonstrate the 12 themes of professionalism with observable behaviors i.e. day to day behavior reassures that the resident is responsible, reliable and trustworthy.

Men's Health Care

Family Medicine Expert

1. The learning environment will provide opportunities for residents to demonstrate integration of all the CanMEDS-FM roles in order to function effectively as a generalist in providing health care to men.
2. The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required to meet the needs of men.
2.1. Have a working knowledge of the prevalence and impact of diseases affecting men of varying demographic and geographic distributions.
2.2. Be aware of men's less frequent access of the health care system and thus the need to make efficient use of the visits that do occur.
2.3. Sexual Health
2.3.1. Exhibit sensitivity in dealing with issues of sexual dysfunction and inclusiveness with regards to sexual orientation.
2.3.2. Discuss men's role in Sexually Transmitted Infection prevention, contraception and responsible fathering.
2.3.3. Appropriately recognize and manage reproductive tract infections and problems:
2.3.3.1. Sexually transmitted infections (Sexually Transmitted Infections 1-8)
2.3.3.2. Urethritis
2.3.3.3. Epididymitis
2.3.3.4. Orchitis
2.3.3.5. Prostatitis
2.3.3.6. Benign prostatic hypertrophy (Prostate 6)
2.3.3.7. Penile anomalies
2.3.3.8. Scrotal and testicular abnormalities
2.3.3.9. Genital trauma
2.3.3.10. Erectile and ejaculatory dysfunctions
2.3.4. Appropriately screen for, manage and refer neoplastic disease of the male genital tract.
2.3.4.1. Penile carcinoma
2.3.4.2. Testicular carcinoma
2.3.4.3. Prostatic carcinoma (Prostate 1-5)
3. The learning environment will provide opportunities for residents to assess and manage men using the patient-centred clinical method.
4. The learning environment will provide opportunities for residents to provide comprehensive and continuing care throughout men's lives incorporating appropriate preventative, diagnostic and therapeutic interventions.
4.1. Health promotion and disease prevention.
4.1.1. A gender-specific understanding of the importance of disease prevention, wellness and health promotion.
4.1.1.1. Nutritional needs
4.1.1.2. Exercise programs
4.1.1.3. Weight management and obesity
4.1.1.4. Substance abuse counselling
4.1.1.5. Avoidance of sexually transmitted infections
4.1.1.6. Motor vehicle safety, seat belt and helmet use
4.1.1.7. Occupational health and injury prevention
4.1.1.8. Cancer screening guidelines (skin, colon, prostate, testicular, breast).
5. The learning environment will provide opportunities for residents to attend to complex clinical situations effectively in providing health care to men.

6. The learning environment will provide opportunities for residents to demonstrate proficiency and evidence-based use of procedural and physical exam skills.

6.1. Perform a systematic male physical examination, including a comprehensive urogenital, inguinal, rectal and prostate examination.
6.2. Urethral swab for sexually transmitted infections
6.3. Foley catheter placement
6.4. Various treatment modalities for anogenital condylomata.

Communicator

7. The learning environment will provide opportunities for residents to develop rapport, trust and ethical therapeutic relationships with men.
8. The learning environment will provide opportunities for residents to accurately elicit and synthesize information from and perspectives of men as well as colleagues and other professionals.
9. The learning environment will provide opportunities for residents to accurately convey needed information and explanations to men as well as colleagues and other professionals.
10. The learning environment will provide opportunities for the resident to develop a common understanding on issues, problems and plans with men, colleagues and other professionals to develop, provide and follow-up on a shared plan of care.
11. The learning environment will provide opportunities for the resident to convey effective oral and written information.

Collaborator

12. The learning environment will provide opportunities for residents to participate in a collaborative team-based model and with consulting health professionals in the care of men.
13. The learning environment will provide opportunities for residents to engage men as active participants in their care.

Manager

14. The learning environment will provide opportunities for residents to participate in activities that contribute to the effectiveness of their own practice, healthcare organizations and systems.
15. The learning environment will provide opportunities for residents to manage their practice and career effectively.

Health Advocate

16. The learning environment will provide opportunities for residents to recognize men as a unique population in regards to their disproportionate involvement in a number of issues and to advocate for community approaches to addressing these issues.
16.1. Violence
16.1.1. Rape
16.1.2. Domestic violence
16.1.3. Suicide
16.2. Risk-taking behaviour
16.3. Criminal behaviour
17. The learning environment will provide opportunities for residents to demonstrate awareness of community resources to help men in the community. The resident will recognize the indications for these services and advocate effectively.

Scholar

18. The learning environment will provide opportunities for residents to develop evidence-based practices for providing men's health care and methods for ongoing continuing medical education.
19. The learning environment will provide opportunities for residents to critically evaluate medical information, its sources and its relevance to the care of men.

20. The learning environment will provide opportunities for residents to be aware of standards of care and recommendations from the College of Family Physicians of Canada for the care of men.
21. The learning environment will provide opportunities for residents to facilitate the education of men as well as trainees, other health professional colleagues, and the public.

Professional

22. The learning environment will provide opportunities for residents to recognize unique professional obligations important for the care of men.
23. The learning environment will provide opportunities for residents to demonstrate understanding of privacy legislation and physician confidentiality and consent as it pertains to men.

Palliative Care

Family Medicine Expert

1.   The learning environment will provide opportunities for residents to demonstrate integration of all the CanMEDS-FM roles in order to function effectively as a generalist in the provision of care to palliative patients and their families.

2.   The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required to meet the needs of the palliative patients and their families in their practice.

2.1.   Assess and manage pain and symptoms effectively through history, appropriate physical exam and relevant investigations (Palliative Care 4).

2.1.1.   Demonstrate knowledge of classification and neurophysiology of pain.

2.1.2.   Prescribe opioids effectively including initiating dosage, titration, breakthrough dosing, prevention of side effects, monitoring, dose equivalency and opioid rotation.

2.1.3.   Describe the clinical presentation of opioid neurotoxicity and be able to put a management plan in place to address the problem.

2.1.4.   Prescribe adjuvant modalities and medications for pain and symptom relief.

2.1.5.   Be aware of non-pharmacologic strategies for pain and symptom management.

2.1.6.   Develop and implement management plans for other symptoms including: A) fatigue; B) anorexia and cachexia; C) constipation; D) dyspnea; E) nausea and vomiting; F) delirium; G) skin and mouth care; H) anxiety and depression.

2.1.7.   Monitor the efficacy of symptom management plans.

2.2.   Review and adjust management plans to accommodate the changes that may occur as the end of life approaches (Palliative Care 5)

3.   The learning environment will provide opportunities for residents to demonstrate proficient assessment and management of patients using the patient-centred clinical method.

3.1.   Demonstrate an understanding of the personal, family and social consequences of life-threatening illness (Palliative Care 3).

3.2.   Demonstrate cultural, gender, religious and aboriginal sensitivity in addressing end-of-life care.

3.3.   Demonstrate the ability to develop a management plan that appropriately balances disease-specific treatment and symptom management according to the individual needs of the patient and family.

3.4.   Demonstrate the role of the family physician in assessing and managing grief in patients and families including normal and atypical grief (Grief 1-4).

3.5.   Identify and assess spiritual issues in end-of-life care (Palliative Care 3).

3.6.   Describe the concept of total pain.

4.   The learning environment will provide opportunities for residents to provide comprehensive and continuing care throughout end-of-life care incorporating appropriate preventive, diagnostic and therapeutic interventions.

5.   The learning environment will provide opportunities for residents to attend to complex clinical situations effectively in the management of palliative patients.

5.1.   Describe a management plan for urgent/emergent problems in the palliative setting including spinal cord compression, hypercalcemia, superior vena cava syndrome and terminal agitation.

5.2.   Distinguish between physician-assisted suicide, euthanasia and terminal sedation, and withholding and withdrawing therapy.

6.   The learning environment will provide opportunities for residents to demonstrate proficient and evidence-based use of procedural skills.

7.   The learning environment will provide opportunities for residents to provide coordination of palliative patients and their families including collaboration and consultation with other health professionals and caregivers.

7.1.   Develop and implement a care plan to address issues of grief in collaboration with other disciplines.

Manager

8. The learning environment will provide opportunities for residents to participate in activities that contribute to the effectiveness of their own practice, healthcare organizations and systems.
8.1   Demonstrate the use of the standard tools used in symptom assessment.
9 The learning environment will provide opportunities for residents to manage their practice and career effectively to incorporate end-of life care.
10 The learning environment will provide opportunities for residents to allocate finite palliative care resources appropriately.
10.1   Describe models of end-of-life care and the role of family physicians in the provision of such care.
11 The learning environment will provide opportunities for residents to serve in palliative care administration and leadership roles, as appropriate.

Communicator

12. The learning environment will provide opportunities for residents to use the patient-centred clinical method to effectively communicate with palliative patients and their families.
12.1   Develop rapport, trust and ethical therapeutic relationships with patients and families.
12.2   Accurately elicit and synthesize information from, and perspectives of, patients and families, colleagues and other professionals.
12.3   Accurately convey needed information and explanations to patients and families, colleagues and other professionals.
12.4   Develop a common understanding on issues, problems and plans with patients and families, colleagues and other professionals to develop, provide and follow-up on a shared plan of care.
12.5   Convey effective oral and written information
12.6   Demonstrate the ability to address concerns about initiating and using opiates.
12.7   Demonstrate the ability to provide supportive counselling and resources to those coping with loss.
12.8   Demonstrate the ability to discuss advance care planning, including developing, revising and implementing advance directives with patients and families.
12.9   Understand informed consent and capacity issues as well as substitute decision-making.
12.10   Initiate and conduct effective patient and family meetings.

Collaborator

13. The learning environment will provide opportunities for residents to participate in a collaborative team-based model and with consulting health professionals in the care of patients.
13.1   Demonstrate the role of family physicians in end-of-life care and describe the roles of other formal and informal caregivers.
13.2   Demonstrate an approach to providing home care to dying patients.
14. The learning environment will provide opportunities for residents to maintain a positive working environment with consulting health professionals, health care team members, and community agencies (Palliative Care 2).
15. The learning environment will provide opportunities for residents to engage patients or specific groups of patients and their families as active participants in their care.
15.1   Demonstrate an approach to providing home care to dying patients.

Health Advocate

16. The learning environment will provide opportunities for residents to respond to individual patient health needs and issues as part of the care of palliative patients and their families.
16.1   The learning environment will provide opportunities for residents to ensure the privacy and dignity of the patient.
16.2   The learning environment will provide opportunities for residents to demonstrate integrity and honesty in the care of patients and their families.
17. The learning environment will provide opportunities for residents to respond to the palliative health care needs of the communities that they serve.

18. The learning environment will provide opportunities for residents to promote the health of individual patients, communities and populations.

Professional

19. The learning environment will provide opportunities for residents to recognize unique professional obligations important for the care of palliative patients.
20. The learning environment will provide opportunities for residents to demonstrate an ethical approach when discussing issues involving caring for the terminally ill and their families including euthanasia, consent and capacity, physician assisted suicide, principle of double effect, and palliative sedation.
21. The learning environment will provide opportunities for residents to demonstrate understanding of privacy legislation and physician confidentiality and consent as it pertains to palliative patients.
22. The learning environment will provide opportunities for residents to demonstrate awareness of their own ideas and beliefs about parenting and how this may influence their advice to families.
22.1 Demonstrate self-awareness and self-care while caring for terminally ill patients.

Scholar

23. The learning environment will provide opportunities for residents to develop evidence-based practices for palliative care and methods for ongoing continuing medical education.
24. The learning environment will provide opportunities for residents to critically evaluate medical information, its sources and its relevance to the care of palliative patients and their families.
25. The learning environment will provide opportunities for residents to facilitate the education of palliative patients, their families, trainees, other health professional colleagues, and the public, as appropriate.
26. The learning environment will provide opportunities for residents to contribute to the creation, dissemination, application, and translation of new knowledge in the care of palliative patients.

Procedural and Surgical Skills

Family Medicine Expert

1. The learning environment will provide the family medicine resident with the opportunity to demonstrate the knowledge and skills regarding general principles of surgical management:
1.1 Demonstrate the knowledge base required to effectively evaluate the indications for procedural and surgical procedures.
1.2 Demonstrate the ability to conduct a comprehensive pre-operative assessment and identify important peri-operative issues. This includes knowledge of testing required and indications for anaesthesia consultation.
1.3 Demonstrate awareness of the indications and contraindications of each procedure.
1.4 Demonstrate the ability to mentally rehearse the landmarks, technical steps and potential complications of each procedure.
1.5 Demonstrate knowledge of normal postoperative healing and the ability to identify and manage post- operative complications, *i.e.* infection, wound dehiscence, keloid formation.
2. The learning environment will provide the family medicine resident with the opportunity to demonstrate the ability to assist consultant surgeons for major surgery:
2.1 Demonstrate the ability to work collaboratively with consultant surgeons in pre-operative, in-hospital and post-operative care for major surgical procedures.
2.2 Demonstrate the ability to act effectively as a surgical assistant for major surgical procedures.
3. The learning environment will provide the family medicine resident with the opportunity to demonstrate the ability to perform procedural skills relevant to a family physician:
3.1 Skin Based Surgery:
3.1.1 Local anaesthetic infiltration and digital block
3.1.2 Abscess incision and drainage
3.1.3 Insertion of sutures--simple interrupted, vertical mattress, horizontal mattress and subcuticular
3.1.4 Laceration repair (suture and tissue adhesive)
3.1.5 Skin biopsy-shave, punch and excisional
3.1.6 Excision of cystic and solid lesions i.e. epidermoid cysts and lipomas
3.1.7 Cryotherapy
3.1.8 Removal of foreign body
3.1.9 Surgical management of ingrown toenail
3.2 Eye, ear, nose and throat procedural skill
3.2.1 Instillation of fluorescein
3.2.2 Slit lamp examination
3.2.3 Removal of corneal or conjunctival foreign body
3.2.4 Removal of cerumen
3.2.5 Removal of foreign body from nose or ear
3.2.6 Cautery for anterior epistaxis
3.2.7 Anterior nasal packing
3.2.8 Measurement of intraocular pressure
3.3 Gastrointestinal and genitourinary procedural skills
3.3.1 Anoscopy
3.3.2 Incision and drainage of a thrombosed external hemorrhoid
3.3.3 Cryotherapy or chemical therapy of genital warts
3.3.4 Aspirate breast cyst
3.3.5 Pap smear
3.3.6 Insertion and removal of an intrauterine device
3.3.7 Endometrial aspiration/biopsy
3.4 Obstetrical procedural skills
3.4.1 Normal vaginal delivery
3.4.2 Episiotomy and repair
3.4.3 Artificial rupture of membranes
3.5 Musculoskeletal procedural skills

3.5.1	Splinting of injured extremities
3.5.2	Reduction of minor dislocations/subluxations i.e. pulled elbow, finger dislocations
3.5.3	Application of simple casts i.e. short arm cast, scaphoid cast, below knee walking cast
3.5.4	Aspiration and injection of knee joint
3.5.5	Aspiration and injection of the shoulder joint and subacromial bursa
3.5.6	Corticosteroid injection for epicondylitis or plantar fasciitis
3.5.7	Trigger point injection
3.6	Resuscitative procedural skills
3.6.1	Intradermal, IV, IM and SC injections
3.6.2	Venipuncture
3.6.3	Peripheral intravenous line; adult and child
3.6.4	Oral airway insertion
3.6.5	Bag-valve-mask ventilation
3.6.6	Endotracheal intubation
3.6.7	Cardiac defibrillation
3.6.8	Lumbar puncture
3.6.9	Placement of transurethral catheter
3.6.10	Nasogastric tube insertion

Assessment and feedback will be provided based on the General Key Features of Procedure Skills:
It should be remembered that it is not only the technical aspects of the individual procedures that are important. The higher levels of competence must also be assessed, as always, in the context of family medicine—the key features describe this aspect.

The General Key Features of Procedure Skills*

1. In order to decide whether or not you are going to do a procedure, consider the following:
    a) The indications and contraindications to the procedure
    b) Your own skills and readiness to do the procedure (e.g., your level of fatigue and any personal distractions)
    c) The context of the procedure, including the patient involved, the complexity of the task, the time needed, the need for assistance, and location
2. Before deciding to go ahead with the procedure:
    a) Discuss the procedure with the patient, including a description of the procedure and possible outcomes, both positive and negative, as part of obtaining their consent.
    b) Prepare for the procedure by ensuring the appropriate equipment is ready.
    c) Mentally rehearse the following:
        *   The anatomic landmarks necessary for procedure performance.
        *   The technical steps necessary in sequential fashion, including any preliminary examination.
        *   The potential complications and their management
3. During performance of the procedure:
    *   Keep the patient informed to reduce anxiety.
    *   Ensure patient comfort and safety always.
4. When the procedure is not going as expected, re-evaluate the situation, and stop and/or seek assistance as required.
5. Develop a plan with your patient for after care and follow-up after completion of a procedure

Manager

4. The learning environment will provide the family medicine resident with the opportunity to perform in the capacity of manager with the members of the procedural health care team:
4.1   Demonstrate the evaluation of the context of the procedure including the patient involved, the complexity, the time needed, the need for assistance and the appropriate location.
4.2   Demonstrate the ability to act as the leader of the procedural team.
4.3   Demonstrate a willingness to take responsibility for ensuring that the physical location, equipment and supplies are adequate for the procedure being performed.

4.4   Demonstrates the ability to act as a case manager for surgical patients with multiple medical problems.

Communicator

5.   The learning environment will provide the family medicine resident with the opportunity to demonstrate effective communication with patients and team members regarding procedures:
5.1   Demonstrate the ability to assist patients in informed decision-making, evaluation of risks and benefits and a description of the procedure.
5.2   Demonstrate appropriate communication with your patient during the procedure to keep the patient informed and reduce anxiety.
5.3   Demonstrate effective communication regarding any unexpected occurrences or poor outcomes.
5.4   Demonstrate the development of a plan with your patient for aftercare and follow-up after completion of the procedure and demonstrate effective communication of this.

Collaborator

6.   The learning environment will provide the family medicine resident with the opportunity to demonstrate effective collaboration with team members, community agencies and consultants regarding procedural issues.
6.1   Demonstrate the ability to work cooperatively with other members of the procedural team to best utilize each person's skills effectively
6.2   Demonstrate a willingness to ask for help or seek assistance as required
6.3   Demonstrate an ability to work effectively with allied health professionals and community agencies in discharge planning and community care of the post-surgical patient.
6.4   Demonstrate the ability to work in collaboration with consultant surgical colleagues to provide in-hospital post- operative care.

Health Advocate

7.   The learning environment will provide the family medicine resident with the opportunity to demonstrate advocacy on behalf of their patient in issues of health promotion or access to health care services.
7.1   Demonstrate the ability to be an effective advocate and liaison with consultant surgical providers and community agencies.
7.2   Demonstrates the ability to identify populations and individuals at risk of adverse outcomes (i.e. alcoholism, smoking, diabetes, coronary artery disease, etc.) and will counsel patients in risk reduction to help avoid the need for surgery.

Professional

8.   The learning environment will provide the family medicine resident with the opportunity to demonstrate professional behavior with patients, team members and other health care providers at all times.
8.1   Demonstrate knowledge of his/her personal limits of surgical skills and seek help or refer appropriately.
8.2   Demonstrate respect for the patient and ensure appropriate draping and respect for boundaries at all times.
8.3   Demonstrates an ability to ensure patient comfort and dignity at all times during the procedure
8.4   Demonstrate respect for all members of the procedural team.

Scholar

9.   The learning environment will provide the family medicine resident with the opportunity to demonstrate the critical examination of the evidence for procedural skills, and the ability to teach others their skills.
9.1   Demonstrate an ability to critically examine the evidence for the efficacy of medical procedures and surgery
9.2   Demonstrate willingness to continually engage in professional activities to improve skills and learn new advances in surgical techniques.

Professional Competencies

Family Medicine Expert

1.	The learning environment will provide opportunities for residents to demonstrate integration of all the CanMEDS-FM roles in order to function effectively as a professional.

Communicator

2.	The learning environment will provide opportunities for residents to develop rapport, trust and ethical therapeutic relationships with patients and families.
3.	The learning environment will provide opportunities for the resident to convey effective oral and written information.
3.1	Consultation
3.1.1	To develop skills in communicating effective, appropriate and efficient consultation with medical colleagues and other health professionals
3.2	Patient Counselling
3.2.1	To develop skills in counselling patients, especially in conveying information in a manner appropriate to the patient's level of literacy and understanding.
3.3	Handover
3.3.1	To develop skills in effective, safe and efficient handover to colleagues when they are going off duty.

Collaborator

4.	The learning environment will provide opportunities for residents to participate in a collaborative team-based model and with consulting health professionals.

Manager

5.	The learning environment will provide opportunities for residents to participate in activities that contribute to the effectiveness of their own practice and develop familiarity with such issues as:
5.1	Effective Medical Records
5.1.1	Responsibilities and access
5.1.2	Effective organization
5.1.3	Electronic Medical Records
5.2	Compensation
5.2.1	Different methods of compensation
5.2.2	Billing procedures and strategies
5.3	Audit and Quality Improvement
5.3.1	Design and execution of a clinical practice audit
5.3.2	Reflection on opportunities for quality improvement within the practice environment.
6.	The learning environment will provide opportunities for residents to manage their practice and career effectively, specifically in relation to issues such as:
6.1	Commencing Practice
6.1.1	Evaluating practice and locum opportunities
6.1.2	Licensing
6.1.3	Group versus solo practice
6.1.4	Staffing issues
6.1.5	Office equipment and layout.
6.2	Personal and Professional Financial Management
6.2.1	Accounting
6.2.2	Tax planning
6.2.3	Budgeting and debt management
6.2.4	Insurance

Health Advocate

7.   The learning environment will provide opportunities for residents to advocate for improved health for their patients and their community.

Scholar

8.   The learning environment will provide opportunities for residents to maintain and enhance their professional activities through ongoing self-directed learning based on reflective practice. **(Learning 6-8)**

9.   The learning environment will provide opportunities for residents to critically evaluate medical information, its sources and its relevance to the provision of comprehensive family medicine.

10.   The learning environment will provide opportunities for residents to experience the applicability of research to family medicine:

10.1.   By developing skill at efficiently answering point of care questions using a variety of evidence-based strategies.

10.2.   By completing a research project and presenting it to their colleagues and department.

11.   The learning environment will provide opportunities for residents to engage in teaching opportunities specifically:

11.1.   Opportunities and reminders of the importance of teaching patients and their families as a component of clinical practice.

11.2.   A number of opportunities for the resident to facilitate the teaching of topics to their resident colleagues.

11.3.   Opportunities to participate in the teaching of other learners and health care workers**.**

Professional

12.   The learning environment will provide opportunities for residents to develop familiarity with the role of Ethics in Family Medicine, specifically:

12.1.   Commitment to the patient's good

12.1.1.   Understanding ethics as an integral part of every clinical encounter, not just when controversies arise.

12.1.2.   Understand fundamental ethical principles of family medicine, including respect for patient dignity and beneficence-in-trust.

12.1.3.   Understand and demonstrate specific professional qualities that stem from commitment to the good of their patients, such as effacement of self-interest, compassion, intellectual honesty, justice and prudence.

12.1.4.   In cases where there is ethical conflict between physician and patient, be prepared to transfer care to another physician if appropriate.

12.2.   Ethical decision making and valid consent

12.2.1.   To demonstrate a patient-centered approach to key ethical issues in clinical practice, such as: informed consent, privacy/confidentiality, withholding and withdrawing medical interventions.

12.2.2.   To demonstrate the ability to identify differing perspectives on priority values and/or ethical principles in a given case or issue and the basis of these differences (individual, theoretical-cultural, religious and others).

12.2.3.   To demonstrate an appreciation of their own roles and responsibilities in decision making as well as those of patients, and respectfully discuss and manage value differences and conflicts.

12.2.4.   To demonstrate a clear understanding of issues such as informed consent, surrogate decision-making and advance directives.

12.3.   Identifying, analyzing and discussing ethical issues

12.3.1.   To demonstrate an ability to analyze cases and issues taking into account relevant considerations (e.g. commonly used ethical theories, elements of ethical decisions, principle of double effect, positions of stakeholders, etc.).

12.3.2.   To demonstrate in analyzing a case a sequential approach, taking into account such things as the facts of the matter, relevant laws, policies, guidelines, the perspective of the patient and others having a stake in the issue and the resident's own values as they bear on the issue.

12.3.3.   To demonstrate the ability to provide ethically reasoned justification for their decision.

12.3.4.   To demonstrate sensitivity to potential ethical issues in their collaborative relationships with non-medical colleagues, institutions, professional associations, government bodies, etc., to foster the health care of patients.

12.4.   Areas of Conflict

12.4.1.   To demonstrate an awareness of the issues of allocation of scarce resources, gatekeeper role and prioritization of need and how these relate to the duty to the patient.

12.4.2.   To demonstrate an awareness of situations where there is an obligation to a third party that may conflict with the duty to the patient.

12.4.3.   To demonstrate an awareness of issues that may arise in a physician's relationship with the pharmaceutical industry.

12.4.4.   To demonstrate awareness of the unique issues and responsibilities around prescribing controlled drugs.

13.   The learning environment will provide opportunities for residents to demonstrate professional behaviour in the area of Patient Safety and Errors.

13.1.   Develop an awareness for cognitive biases and other aspects of critical thinking and how they may play a role in patient safety and medical errors.

13.2.   Develop and demonstrate skills in error/adverse event disclosure and apology.

13.3.   Demonstrate awareness of the physician's role in prevention of iatrogenic infections and compliance with guidelines around hand washing.

14.   The learning environment will provide opportunities for residents to demonstrate professional behaviour, specifically demonstrating that:

14.1.   The resident knows his/her limits of clinical competence and seeks help appropriately.

14.2.   The resident demonstrates a caring and compassionate manner.

14.3.   The resident demonstrates respect for patients in all ways, maintains appropriate boundaries and is committed to patient well-being. This includes time management, availability and a willingness to assess performance.

14.4.   The resident demonstrates respect for colleagues and team members.

14.5.   The physician displays a commitment to personal health and seeks balance between personal life and professional responsibilities.

14.6.   The physician demonstrates a mindful approach to practice by maintaining composure and equanimity, even in difficult situations, and by engaging in thoughtful dialogue about values and motives.

15.   The learning environment will provide opportunities to contribute to the activities of professional associations locally, provincially and nationally.

16.   The learning environment will provide opportunities to explore leadership roles and the skills required for these roles.

Women's Health Care

Family Medicine Expert

1. The learning environment will provide opportunities for residents to integrate all the CanMEDS-FM roles in order to function effectively as a generalist in the provision of care to women.
2. The learning environment will provide opportunities for residents to establish and maintain clinical knowledge, skills and attitudes required to meet the needs of women including:
2.1. An awareness that many medical disorders manifest differently in women.
2.2. An awareness of the widespread and complex health effects of sexual abuse on women and resources available to assist affected women.
2.3. An awareness of effects on female patients regarding the public perception of women and body image.
3. The learning environment will provide opportunities for residents to assess and manage women using the patient-centred clinical method.
4. The learning environment will provide opportunities for residents to provide comprehensive and continuing care to women throughout the life cycle incorporating appropriate preventive, diagnostic and therapeutic interventions.
4.1. Provide appropriate evaluation and counselling using evidence-based guidelines for:
4.1.1. Nutritional needs through the female lifecycle
4.1.2. Cancer screening guidelines
4.1.3. Immunization
4.1.4. Exercise
4.1.5. Osteoporosis
4.1.6. Smoking cessation
4.2. Obtain a detailed reproductive health history as part of a well woman visit – including history of risk factors for STIs.
4.3. Counsel a woman regarding reproductive and contraceptive choices (Contraception 1,3).
4.4. Counsel a woman regarding safe sex practices (Sex 1, Sexually Transmitted Infections 1).
4.5. Diagnose and manage menstrual disorders, and irregularities throughout the life cycle.
4.6. Diagnose and manage infection/inflammation of the reproductive tract, and urinary tract, including STIs (Sexually Transmitted Infections 2,6,7; Vaginitis 1-3).
4.7. Diagnose and manage acute & chronic abdominal and pelvic pain, always considering pregnancy as a possible cause (Abdominal Pain 3).
4.8. Diagnose and initiate management of endometriosis
4.9. Diagnose and manage urinary incontinence & uterovaginal prolapse.
4.10. Screen for, detect and manage genital tract neoplasia (Cancer 2).
4.11. Diagnose and undertake initial management of infertility (Infertility 1-6).
4.12. Counsel a woman regarding normal physical, psychological changes to be expected at the menopause and options for their management (Menopause 1-8).
4.13. Counsel a woman with an unwanted pregnancy regarding the choices available to her (Pregnancy 3).
4.14. Identify and counsel women with eating disorders (Eating Disorders 2-6).
4.15. Diagnose and manage breast lumps in women (Breast Lump 2).
4.16. Counsel re recommendations and controversies of screening for breast cancer using clinical examination, self-examinations, and imaging and genetic testing (Breast Lump 1).
4.17. Refer and provide primary care follow-up for breast cancer patients (Breast Lump 30).
4.18. Initiate evaluation and treatment of victims of rape and sexual assault (including psychosocial and legal issues) (Rape/Sexual Assault 1-6).
5. The learning environment will provide opportunities for residents to effectively attend to complex clinical situations in the care of women.
6. The learning environment will provide opportunities for residents to become proficient in evidence-based use of procedural and physical exam skills.
6.1. Control of fertility
6.1.1. IUD insertion and removal

6.1.2.   Diaphragm fitting
6.2.   Surgery and diagnostic
6.2.1.   Microscopic diagnosis of urine and vaginal wet preparation
6.2.2.   Obtaining cervical cytology, HPV tests and cultures
6.2.3.   Gynecological and breast examination
6.2.4.   Breast cyst aspiration
6.2.5.   Endometrial biopsy, aspiration and curettage
7.   The learning environment will provide opportunities for residents to provide coordination of patient care including collaboration and consultation with other health professionals and caregivers.

Manager

8.   The learning environment will provide opportunities for residents to manage their time effectively.
9.   Establish office policies and practices to ensure patient comfort and choice, especially with sensitive examinations (e.g. communication during exam, positioning for Pap, chaperones for genital/rectal exams).

Communicator

10.   The learning environment will provide opportunities for residents to:
10.1.   Develop rapport, trust and ethical therapeutic relationships with patients and families.
10.2.   Accurately elicit and synthesize information from, and perspectives of, patients and families, colleagues and other professionals.
10.3.   Accurately convey needed information and explanations to patients and families, colleagues and other professionals.
10.4.   Develop a common understanding on issues, problems and plans with patients and families, colleagues and other professionals to develop, provide and follow-up on a shared plan of care.
10.5.   Convey effective oral and written information.

Collaborator

11.   The learning environment will provide opportunities for residents to:
11.1.   Work collaboratively in different models of care including team based approaches:
11.2.   Engage patients and families as active participants in their care.
11.3.   Consult appropriately with other members of the health care team.

Health Advocate

12.   The learning environment will provide opportunities for residents to respond to individual patient health needs and issues as part of patient care including:
12.1.   Identifying women who are vulnerable or marginalized and assist them in issues (e.g., occupational issues, special diet application forms, etc.) that promote their health.

Scholar

13.   The learning environment will provide opportunities for residents to maintain and enhance professional activities through ongoing self-directed learning based on reflective practice in providing care to women.
14.   The learning environment will provide opportunities for residents to evaluate medical information, its sources, and its relevance to the care of women, and apply this information to practice decisions.
15.   The learning environment will provide opportunities for residents to facilitate the education of patients, families, trainees, other health professional colleagues, and the public, as appropriate in issues of care to women.

Professional

16.   The learning environment will provide opportunities for residents to demonstrate commitment:
16.1.   To their patients, profession, and society through ethical practice.

16.2.   To physician health and sustainable practice
16.3.   To reflective practice.
17.   The learning environment will provide opportunities for residents to demonstrate the 12 themes of professionalism with observable behaviors i.e. day to day behavior reassures that the resident is responsible, reliable and trustworthy.

CURRICULUM DELIVERY

One of the challenges with a distributed, multiple-site program such as Dalhousie's is that of delivering the curriculum at each site in a comprehensive and equitable manner. To accomplish this, the curriculum will be delivered using a variety of methods at each site. This will include, but not be limited to:

- Clinical Learning Experiences (both Family Medicine and Consultant based)
- Hospital/Department rounds
- Postgraduate Medical Education modules (PGME) both video-conference and e-modules
- Academic Curriculum (both on-site and distributed)
- Problem-based Small Group Learning (PBSGL)

Some explanatory comments about the Academic Curriculum in particular are in order. The Academic Curriculum is a selection of clinical topics that have been deemed essential to present to residents in an academic manner. Each site will have different strategies to accomplish this (for example academic half days each week or academic days during core clinical learning experience). The Program Curriculum Committee has developed a list of topics (see below) that must be delivered at each site. In addition to these topics, each site has developed other topics, based on local interest and expertise.

MANDATORY ACADEMIC CURRICULUM TOPICS

Mandatory Academic Curriculum Topics 2017-2018	
Abdominal Pain: Office Approach	Hepatitis (viral)
Abnormal Uterine Bleeding	Hyperlipidemia
Abortion Care	Hypertension
Acne	Immigrants
ADHD	Immunization
Adolescent Health	Infertility
Allergies/Anaphylaxis	Inflammatory Bowel Disease
Anemia	Interactions with Pharmaceutical Representatives
Anxiety	Ischemic Heart Disease
Arrhythmia/Atrial Fibrillation	Lifelong Learning
Arthritis: OA/RA/Gout	Low Back Pain, including red flags, yellow flags
Asthma	Menopause
Boundary Issues	Motivational Interviewing
Breastfeeding and Feeding of Infants	Neck and Shoulder Pain
Breast Lump Office Management	Obesity and Weight Loss
Cerebrovascular Disease	Occupational Medicine
Chronic Non-Malignant Pain	Opioid Prescribing
Congestive Heart Failure	Osteoporosis
Competency Assessment	Otitis Media, and Externa
Contraception	Periodic Health Examination
COPD	Personality Disorders
Croup	Poverty
Dementia	Prostate Disease
Depression	Post-Traumatic Stress Disorder
Diabetes	Seizure Disorders
Diarrhea	Sexually Transmitted Infections
Disability	Skin Disorders
Dizziness	Substance Abuse
Dyspepsia, GERD, Gastritis and Peptic Ulcer Disease	Thyroid Disease
Ethics	Ulcers and Wound Care
Evidence Based Medicine	URI and Strep Throat
Fatigue	UTI
Gastrointestinal Bleed	Vaginitis
Headache	Venous Thromboembolism

PORTFOLIOS

At the moment, the Dalhousie Residency does not require a formal learning portfolio. Evidence shows that reflection on clinical experience improves and deepens learning. We have started this process with the institution of the Bi-Annual Resident Performance Review (periodic review). This includes much of the data that would be in a portfolio. The Bi-annual Review involves resident reflection on their own, and with the Site Director, to develop individualized learning plans. Residents may also choose to construct their own individualized learning portfolios. With this in mind, residents are encouraged to consider documenting their learning throughout the residency. Help and guidance are available for residents who are constructing a portfolio. Some of the portfolio can be documented through One45.

Examples of items that could be included in a portfolio:

Procedures completed
Conferences attended
Seminars presented – with evaluations
Clinical questions that have been researched
Chronic problems managed
Deliveries completed
Pregnant women followed
Learning plans
Self, peer or observer assessments
Chart notes
Letters from patients
Worksheets, checklists or logbooks of agreed upon activities
Notes from meetings between the resident and his/ her teachers
Samples of work demonstrating clinical competence
Evidence of self-assessment and self-reflection
Narratives describing personal experience and critical incidents
Copies of summative evaluations.

ASSESSMENT, EVALUATION and FEEDBACK

To ensure that residents are meeting curricular and program objectives, assessment of resident performance is conducted at regular intervals. The two main types of assessment are formative (providing timely feedback to help residents gauge their performance and take corrective action as necessary) and summative (ascertaining whether residents have met the stated objectives). The majority of assessment in the Dalhousie Family Medicine program is formative in nature.

Much formative feedback is delivered verbally during Clinical Learning Experiences (CLE). However, to help guide learning it is beneficial to document feedback. In Family Medicine programs across the country, the documentation of feedback typically occurs on 'field notes.' These daily feedback forms, be in paper or electronic form, capture the output of the process of feedback that occurs between preceptor and resident.

Collected field notes provide evidence of competence that is used to inform the program of your progress. Data collected on field notes is often used to back up statements of performance on your In-Training Assessment Reports (ITARs) that are completed for each of your rotations.

The remainder of this section summarizes the components and is divided into the following:
- o Policy on the Evaluation Process (p. xxx)
- o Field Notes (p. xxx)
- o Easy to Follow Instructions for Using Field Notes (p. xxx)
- o Field Note Sample (p. xxx)
- o Characteristics of a Good Field Note (p. xxx)
- o Template for In-Training Assessment Process (p. xxx)
- o In-Training Assessment Report (ITAR) for Family Medicine (p. xxx)
  - Selectivity (p. xxx)
  - Clinical Reasoning (p. xxx)
  - Professionalism (p. xxx)
  - Patient-Centered Approach (p. xxx)
  - Procedure Skills (p. xxx)
  - Communication Skills (p. xxx)
  - Overall Progress to Date (p. xxx)
- o Bi-Annual Resident Performance Review Worksheet (p. xxx)

If you have any questions about evaluation and assessment during residency, feel free to contact your site evaluation coordinator or the chair of evaluation, Dr. Keith Wilson (kwwilson@dal.ca).

Policy on the Evaluation Process

For a resident to successfully complete the program and have their name submitted to the College of Family Physicians of Canada (CFPC) all of the following documentation must be in order:

- An In-Training Assessment Report (ITAR) for each CLE successfully completed:
  - o In our integrated sites, a Family Medicine ITAR will be completed every two months in the first four months of residency then every three months throughout residency. These ITARs are to be populated by data from field notes from core family medicine preceptors and the consultant preceptors that provide longitudinal CLEs for the residents at these sites.
  - o For block-based sites, ITARs will be completed for each rotation. Core Family Medicine rotations will have a mid-point and final ITAR populated by data from field notes.
- Evaluation of Service (EOS), Learner Assessment of Family Medicine Preceptor as well as Resident Assessment of Consultant Faculty for all CLEs.
- The resident must demonstrate and document appropriate progress towards competence to enter unsupervised practice. This progress will be assessed by a detailed review bi-annually at a meeting

between the resident and the Site Director (or Site Directors' designate). Field notes will be a key component of this process, as they provide written documentation of performance and feedback in the clinical environment.

(For the complete Policy on the Evaluation Process see One45 Handouts and Links)

You will receive email notifications for all clinical learning experience assessments (mid-term, final and half-day back)

To log onto the electronic evaluation system, follow these steps:
- Go to: **www.med.dal.ca**
- Click on: One45 Web Eval (left side menu)
- You will receive an e-mail with your username and password and instructions on how to access the system once an evaluation has been sent out for you.

Evaluation of Service and Evaluation of Preceptor

According to University regulations your feedback on the Service and on your preceptor is mandatory for each clinical learning experience (CLE) you complete. You will receive a notice and forms electronically through One45. We require **both** an evaluation of service and an evaluation of the supervisor(s).

Field Notes

Feedback and assessments are essential to your education. Feedback is most effective when it occurs immediately after an encounter, and with coaching. We suggest that you and your preceptor complete *a field note for each half day of clinical experience*. This will give you a wealth of information on how to practice effectively and will encourage reflection and deeper learning on your part. You will be given a (prescription sized) pad of these forms. You may be asked to complete a certain number of these field notes per rotation depending on your site. However it is most important to remember that the field note is simply **documentation of a process** that is already taking place: the feedback itself is the most important part.

EASY TO FOLLOW INSTRUCTIONS FOR USING FIELD NOTES

This section explains the rationale for field notes as a method of evaluation, instructions for completing a field note and provides a sample field note.

What the process should deliver:

- During daily clinical work, encourage the gathering and documentation of case-specific comments and feedback with reflection and coaching from preceptors to residents.
- Consistency across the program, with properly documented feedback to stimulate improvement in competence:
    - based on performance through a wide spectrum of skills
    - linked to the CFPC Evaluation Objectives (key features and observable behaviours)
- A guide to teachers and learners, with evidence that competence is developing by:
    - helping inform ITARs, periodic reports, performance reviews, and resident's portfolio
    - acting as an aid memoir for periodic discussions on resident progress

On the selected clinical sessions:

- Observe an encounter, part of an encounter or simply discuss the case with the resident as close to the time of the encounter as possible (preferably the same day).
- It is very important that both the preceptor and the resident are engaged in the discussion reflecting on the clinical situation. This requires face-to-face dialogue, with input from both partners during completion. Often it is helpful to have the resident do some or all of the writing, noting the demographic information, the problem/situation discussed, and the feedback given.
- Indicate on the note if a direct observation has been involved.
- Use the "Guide to the CFPC Evaluation Objectives" found on the field note pad to choose **one** phase of the encounter and **one** competency of **one** skill to be discussed. This encourages specific feedback to reinforce the take home message.
- The responsibility to initiate the discussion should be shared between faculty and resident.

Important Background Information

Click here to go to the CFPC's Evaluation Objectives: http://cfpc.ca/EvaluationObjectives/

Or go to www.cfpc.ca and look under "For Teachers and Researchers" for the Evaluation Objectives and other tools.

Feedback: To Be Shared, Specific and Focused

- Ensure the resident starts the discussion with their impressions.
- Together develop positive statements **"continue"** with shared **"suggestions for improvement"**.
- Common reflection is an important part of the process and facilitates deeper learning.
- On selected occasions explore with the resident the pertinent Key Feature or Observable Behavior from the CFPC Evaluation Objectives.
- Reinforce the take home message/**coaching point**. It is recommended to stick with one pertinent and actionable point.

Mid and End of Clinical Learning Experience
- Ensure direct observations/discussions have covered a variety of phases, skills and topics.
- Review your carbon copies of the field notes prior to or during assessment discussions and ITAR completion with the resident. Then return them to the site administrator for storage in the resident file.

- The resident keeps the other copy for their file/portfolio to be used in discussion with their primary preceptor and/or Site Director for the ongoing demonstration of their progress towards competency.

Examples of Completed Field Notes:

Procedure: IUD Insertion; **Skill Dimension:** Procedural Skills; **Competency:** Informed Consent & Preparation; **Domains:** Office/Women's Health Care
Continue: Preceptor: "What do you think went well there? Resident: "I think the patient appreciated that I explained what was going to happen during the whole procedure."
Suggestions for improvement: Preceptor: "I usually try to plan for what I will need during the procedure and have it ready prior to starting."
Follow up: Preceptor: "Please always review our check list for IUD insertion while preparing for the procedure."

Phase: History**; Skill Dimension:** Communication; **Competency:** Non-Verbal; **Domain:** Office/Care of Adults
Continue: Resident: "As we discussed the last time I maintained good eye contact."
Suggestions for improvement: Preceptor: "I noticed you appeared to invade her personal space. If you try to stand back a little further it may improve your patient's comfort."
Follow up: Preceptor: "Perhaps we could video you this afternoon so you could see for yourself."

Problem: Ectopic Pregnancy; **Phase:** Investigation; **Skill Dimension**: Selectivity; **Competency:** Establishes Priorities; **Domain:** Emergency/Women's Health Care
Continue: Resident: "I identified the GYN/OBS history and the possibility of an ectopic pregnancy." Preceptor: "Well done! It was great you used the key features for abdominal pain to help with this."
Suggestions for improvement: Preceptor: "Perhaps the next step is to understand the urgency for immediate further investigation and treatment and how to arrange for that in our community."
Follow up: Preceptor: "Tomorrow morning after rounds lets discuss how to best use the ER and X-ray in urgent situations."

Problem: Multiple Medical Problems; **Phase:** Management & Treatment; **Skill Dimension:** Clinical Reasoning; **Competency:** Set Goals/ Objectives; **Domain:** Office/Care of the Elderly
Continue: Resident: "I dealt with most of the problems she presented to me getting her flow sheets for diabetes and hypertension done."
Suggestions for improvement: Preceptor: "Thanks for going back when I noticed your description about her frequent falls was more limited than some of the notes on other less critical problems. With a patient like this I try to identify all the presenting problems early then put aside the less important today to deal properly with the more critical."
Follow up: Preceptor: "I think the Key Features on Multiple Medical Problems may help, please review them for discussion with me tomorrow morning."

To view Dalhousie Family Medicine's Completing Field Notes – Video Tutorials, please go to
http://family.medicine.dal.ca/ug/GeneralInfoPreceptors.html

FIELD NOTE SAMPLE

Guide To The CFPC Evaluation Objectives
Phases Of The Clinical Encounter

A - History	D - Physical	G - Hypothesis
B - Diagnosis	E - Procedure	H - Investigation
C - Referral	F - Follow-Up	I - Management & Treatment

Selectivity
1. Appropriately Focused
2. Appropriately Thorough
3. Establishes Priorities
4. Urgent vs. Non-Urgent

Clinical Reasoning
5. Hypotheses / Diff. Dx
6. Gather Data (Hx & Px)
7. Interpret Data
8. Make Decisions
9. Set Goals/Objectives

Professionalism
10. Responsible/Reliable/ Trustworthy
11. Knows Limits
12. Flexible / Resourceful
13. Evokes Confidence
14. Caring / Compassionate
15. Respect/Boundaries/ Availability
16. Collegial
17. Ethical / Honest
18. Evidence Influence
19. Community Responsive
20. Good Balance
21. Mindful Approach

Patient Centered Approach
22. Explores Disease and Illness (Feelings, Ideas, Function & Expectations)
23. Whole Person/Context
24. Common Ground
25. Builds Relationship
26. Health Promotion / Prevention
27. Being Realistic

Procedure Skills
28. Decision to Act
29. Informed Consent & Preparation
30. During Procedure (Comfort/Safety)
31. Technical Skills
32. If Problems: Reevaluate
33. After Care / Follow-Up

Communication with both Colleagues and Patients
34. Listening Skills
Language Skills
　35. Verbal
　36. Written
　37. Charting
Non-Verbal Skills
　38. Expressive
　39. Receptive
40. Culture and Age Appropriateness
41. Attitudinal

Domains of Care	
Location of Care	**Lifecycle**
a. Office	g. Palliative Care
b. Emergency	h. Men's Health Care
c. Hospital	i. Women's Health Care
d. Home	j. Care of Adults
e. Long Term Care	k. Care of the Elderly
f. Community	l. Care of Children and Adolescents
	m. Maternal and Newborn Care

Field Note
Dalhousie University – Department of Family Medicine

Date: _____ Learner: _____

Supervisor: _____ Directly Observed Yes ☐ No ☐

Problem/Procedure: _____

Phase: _____

Skill: _____ Competency : _____

Domains: _____

Continue:

Suggestions for Improvement:

Follow Up: _____

Learner's Initials _____ Supervisor's Initials _____

CHARTACTERISTICS OF A GOOD FIELD NOTE

Purposes of a Field Note:
1. For the Learner: support further development
2. For the Clinical and Academic Coach: provide evidence to support assessment, judgement around competency development and a prescription for future growth
3. For the Program: document the learners' path to support program summative decisions concerning program extension, enrichment, completion or termination

Principles:
1. Field Notes do not replace feedback*, they only document it.
2. In general terms, there are parts of clinical encounters that require thinking/problem solving (higher order skills**) beyond basic knowledge. Focusing on these areas better support competency development and assessments.
3. Not all Field Notes require direct observation of the patient encounter but all Field Notes do require direct involvement and reflective discussion with the resident. Think broadly for sources of feedback and Field Notes… i.e. a Field Note could be based on their clinical reasoning following a discussion and/or chart review, witnessing their collaboration with AHC, professional behaviours, leadership skills, etc.
4. Competency-based assessment requires looking for patterns of performance and trajectory. If there is a previously identified area needing improvement, follow up on this is essential to ensure that improvement/growth has occurred.
5. Field Notes alone are not sufficient to ascertain competence. They must be part of an assessment system that collates, summarizes and interprets the data to make decisions. As such they should cover a broad range of identified desired competencies, pick up on past performance to follow trajectory and be numerous enough to provide a high-resolution picture of competency.

Characteristics of a Good Field Note:
- Has a date (for trajectory)
- Identifies a topic and a competency
- Is behaviourally specific and uses clear unambiguous language
- Is detailed enough to paint a picture of the performance being commented on
- Is focussed on the individual (not a comparator to others)
- Is focussed on a manageable amount of information
- Is focused on higher order skills
- Includes an application of the assessment standards***
- Has a judgement about the performance
- Identifies things to continue doing, things for further growth
- Promotes reflection

    *The characteristics of good feedback include:
    a) Ensuring the discussion is timely (at least the same day)
    b) Ensuring it is frequent (at least daily)
    c) Being specific and commenting on behaviours, not intentions or personal attributes
    d) Having reflective discussions that focus on challenging/discerning case characteristics
    e) Stimulating learning through making a judgement and documenting and discussing pertinent coaching points with each case
    f) Focusing on one take-home message each for the behaviours to continue and the behaviours to modify
    g) Making judgements based on standards, not comparators to others
    h) Using the CFPC Evaluation Objectives to help identify key messages

    ** Higher Order Skills: Consider focusing on:

a) History vs Physical Exam
b) Diagnosis vs Treatment—(although higher order skills could go into treatment decisions if the focus is on patient centeredness and/or acuity rather than just knowledge)
c) Data gathering vs Data interpretation

TEMPLATE FOR IN-TRAINING ASSESSMENT PROCESS

DALHOUSIE FAMILY MEDICINE'S
TEMPLATE FOR IN-TRAINING ASSESSMENT PROCESS

ITA Tasks / Steps	Description	Learner Roles	Who Does What? Learner in Partnership With Faculty/Preceptors/Administrators/Patients/Allied Health Care Partners
During daily clinical activities ❖ Observe performances ❖ Provide feedback ❖ Document	• Field notes • End of shift clinical assessment • Patient feedback forms	The learner will: ❖ Seek opportunities to be observed ❖ Seek feedback ❖ Participate in a process of reflective learning with documentation	Assessors in partnership with residents: ❖ Seek opportunities to observe performances ❖ Provide feedback ❖ Participate in reflection of the resident's clinical practice with documentation
Collect and organize documentation within a framework ❖ Daily field notes ❖ Other performance assessments	Portfolio and/or file collection of evidence	The learners will organize documented observations according to: ❖ Learner's needs ❖ Objectives ❖ Program requirements	Administrative staff compiles and organizes the residents file with all relevant data for review twice annually with the Site Director or their designate. One copy of the field note is retained by faculty for use in completing the ITAR and after given to site administrative staff for placement on the permanent file.
Periodic assessment of progress based on organized documentation	Guided review and assessment	In order to systematically develop competence in comprehensive full scope family medicine the resident: ❖ Will use the CFPC Evaluation Objectives ❖ Provides self-assessment ❖ Participates in process of guided self-assessment	All family medicine faculty will use the CFPC Evaluation Objectives to identify and assess the competencies necessary for the individual learner's future practice of comprehensive full scope family medicine. All faculty will provide the resident with assessment (ITAR) in-part populated with comments from field notes. Site Director or designate to review progress towards competence with the resident providing feedback and discussion with reflection to determine if the curriculum requires modification (twice annually).

	Who takes action – what action is required		
Review and update learning plans		To describe the competencies necessary for their future practice each resident will actively participate in developing an appropriate series of learning plans throughout their residency by periodically: ❖ Reflecting on learning needs ❖ Future career plans ❖ Personal objectives ❖ Community needs	Primary Preceptor meets with the resident twice annually to review their progress specific to Family Medicine and establish their learning objectives with a learning plan. The Site Director and or Designate reviews with the resident twice annually to review their overall progress and establish their learning objectives with a learning plan
Adjust and adapt learning activities	Identifying resources Modifying curriculum Identifying target goals Modify/customize assessment ❖ Formative and summative assessment ❖ Frequency and/or type of periodic assessment	Become actively involved in implementing the adapted learning experiences needed to achieve the competences required for their future practice. Collaborate with Faculty: ❖ To identify personal goals for development and/or remediation ❖ To identify needed resources ❖ Modifying the curriculum ❖ Customize the assessment	Primary Preceptor and/or the Site Director and/or the Program Director works with the resident to establish target goals. They will identify appropriate resources with the needed modification of the curriculum. As appropriate the formative and summative assessment will be customised with a customized reporting system.
Reporting	With learner/resident to clarify plans Back to daily clinical supervisors Progress report to appropriate administrators/faculty Documentation for accreditation	Take ownership with reporting of the learning plan through: ❖ Discussion and documentation for implementation with appropriate faculty ❖ Establish and document the necessary learning experiences to achieve the required competencies.	The Primary Preceptor and/or the Site Director or their designate ensures: ❖ Both the resident and faculty have responded to the learning needs with appropriate documentation. ❖ Progress reports are placed in resident's file by administrators. Resident's file will be a permanent record for review.

IN-TRAINING ASSESSMENT REPORT (ITAR) for FAMILY MEDICINE

The purpose of the in-training assessment report is to provide clear documentation of the resident's progress towards competence in the six essential family medicine skills. Each skill is defined. Please add specific comments about resident performance to outline where the resident has achieved competence, where they are progressing satisfactorily, areas to focus on for future development and any concerns. Please provide examples from field notes that support your narrative.

In order to document satisfactory progress, all six skill dimensions should be assessed in a **sampling** of the following content of comprehensive family medicine.

PGY1 - with readily available supervision
PGY2 - independently with back up

- Care of Children
    - Newborn care
    - Evidence based health promotion and prevention from infant to child
    - Acute illness in infants
    - Acute illness in school age children
    - Chronic illness
- Care of Adolescents
    - Evidence based health promotion and prevention
    - Issues around sexuality and reproductive health
    - Assessment of substance use/abuse
    - Social problems
    - Psychological/psychiatric problems
    - Suicide risk
    - Chronic illness (e.g. diabetes, asthma, IBD)
- Care of Adults
    - Evidence based health promotion and prevention
    - Chronic disease care (e.g. diabetes, CVD, arthritis, COPD etc.)
    - Complex patients with multiple diseases
    - Benign self-limited illnesses
    - Undifferentiated problems
    - Acute serious illness in ambulatory setting
    - Acute illness needing urgent care or hospitalization
    - Care of hospitalized patients
    - Behavioral Medicine
    - Life stages and transitions
    - Cancer care
    - Palliative care
    - Care of Women including Maternity Care
    - Care of Men
    - Emergency Medicine
    - Care of Underserved populations
    - Care of the Elderly
- Uncommon but serious and treatable conditions (red flags)
- Therapeutics
- Procedure Skills
- In order to be considered to be competent, at the end of residency the resident should demonstrate the ability to practice in all of the above areas.

Selectivity

Definition

Residents who demonstrate selectivity are able to set priorities, focus on what is most important and avoid a routine or stereotypical approach (such as a medical student might use). They are selective and adapt to the situation and the patient. They gather the most useful information without losing time on less contributory data; however they will explore a problem in detail when needed. They can distinguish urgent and non-urgent conditions and act appropriately for each.

Describe aspects of competence achieved in SELECTIVITY and developing competence including examples from field notes

Date: non-modifiable after submission

Date: next assessment and again non-modifiable after submission

Date: etc.

Describe areas for focus and further development in SELECTIVITY including examples from field notes

Date: non-modifiable after submission

Date: next assessment and again non-modifiable after submission

Date: etc.

☐ Progress as expected. No concerns.
☐ Some concerns about progress. A plan has been established between the resident and the preceptor and will be implemented and assessed through ongoing clinical exposure
☐ Significant concerns about progress – site level or program level remediation plan required. May need program support

Clinical Reasoning

Definition

Residents who demonstrate good clinical reasoning gather **the right information at the right time** and **interpret and synthesize** the information systematically. They consistently consider common and red flag conditions and organize their thinking to come to a reasonable problem list with short and long term management plans. They make appropriate decisions and set appropriate goals.

Describe aspects of competence achieved in CLINICAL REASONING and developing competence including examples from field notes

Date: non-modifiable after submission

Date: next assessment and again non-modifiable after submission

Date: etc.

Describe areas for focus and further development in CLINICAL REASONING including examples from field notes

Date: non-modifiable after submission

Date: next assessment and again non-modifiable after submission

Date: etc.

☐ Progress as expected. No concerns.
☐ Some concerns about progress. A plan has been established between the resident and the preceptor and will be implemented and assessed through ongoing clinical exposure.
☐ Significant concerns about progress – site level or program level remediation plan required. May need program support

Professionalism

Definition

Professionalism means reliability, trustworthiness, respect and responsibility to patients, to colleagues, to oneself, to the profession, and to society at large; it deals with honesty, ethical issues, lifelong learning and the maintenance of the quality of care. Important attitudinal aspects such as caring and compassion fall under professionalism. It includes knowing and expanding one's limits of competence, dealing with uncertainty in a clinically appropriate and patient-centered manner and the ability to evoke confidence without arrogance. Professionalism implies attention to boundaries, commitment to patient wellbeing, respect for patients' culture and values (e.g. appropriate personal appearance) and willingness to assess one's own performance. It includes a commitment to reflective practice, evidence based medicine and learning from colleagues and patients as well as a commitment to personal health and seeking balance between personal life and professional responsibilities. The ability to behave professionally and collegially in difficult situations is essential. Professionalism means doing the right thing even when no one else may ever know.

Describe aspects of competence achieved in PROFESSIONALISM and developing competence including examples from field notes
Date: non-modifiable after submission
Date: next assessment and again non-modifiable after submission
Date: etc.
Describe areas for focus and further development in PROFESSIONALISM including examples from field notes
Date: non-modifiable after submission
Date: next assessment and again non-modifiable after submission
Date: etc.

☐ Progress as expected. No concerns.
☐ Some concerns about progress. A plan has been established between the resident and the preceptor and will be implemented and assessed through ongoing clinical exposure.
☐ Significant concerns about progress – site level or program level remediation plan required. May need program support.

Patient-Centered Approach

Definition

Residents who are patient centred demonstrate exploration of both the disease and the patient's personal experience of illness (e.g. FIFE). They show an active interest in their patients, and over time are able to describe important details of their lives. They work to enhance the relationship and gather day-to-day contextual information that will help guide them in making appropriate decisions with their patients. They work with their patients to come to agreement on the problems, the priorities, the goals and approach to management. They regularly address prevention and health promotion in clinical encounters. They manage time and resources effectively.

Describe aspects of competence achieved in PATIENT CENTERED APPROACH and developing competence including examples from field notes Date: non-modifiable after submission Date: next assessment and again non-modifiable after submission Date: etc.
Describe areas for focus and further development in PATIENT CENTERED APPROACH including examples from field notes   Date: non-modifiable after submission Date: next assessment and again non-modifiable after submission Date: etc.

- ☐ Progress as expected. No concerns.
- ☐ Some concerns about progress. A plan has been established between the resident and the preceptor and will be implemented and assessed through ongoing clinical exposure.
- ☐ Significant concerns about progress – site level or program level remediation plan required. May need program support.

Procedure Skills

Definition

Residents who have an effective approach to procedures can decide if it is appropriate for them to do this procedure on this patient on this day. They prepare thoroughly for the procedure, including patient consent. They attend to the patient's comfort and safety throughout the procedure. If difficulties arise, they demonstrate the ability to re-evaluate and stop or seek assistance. They organize appropriate after care and follow up. They demonstrate appropriate technical skills.

Please review the Procedural Skills Log for this resident by clicking on the link below prior completing this section of the evaluation.

Describe aspects of competence achieved in PROCEDURE SKILLS and developing competence including examples from field notes Date: non-modifiable after submission Date: next assessment and again non-modifiable after submission Date: etc.
Describe areas for focus and further development in PROCEDURE SKILLS including examples from field notes Date: non-modifiable after submission Date: next assessment and again non-modifiable after submission Date: etc.

☐ Progress as expected. No concerns.
☐ Some concerns about progress. A plan has been established between the resident and the preceptor and will be implemented and assessed through ongoing clinical exposure.
☐ Significant concerns about progress – site level or program level remediation plan required. May need program support.

Communication Skills

With Members of the Health Care Team (Colleagues)

Definition

Residents who communicate well with colleagues take enough time and demonstrate the ability to listen so they truly understand their colleague's point of view. They are able to communicate accurately and clearly, both verbally (face to face, over the phone, etc.) and in writing (e.g. chart notes, consult letters, orders, prescriptions etc.). They display effective non-verbal skills, including attention to their own body language, responding to body language of a colleague, tone of voice, etc. They demonstrate respect for the opinions, values and ideas of their colleagues.

Describe aspects of competence achieved in COMMUNICATION SKILLS with colleagues and developing competence including examples from field notes Date: non-modifiable after submission Date: next assessment and again non-modifiable after submission Date: etc.
Describe areas for focus and further development in COMMUNICATION SKILLS including examples from field notes Date: non-modifiable after submission Date: next assessment and again non-modifiable after submission Date: etc.

☐   Progress as expected. No concerns.
☐   Some concerns about progress. A plan has been established between the resident and the preceptor and will be implemented and assessed through ongoing clinical exposure
☐   Significant concerns about progress – site level or program level remediation plan required. May need program support.

Communication Skills

With patients

Definition

Residents who communicate well with patients demonstrate the ability to listen so that they truly understand the patient's needs. They are able to communicate clearly both verbally and in writing (e.g. letters, instructions). They display effective non-verbal skills, including attention to their own body language, responding to the body language of a patient, use of silence, etc. Their communication is appropriate to the culture and age of the patient. They demonstrate a respectful, caring and compassionate attitude.

Describe aspects of competence achieved in COMMUNICATION SKILLS with patients and developing competence including examples from field notes Date: non-modifiable after submission Date: next assessment and again non-modifiable after submission Date: etc.
Describe areas for focus and further development in COMMUNICATION SKILLS including examples from field notes Date: non-modifiable after submission Date: next assessment and again non-modifiable after submission Date: etc.

☐ Progress as expected. No concerns.
☐ Some concerns about progress. A plan has been established between the resident and the preceptor and will be implemented and assessed through ongoing clinical exposure.
☐ Significant concerns about progress – site level or program level remediation plan required. May require program support.

OVERALL PROGRESS TO DATE

☐ Progress as expected. No concerns.
☐ Some concerns about progress. A plan has been established between the resident and the preceptor and will be implemented and assessed through ongoing clinical exposure.
☐ Significant concerns about progress – site level or program level remediation plan required (must be brought to Residency Training Committee Executive meeting for discussion).

Individual Objectives for Future Development with appropriate Learning Plan:

Date: non-modifiable after submission

Date: next assessment and again non-modifiable after submission

Date: etc.

Has the Resident had an opportunity to review/discuss with faculty?
Yes ☐ No ☐

Resident:
Date:

Evaluator:
Date:

The content of this form was adapted from: T Allen, C Bethune, C Brailovsky, T Crichton, M Donoff, T Laughlin, K Lawrence, S Wetmore (alphabetical). *Defining competence in Family Medicine for the purposes of certification by the College of Family Physicians of Canada: The evaluation objectives in family medicine. Accessed February 7, 2011 at site below:*

For the CFPC Evaluation Objectives, with the observable behaviours of Professionalism and Communication Skills and priority topics with their key features please see One45 Handouts and Links

Please download this onto your desktop for use in clinical teaching.

BI-ANNUAL RESIDENT PERFORMANCE REVIEW WORKSHEET

- The sections assigned to the resident MUST be completed and submitted three weeks prior to meeting with the Site Director or designate.
- The sections assigned to the administrator are expected to be completed upon receipt of the resident's submission and prior to the scheduled meeting between the resident and the Site Director or designate.
- The sections assigned to the Site Director or designate are expected to be completed at the time of the scheduled meeting with the resident.

Section to be completed by Site Director or designate

Meeting Dates:

	Proposed Meeting Date	Date Completed	Proposed Meeting Date	Date Completed
PGY1 Meeting	Prior to February		Prior to July	
PGY2 Meeting	Prior to February		Prior to June	
PGY3 Meeting	Prior to February		Prior to June	
Additional review as required				
Additional review as required				

Section to be completed by resident

Evidence of comprehensive sampling of performance with documented feedback:

			Cumulative Total Number of Field Notes (since start of residency)						
			Prior to Feb PGY1	Prior to July PGY 1	Prior to Feb PGY2	Prior to June PGY2	Prior to Feb PGY 3	Prior to June PGY 3	Total
Family Medicine Expert	PROFESSIONAL HEALTH ADVOCATE COMMUNICATOR COLLABORATOR SCHOLAR MANAGER	Selectivity							
		Clinical Reasoning							
		Procedural Skills							
		Patient Centered Approach							
		Professionalism							
		Communication with Colleagues							
		Communication with Patients							
		Field Notes Directly Observed							

Section to be completed by Site Director or designate

Comments: Date: Date: Date: Date: Date: Date:

Section to be completed by Site Director or designate

Domains of Care - Do the documents reviewed reflect all of the domains? Are there gaps?

Location of Care
Office
Emergency
Hospital
Home
Long Term Care
Community

Identified Gaps: Date: Date: Date: Date: Date: Date:

Lifecycle
Palliative Care
Men's Health Care
Women's Health Care
Care of Adults
Care of the Elderly
Care of Children and Adolescents
Maternal and Newborn Care

Identified Gaps:
Date:
Date:
Date:
Date:
Date:
Date:

Section to be completed by Site Director or designate

Procedure Log: review log and develop plan for exposure to core procedures

Comments:
Date :
Date :
Date :
Date :
Date :
Date :

Section to be completed by the administrator with the assessment (satisfactory or not) to be completed by the Site Director or designate.

Review of Clinical Learning Experiences (CLEs) and ITARs completed since last report.

Educational Experience	ITAR YES/NO	Satisfactory YES/NO

Section to be completed by the Site Director or designate

Comments:

Date:

Date:

Date:

Date:

Date:

Date:

Section to be completed by the administrator

Are the Evaluations of Educational activities and Faculty up to date?

Date: Yes _____ No_____	Date: Yes_____ No_____	Date: Yes_____ No_____
Date: Yes_____ No_____	Date: Yes_____ No_____	Date: Yes_____ No_____

Section to be completed by the administrator with the determination of the appropriateness by the Site Director or designate

Leave History:

Has the resident taken appropriate vacation? Has the resident had other leave for any reason?

Comments:
Date:

Date:

Date:

Date:

Date:

Date:

Section to be completed by the administrator with the determination of the appropriateness by the Site Director or designate

Attendance at Academic Curriculum

Comments:
Date:
Date:
Date:
Date:
Date:
Date:

Section to be completed by the administrator

CanMEDS e-Modules Completed

E-Modules to be completed	Completed (Yes/No)
1.	
2.	
3.	
4.	
5.	
6.	

Section to be completed by the Site Director or designate

Comments:
Date:
Date:
Date:
Date:
Date:
Date:

Section to be completed by the resident

Resident Presentations Completed and Evaluations reviewed (including rounds, seminars, workshops, PEARLs, Practice audit)

Date	Audience	Topic	Feedback Received

Section to be completed by the Site Director or designate

Comments:
Date:

Date:

Date:

Date:

Date:

Date:

Section to be completed by the resident

Continuing Practice Development (CPD)

Course	Date	Successful Completion Yes/No
ACLS		
NRP		
ALSO		
ALARM		
ATLS		
PALS		

Section to be completed by Site Director or designate

Comments: Date: Date: Date: Date: Date: Date:

Section to be completed by Site Director or designate

Exam Preparation:

Study Group (Yes/NO): _____

Comments: Date: Date: Date: Date: Date: Date:

Section to be completed by the administrator
Program Organized SOOs with assessments

Number of SOOs completed	
Number of written assessments	

Section to be completed by Site Director or designate

Comments: Date: Date: Date: Date: Date: Date:

Section to be completed by the resident

Research Project Status:

Title: _____
Supervisor: _____
Progress: Date:
Progress: Date:
Progress: Date:
Progress: Date:
Progress: Date:
Progress: Date:

Section to be completed by the Site Director or designate

Comments: Date: Date: Date: Date: Date: Date:

Section to be completed by the administrator

Faculty Advisor Logs:

Name of Faculty Advisor: _____

	Proposed Meeting Date	**Date Completed**	**Proposed Meeting Date**	**Date Completed**
PGY1 Meeting	Before October		Before May	
PGY2 Meeting	Before November		Before May	
PGY3 Meeting	Before November		Before May	

Section to be completed by the administrator

Primary Preceptor Logs

Name of Primary Preceptor: _____

PGY1			
	Proposed Meeting Date – Integrated Site	Proposed Meeting Date – Traditional Site	Meeting Date
PGY1 Meeting 1	July (beginning of residency)	July (beginning of residency)	
PGY1 Meeting 2	March	During Core Family Medicine or as appropriate	
PGY1 Meeting – Other if necessary			
PGY2			
PGY2 Meeting 1	Before November	Before November	
PGY2 Meeting 2	Before May	Before May	
PGY2 Meeting – Other if necessary			
PGY3 (Third Year Programs)			
	Proposed Meeting Date – Integrated three year program	Proposed Meeting Date – plus-one program	Meeting Date
PGY3 Meeting 1	Before November	July (beginning of program)	
PGY3 Meeting 2	Before May	Before May	
PGY3 Meeting – Other if necessary			

Section to be completed by the resident

Committees/ Community Volunteer Work (Social Accountability):

Description	Date

Section to be completed by the Site Director or designate

Comments:
Date:

Date:

Date:

Date:

Date:

Date:

Section to be completed by the resident with possible additional comments by Site Director or designate

Triple C Competency-Based Curriculum

1. How are you developing continuity in patient care?

a. Patient Panel: The practice **must** be organized in such a manner that residents can build and maintain a defined panel of patients. Resident responsibility should be such that patients recognize the resident as one of their personal physicians, and that residents are directly responsible for the delivery of care to those patients with whom they are identified.

Have you had the opportunity to develop a panel of patients with whom you experience continuity?   Yes /No: _____

Do you assume responsibility for this panel of patients?   Yes/No: _____

Comments: Date: Date: Date: Date: Date: Date:

b. Are you following the same patients through different practice settings (office, hospital, home, long term care facility)?

Comments: Date: Date: Date: Date: Date: Date:

2. How has your experience been centred in Family Medicine?

Comments: Date: Date: Date: Date: Date: Date:

3.   How is your experience comprehensive and reflective of the needs of a family physician?

Comments:
Date:

Date:

Date:

Date:

Date:

Date:

Other General Comments (How are things are going?)

Comments:
Date:

Date:

Date:

Date:

Date:

Date:

Section to be completed by the Site Director or designate.
Please date and complete the current progress section for each meeting.

CURRENT PROGRESS: Date _____

	Place 'X' in appropriate box (one response only)
Progress as expected	
There are concerns about progress. These have been discussed with the resident and a progress plan has been determined	
Progress unsatisfactory; immediate action required in consultation with Residency Training Committee Executive.	

Comments:

Learning plan with resident input:

Has Resident had opportunity to review/discuss with Site Director or Designate?

(Yes/No): _____

_____   _____

Resident   Date

_____   _____

Site Director or Designate   Date

_____   _____

Program Director   Date

COPY THIS PAGE AND PROVIDE TO RESIDENT AFTER MEETING

Dalhousie University

Department of Family Medicine

Resident Project Guide

Updated for July 2017

Resident Project Guide
Department of Family Medicine

Introduction

> *"A strong research base is as fundamental to general practice, as to any academic discipline. Research and education are not different kinds of academic activity but complementary, the two sides of one coin. Research is organized curiosity. Curiosity involves asking questions; if others do not know the answers, research is needed. Education in which the answers are not based on research is indoctrination; research in which questions are not based on need is prevarication. The advance of general practice as an academic discipline depends on our ability to integrate research and education in the pursuit of excellence in clinical care."*
>
> *Charles Bridge-Webb*
> *Adapted from the George McQuitty Memorial Lecture, University of Calgary, 1982, Can Fam Physician 1983, Vol. 29:52*

The objectives for research in Family Medicine are detailed by the College of Family Physicians of Canada. They emphasize curiosity, self-assessment and skill at critically reviewing the medical literature.

All residents are required to complete a resident project as part of their residency program requirements. The resident project is an academic/scholarly one that *must* meet the standards described in this guide and *must* be completed successfully in order to fulfill the requirements of the residency training program.

The purpose of the resident project is to introduce the resident to the process of finding answers to questions commonly encountered in primary care by critically reviewing the available literature. Where such answers are found lacking, the resident may choose to employ an appropriate methodology to design a study using proper scientific rigor to answer that question.

There *is no requirement to conduct a* **research** *study*; however, it is hoped that the resident project will provide the resident with the opportunity to develop or practice primary care research skills. For those with more in-depth research interests, primary care research electives are available and inquiries should go to the Site Director.

Goal:
- To contribute to the understanding and/or effectiveness of Family Practice.

Purpose:
- To develop skills that the resident can use in order to be a resource to a family practice;
- To provide an evaluation of these skills for the resident transcript.

Objectives:
- To ask a question relevant to Family Medicine;
- To develop a way of answering the question, using appropriate resources and time lines;
- To write up the project and present it orally prior to completion of the residency.

Project Goals:
- To develop skills in asking and answering questions that are important and relevant to the discipline of Family Medicine;
- To stimulate creative and original thought based on questions encountered in practice;
- To practice the fundamentals of evidence-based care or other critical inquiry;
- To be able to communicate the results clearly to colleagues;
- To promote an interest in Family Medicine research.

Expectations:
The resident project must be aimed at answering a question in the field of Family Medicine. It can be in the form of a position paper, an educational tool, a research project, a literature appraisal, or a practice quality improvement project. The

resident is expected to choose an area of interest to Family Medicine, propose a question, review the literature, and design a method of answering that question.

PGY2 residents are expected to submit a written paper and give an oral presentation of their findings to their colleagues and faculty members at the ***Resident Project Presentation Day*** held at their Site Project Presentation event. The written documents will be graded and an award will be presented to the author(s) of the project judged to be the most outstanding. In addition, in some sites, PGY1 residents are expected to give a 10 minute presentation discussing the progress of their projects. Completed resident projects will be stored and available to review for internal use by residents and faculty.

Ethics Issues:
All residents who engage in research involving human beings require a full or an expedited ethics review by a research ethics board (REB). This applies also to research considered "minimal risk," for example the examination of patient charts, patient/resident/physician surveys, etc. The resident should discuss this with the Project Coordinator. *If possible, it is advised that residents should consult with the Chair of the local Research Ethics Board (REB) regarding requirements for REB applications.*

Multiple Authors "Author Contribution":
When a resident project involves multiple authors (colleague resident or others), each author must outline, in a section entitled "Author Contribution", their individual contribution to the project. It is expected that each individual author's contribution be substantial and that they review and approve of the final text.

Type of Projects:
1. Literature Appraisal/EBM Review
    This involves a detailed review of the literature on a specific topic pertinent to Family Medicine. Original research papers should be reviewed and appraised using critical appraisal skills.

    Those interested in topics debunking a Canadian healthcare myth related to Family Medicine may choose to create a "Mythbuster." This method must follow the Canadian Health Services Research Foundation guidelines:
    http://www.cfhi-fcass.ca/PublicationsAndResources/Mythbusters.aspx

    If this option is selected, residents should indicate that this is the intended format of the project and discuss the requirements and page length with their Project Supervisor and Project Coordinator.

2. Position Paper/Essay
    This involves an extensive treatise on a topic of importance to Family Medicine. Topics can also relate to a broad range of pertinent issues such as the history of medicine, medical philosophy, medical education, politics, etc. The report must include critically appraised evidence to support the argument being presented.

3. Educational Tool
    This involves developing a tool or resource useful for the education of physicians, other health care workers, patients or the public. The educational tool needs to be accompanied by a description of how the topic was selected, a literature review and the reason for the need of the tool.

4. Practice Quality Improvement Project/Audit
    This involves identifying a practice-based question, finding evidence-based guidelines/recommendations to guide the approach to clinical care with respect to the question, constructing an audit tool, auditing charts, and reporting the results along with recommendations.

5. Research Project
    This involves the posing of a question, reviewing the literature, selecting the methods needed to answer the research question, collecting original data, conducting the data analysis, and reporting the findings

Residents are encouraged to engage in original research. It is important for residents to be aware that research projects require more steps to complete than other types of projects and therefore may take longer to complete. Most research projects require approval by the local Research Ethics Board. Residents are advised to speak with their Project Coordinator about the need for ethical approval for their project.

Project Coordinator
Each site has a Project Coordinator, whose role it is to discuss the project format and requirements with the resident on a regular basis and encourage the resident to adhere to the deadlines. In some cases the Project Coordinator may also be the Project Supervisor.

Project Supervisor
Each resident must choose a Project Supervisor to counsel them on the content of their project. The Project Supervisor may be a clinical supervisor in the home base Family Medicine Department, another family physician, a consultant or another appropriate individual. If someone other than a family physician is selected, it is important to retain advice on the relevance of the project to Family Medicine from the Project Coordinator.

Budget
There are funds in the budget to cover some resident project expenses at all sites. Each resident is allowed $50 for minor expenses, but it is also possible to apply for more funding. This issue should be discussed with the Project Coordinator at the appropriate site.   For amounts over $50, a written budget must be submitted to the Project Coordinator at the appropriate site. All receipts must be submitted and expenses will be reimbursed. If funds are needed in advance, a written request can be submitted and receipts submitted at a later date.

Minimum Time Commitment (*please note timelines and conditions may vary from site to site)*:
Residents should expect to commit at least **40 hours of work** to their project. The program **may** allow the resident to use some independent learning time to work on their project, however; the amount of time permitted depends largely on the nature and scope of the project and therefore residents will need to discuss this with either the Project Coordinator or Project Supervisor. Time away from half-days back and academic half-days is not generally permitted.

Project Format
Although projects can be presented in different formats (art-work/handbooks/DVD, etc.) the project paper should be a minimum of 8 pages (±3000 words) and a maximum of 16 pages (±6000 words), double spaced, 12 font, excluding tables and references. The format of the written work should follow a scientific lay-out: *Abstract, Introduction, Background, Study Design/Method, Results, Discussion, Conclusion and Limitations*. Alternatives for the min/max page length and format will be considered for special circumstances, and must be approved by the Project Coordinator.

Project Cover Page
Make sure that you add a cover page to you project. The cover page needs to include the following: 1) name, 2) title of project 3) site 4) name of supervisor 5) type of project (research, literature review etc),. 6) date

Plagiarism
Plagiarism is a serious academic offence and can lead to expulsion. Please see the Dalhousie University website on plagiarism.
http://www.dal.ca/dept/university_secretariat/academic-integrity/plagiarism-cheating.html

Timelines:
PGY1 year:
❖ The resident must discuss the project topic with the Project Coordinator.

❖ The resident will select and discuss the content of the project with their Project Coordinator and Project Supervisor by the end of the three-month PGY1 Family Medicine clinical learning experience, but no later than the **1st Monday of November**.
  • This does not apply to Halifax-based residents who may spend some of their first 6 months of their residency at sites away from Halifax. Their deadline is June 30th of their PGY1 year. However, those residents are expected to contact the Project Coordinator with an outline of their proposal by the last Friday in September in their PGY1 year.

❖ The resident will develop a well-defined *project proposal* (2-3 pages) in writing that they will submit to their Project Supervisor and their Project Coordinator.
❖   *Halifax site residents need only submit their project proposal to their Project Supervisor, and are not required to also submit it to their Project Coordinato*r.

❖ Residents must have their PGY1 Resident Project Proposal Form (Form I) signed by their Project Coordinator.

Halifax residents are not required to complete and submit a Form I; however, they are still required to complete and submit a Form II.

❖ All residents are required to complete a Project Supervisor Agreement Form (Form II), which must be signed by their Project Supervisor.

❖ The proposal and required signed forms (Forms I and II) are due no later than the **1st Monday of February of the resident's PGY1 year.** Forms are to be submitted to the Project Coordinator, who will forward electronic copies to the Education Committee Secretary (fmcommittees@dal.ca).

Halifax residents will forward their proposal and Form II directly to the Education Committee Secretary (fmcommittees@dal.ca).

❖ Residents whose projects are research projects, must apply for approval through their local Research Ethics Board (REB). It should be noted that this can at times be a lengthy process, and residents must plan accordingly in order to allow sufficient time for punctual project completion.

❖ If necessary, the resident should write out a budget, and submit it to the Project Coordinator. (see below for budget guidelines)

❖ At some sites, PGY1 residents are required to present their proposal in a 10 minute oral format during their site's Resident Project Presentation Day (usually held in May), or at another venue, as determined by their site. PGY1 residents are to confirm details with their Project Coordinator.

PGY2 year:
❖ The resident will prepare a project progress report no later than the **2nd Monday of September of their PGY2 year** and meet with their Project Supervisor in order that their Project Supervisor may evaluate the resident's progress. A Project Progress Report (Form III) will be completed at that time by the Project Supervisor, an electronic copy of which will be sent to the Education Committee Secretary.

❖ The resident will have their Project Supervisor complete and sign a Resident Project Final Approval Form (Form IV). The signed Form IV and the completed draft of the written project must be submitted to the Project Coordinator for review no later than the **1st Monday of January.** *Halifax residents are not required to submit their final project and signed Form IV to the Halifax site Project Coordinators.*

❖ Once approved by their Project Coordinator (Project Supervisor for Halifax site residents), the **FINAL project** must be submitted to the Education Committee Secretary (fmcommittees@dal.ca)as a **single PDF document** by the **2nd Monday in February for ALL residents**. The PDF document must be formatted in such a way as can easily be emailed and opened by project reviewers.   The Education Committee Secretary will send the project to a project reviewer for assessment.

❖ The **non-Halifax site** Project Coordinators will send an electronic copy of the signed **Form IV** to the Education Committee Secretary. *Halifax residents will send the electronic copy of the signed Form IV to the Education Committee Secretary.*

❖ A PowerPoint slide presentation of the resident project must be completed and submitted to the resident's Project Coordinator by the **1st Monday of May** of their PGY2 year. Halifax site residents will submit their PowerPoint slide presentation to the Halifax Site Administrator and not to the Project Coordinator.

❖ PGY2 residents will present their projects orally during their Site Project Presentation event.

❖ If a resident is concluding the program four months or more beyond the usual program end-date, submission of the written project can be deferred to 2 months before their concluding date, and an oral presentation will be arranged separately.

See the attached worksheet for timeline summaries. Please note that these deadlines may be modified if the nature of the project is such that data collection or analysis cannot be completed by the required dates. In that case, the resident must discuss the new timelines in advance with the Project Coordinator and new timelines will be formally established.

Project Assessment
Completed resident projects should be forwarded to the Department of Family Medicine Education Committee Secretary (fmcommittees@dal.ca) as a single PDF file by the **2nd Monday in February**. The PDF document must be formatted in such as way as can be easily emailed to and opened by project reviewers. The Medical Education Committee Secretary will forward the completed resident projects to an appropriate reviewers. Project reviewers are expected to complete their review within 4 to 6 weeks of accepting a project for review. Late submissions often take longer to complete, so residents are strongly discouraged from submitting after the deadline. If a project is deemed "Acceptable" the resident and the Project Coordinator will be informed. A resident project must be deemed "Acceptable" or higher for the resident to successfully complete the residency program requirements. An assessment rubric has been developed and is attached to this guide.

If a project is assessed as "Requiring Revisions," the resident and the Project Coordinator will be informed by the Education Committee Secretary. The Project Coordinator will communicate with the reviewer and then follow-up with the resident, and if need be with the Project Supervisor to ensure they understand the reviewer's concerns.

The revised project will be sent to the Education Committee Secretary in a single PDF document that has been formatted in such a way as can easily be emailed and opened by the project reviewer. The Education Committee Secretary will then forward it to the original project reviewer. If, after a second revision, the project is still deemed "Requiring Revisions" by the original reviewer, a second reviewer may be invited to review the project.

Late Projects
Residents who miss the final project submission date without proper documented reasons may face a delay in receiving their "letter of program completion." Hence, residents are encouraged to submit their final project at the appropriate deadline.

Non-compliance
Non-compliance with the designated deadlines may result in the inclusion of a professional misconduct note in the resident file.

Awards/Presentations
Projects receiving marks in the "outstanding" range, and some others receiving marks in the "highly acceptable" range may be considered for a variety of award nominations, including:

1. Dalhousie University Family Medicine: The "*Doug Mulholland Award*" for the best *resident project*. The projects are judged on originality, relevance to family medicine and critical thinking.

Nominations for award competitions
2. Faculty of Medicine Research Award Competition (up to 3 nominees from the Department of Family Medicine)
3. College of Family Physicians of Canada *research awards* for Family Medicine Residents (one nominee from Dalhousie University Department of Family Medicine)
4. The College of Family Physicians of Canada *scholarly activity* award. This award aims to recognize outstanding family medicine scholarship performed by a resident (one nominee from Dalhousie University Department of Family Medicine).

Questions regarding projects may be directed to:

Dr. Laura Sadler, Chair, Resident Project Sub-Committee
Phone: 902-473-4700 ; Fax 902-473-8548
E-mail: lyouden@dal.ca

Worksheet and Dates for
Completion of Resident Project

	PGY1			
Form	**Task**	**Timelines**	**Dates** **No later than…**	**Task Complete**
	ALL Residents: Meet with Project Coordinator to begin formulating a type of project	July-September	suggested by early September	
	Halifax site residents submit short project outline to Project Coordinator for feedback		**End of September**	
	Decide on topic and formulate the (research/project) question	July-October	Suggested by early October	
	ALL Residents: Select Project Supervisor	July-October	Suggested by early October	
	ALL Residents: Begin conducting literature review	September-December		
Project Proposal, Form I & Form II (*forms III and IV are required later, not now*)	Submit *project proposal* (2-3 pages) in writing, signed by their Project Coordinator (Form I) and the Project Supervisor (Form II)**.** **Halifax residents do not need Form I** The Project Coordinator will forward these forms to the Education Committee Secretary. **Halifax residents must forward their proposal and the Project Supervisor Form (Form II) directly to the Education Committee Secretary (fmcommittees@dal.ca)**		**1st Monday in February**	
	ALL Residents: If the resident project is a research project, the resident must apply to their local Research Ethics Committee for approval. (NOTE: *This may be a lengthy process and residents must plan accordingly*)	September-February		
	At some sites, Proposal Presentation Day (10 minute presentation) (this does not apply to Halifax residents)		**Usually in May – date to be determined by each site**	

	Worksheet and Dates for Completion of Resident Project			
	PGY2			
Form	**Task**	**Timelines**	**Dates** **No later than…**	**Task Complete**
Form III	**ALL Residents:** Completed Resident Project Progress Report (Form III), signed by Project Supervisor		**2nd Monday in September**	
Project Draft and Form IV	**ALL Residents**: Completed draft of project given to Project Supervisor for feedback **ALL Residents:** Project Supervisor to complete and sign Resident Project Final Approval Form (Form IV)		**1st Monday in January**	
Final Project	**Non-Halifax Residents:** Completed **FINAL** project and Form IV to be submitted to the Project Coordinator who will forward to the Education Committee Secretary (fmcommittees@dal.ca) **Halifax Residents:** Completed **FINAL** project and Form IV to be submitted to the Education Committee Secretary (fmcommittees@dal.ca)		**2nd Monday in February**	
	Education Committee Secretary will distribute projects for assessment	as received		
	ALL Residents: PGY2 residents will present their projects orally during their Site Project Presentation event.		**Usually in May – date to be determined by each site**	

PGY1 Resident Project Proposal (Form I)
(*not required for Halifax site residents*)

Please attached a 2-3 page detailed proposal to this form

Resident Name:_____

Project Supervisor Name:_____

Date:_____

Working Title of Resident Project:

_____

_____

Signature of Project Coordinator:_____

Signature of Resident:_____

Comments:

Please send a signed copy of this form to the Project Coordinator no later than
1st Monday in February

Please send an electronic version of the signed copy to the Education Committee Secretary
(fmcommittees@dal.ca)

DALHOUSIE UNIVERSITY
FACULTY OF MEDICINE
Department of Family Medicine

Dalhousie University Family Medicine PGY1 Resident

Project Supervisor Agreement (Form II)

All family medicine residents are required to complete a resident project as part of their residency program requirements. The purpose of the resident project is to introduce the resident to the process of finding answers to questions commonly encountered in primary care by critically reviewing the available literature.

Residents are expected to submit a written paper and give an oral presentation of their findings to their colleagues and faculty members at the annual Resident Project Presentation Day held on the second Monday in May of the PGY2 year or at their site project presentation event.

Types of Projects Acceptable
- Literature Appraisal/EBM Review
- Position Paper/Essay
- Educational Tool
- Practice Quality Improvement Project/Audit
- Research Project

Project Coordinator and Project Supervisor
All resident should have a *Project Coordinator* and a *Project Supervisor*. The Project Coordinator will discuss the project format and requirements with the resident on a regular basis and encourage the resident to adhere to the deadlines. In some cases the Project Coordinator may also be the Project Supervisor. The Project Supervisor will counsel the resident on the content of the project. The Project Supervisor may be a clinical supervisor in the home base Family Medicine Unit, another family physician, a consultant or another appropriate individual. If someone other than a family physician is selected, it is important to retain advice on the relevance of the project to Family Medicine from the Project Coordinator.

If you have any questions or concerns please contact: Dr. Laura Sadler, Resident Project Sub-Committee Chair, (902) 473-4700, or lyouden@dal.ca

I have agreed to be the Project Supervisor for Dr. _____
(name of Family Medicine resident)

Name of Project Supervisor:_____

Signature of Project Supervisor_____Date:_____

Please send a signed copy of this form to the Project Coordinator no later than the
1<u>st</u> <u>Monday in February.</u>

Please send an electronic version of the signed copy to the Education Committee Secretary
(fmcommittees@dal.ca)

Dalhousie University Family Medicine PGY2 Resident
Project Progress Report (Form III)

Resident:_____

Project Supervisor: _____

Title of Resident Project: _____

_____

Type of Project: _____

(*please specify: research, educational tool, literature appraisal/EBM review, position paper/essay, practice quality improvement/audit*)

As the Project Supervisor I have reviewed the ***progress*** of the resident project.

Signature of Project Supervisor: _____

Signature of Resident:_____

Date:_____

Comments:

Please send a copy of this completed form to the Project Coordinator no later than the
2nd Monday in September

Please send an electronic version of the signed copy to the Education Committee Secretary
(fmcommittees@dal.ca)

DALHOUSIE
UNIVERSITY
FACULTY OF MEDICINE
Department of Family Medicine

Dalhousie University Family Medicine PGY2 Resident
Project Final Approval (Form IV)

Resident: _____

Title of Resident Project:
_____

_____

As the Project Supervisor, I have reviewed and approved *the final draft copy* of the resident project.

Name Project Supervisor: _____

Signature of Project Supervisor: _____

Date: _____

Comments:

Please send a signed copy of this form to the Project Coordinator no later than the
1ˢᵗ Monday in January with a copy of your completed draft project.

Dalhousie Family Medicine Resident Project Assessment Rubric

Resident: Assessor: Date:

Type of Project: ☐ Research ☐ Literature Review ☐ Position Paper/Essay ☐ Educational Tool ☐ Practice Quality Improvement/Audit

	Outstanding (90-100)	Highly Acceptable (75-89) Suggested revisions optional	Acceptable (60-74) Suggested revisions optional	Requires Major Revisions (<59)	
	In this project, you...		In this area, you need to...	Remediation is required: you...	
Define question/thesis or presenting case	...present a precise original, thesis/ research question; demonstrate the significance with strong rationale; or describe case with appropriate rich detail and identify perceptively what is at issue	...present a clear question/thesis; demonstrate judgment in rationale for importance; or describe a case that works well for appraisal of values and/or evidence, and identify some significant points	...be more precise in defining your topic / (research) question, be more realistic and/or in tune with the reader in the rationale for the importance of your topic; be more accurate in seeing what is at issue in a case	..present a vague topic, with a poorly thought-out rationale that does not match the actual project carried out	/10
Researching/ Information gathering	...conduct a comprehensive and recent review of the literature with a clear and structured approach; inclusion / exclusion criteria identified; judiciously select important sources to focus on; reject or qualify less reliable sources.	...use a variety of sources, inclusion / exclusion criteria identified; well-chosen according to clear criteria as appropriate, and balanced in perspectives; take into account strengths and limitations of sources.	...pay more attention to finding the most relevant sources; be more balanced in the sources you use; take account of pitfalls in some sources. Describe methods and inclusion / exclusion criteria identified.	...fails to make use of appropriate literature, policy, and/or guidance of documents; make, use of unreliable sources.	/20
Presenting and evaluating sources/others' perspectives	...summarize diverse literature/views accurately and fairly; consistently focusses on the most central and significant ideas; critically evaluate sources/perspectives in a precise/nuanced manner	...summarize other's view fairly, with few errors; use appropriate methodologies/standards for critique; balance detail with focus in summary and/or critique	...be more fair in summarizing the views of others; be more focused and/or fair in your criticisms; be more judicious in homing in on what is important	...presents others' view in inaccurate or unfair ways; fail to apply reasonable standards of rigour in evaluating evidence	/25

	Outstanding (90-100)	Highly Acceptable (75-89) Suggested revisions optional	Acceptable (60-74) Suggested revisions optional	Requires Major Revisions (<59)	
Applying sources; reaching conclusions, resolving case, proving thesis	…successfully synthesize and weigh diverse kinds of evidence/applied appropriate research instruments and methods/ provide a compelling argument/evidence for conclusion, and/or a conclusion that is appropriately qualified given the argument/evidence	…utilized good research instruments and methods with few gaps/ draws plausible conclusion form the evidence and arguments/ demonstrate some ability to synthesize and or evaluate diverse evidence	…to improve the argument/ research methods/ get more comfortable in evaluating and synthesizing information/ reach clear conclusion	…fail to support views with evidence and arguments/research instruments and methods are inappropriate for the research question.	**/25**
Organization	...consistently organize your thoughts in a clear structure at both the overall and paragraph levels/ employ smooth transitions and cues for the reader/used appropriate and ordered research sections.	...organize thoughts so that the reader can follow, with intro/ body/ conclusion and paragraph breaks usually appropriate/ no gaps in the research sections and order used to organize the paper.	... break text appropriately into paragraphs and/or sections/ avoid repetition/ need to organize more logically/research presentation needs improvement	...don't organize well enough for the reader to follow your argument/research poorly presented	**/10**
Quality of Language	...write clear prose, use suitably complex sentence structures, consistently select appropriate academic vocabulary; proofread adequately	...make use of clear and accurate word choice; structure sentences well; commit few if any grammatical or spelling errors	...choose words more accurately for meaning or connotation; improve your grammar or spelling, whether by correcting mistakes or proofreading more carefully	...demonstrate problems in word choice that invite misunderstanding or give offence; use consistently poor grammar and spelling	**/5**
Relevance to Family Medicine	... relevance clearly stated	...relevance stated	...state the relevance more clearly	...demonstrates little relevance	**Yes/ No**
Proper citation & quality of references	…excellent	..very good	…good/needs improvement	…needs improvement	**/5**
Instructions: judge level of achievement, based on the descriptors in the box and underline some descriptors for guidance or praise. "Requires Major Revisions" must include specific descriptors and comments to help the resident improve. Only provide a final grade for those in the *Outstanding Highly Acceptable, and Acceptable* range. Grades Requiring *Major Revisions* will be given <u>*after the revisions have satisfactorily been completed*</u>.					**/100**

Updated October 2015

Comments **(please add additional pages when needed):**

Guide on How to Organize Resident Projects based on Type of Project

PROJECT TYPE	Literature Appraisal/EBM Review	Position Paper/Essay	Educational Tool/ Myth-buster	Practice Quality Improvement Project/Audit	Research Project
SECTIONS:					
Abstract ½ page	Summary of all the sections using the headings in the left column.				
Introduction ½ to 1 page	Brief introduction to why topic was chosen and its relevance to family medicine.				
Background 2 to 3 pages	Summary of background to topic for literature appraisal and state research question.	Summary of background literature and the position that will be taken.	Summary of background literature and provide evidence for relevance and indicate gaps.	Summary of background literature and state research question.	Summary of background literature and state research question
Study Design/Method 1-2 pages	State objective(s). Describe how review was conducted, data-bases searched, terms used for searches and inclusion /exclusion criteria used. Method applied for appraisal.	State objective(s). Provide brief description of evidence development to support position (literature review).	State objective(s). Provide methodology for educational tool development, audience focus, visuals, language level, tool choice (paper, video) etc. For Myth-busters, provide method for lit review (see literature appraisal). Use literature to support choice design, method & content	State objective(s). Describe study methods. Inclusion and exclusion criteria.	State objective(s). Describe study methods
Results 3-5 pages	Describe strength and summarize findings of literature/EBM review	Detail position in relation to literature/ evidence and, if appropriate, make recommendations or describe the meaning of the position and how it applies and will be incorporated in family medicine.	Tools/Myth-busters statements need to be grounded in the literature. Describe tool and how to implement it. Provide tool/Myth-buster in appendix.	Present findings from data and describe the strength of the findings.	Present findings from data.
Discussion 2-3 pages	Synthesize the literature, create meaning, and make recommendations and/or next steps.			Synthesize the data and make recommendations/next steps.	Synthesize/ interpret findings, link back to literature/ make recommendations/next steps
Strength/ Limitations ½ pages	Share limitations and highlight advantages and disadvantages of the data/literature.				
Conclusion ½ page	Summarize the results.				
References	References should be appropriate, relevant and the style should be consistent.				

Tips and Tricks When Doing a
Family Medicine Resident Research Project

Conducting research for your resident project can be rewarding and challenging. The following is intended to provide guidance and suggest resources to help with the research endeavor so you can competently complete your project with the time and resources you are prepared to expend. This guide is divided into 5 Steps:

Step 1: Select a topic, identify the research problem, and state a clear research question.
Step 2: Choose a research method.
Step 3: Find an appropriate supervisor.
Step 4: Write a research proposal.
Step 5: Ask the expert.

Step 1: Select a topic, identify the research problem, and state a clear research question.
Topic requirements are:
- It needs a strong relationship to family medicine
- You need to be curious/passionate about it
- It needs to addresses a gap in the research literature
- It needs to be doable within the allotted time and your skill set

Identifying your research problem/research question:
Selecting your research question can be one of the most agonizing and critical steps in developing a solid research study. It defines your whole process, from what background literature you need to read, guiding what method you should use, analysis required, and the findings to report in order to answer the question. Your question should be clear, focused, concise, complex and arguable. This will take time. Step away from your computer; consider what drew you to your topic. What about it animates and matters to you? Listen to yourself and start formulating your question by following your own interests. Remember, you will spend a lot of time researching and writing about the proposed project: if it does not interest you in the beginning, it will certainly become very difficult to write about in the end.
Next, extensively research your topic. What have experts published in peer reviewed journals? How have they framed their research? What gaps, contradictions, or concerns arise for you as you read, talk to people, and visit places? Would doing a local project using existing studies enhance knowledge? Consult the literature! If you aren't sure how to do this, consult a subject librarian: http://util.library.dal.ca/Subspecialists/

More on research question formulation:
Source: Practical Advice on how to formulate your research question: (edited from source http://www.chsbs.cmich.edu/fattah/courses/empirical/03.htm)

Keeping the Research Process in Focus:
- heart of the research project is the problem
- must articulate an acceptable problem
- formulate a problem that is carefully phrased and that represents the single goal of the research effort

State the Problem Clearly and Completely
- always state the problem in a complete grammatical sentence in as few words as possible
- be specific
- limit areas studied so that the study is of manageable size

Think, Consider and Estimate
- be sure of the feasibility of your study

Edit Your Writing
- choose your words carefully
- rewrite, rewrite, rewrite
- keep your sentences short

Every Problem Needs Further Delineation
- eliminate any possibility of misunderstanding
- give full disclosure of what you intend to do and not do
- give the meanings of all terms used
- state the assumptions
- state the hypotheses and/or research question

Sample Research Questions (source: http://writingcenter.gmu.edu/?p=307)

Too simple: *How are doctors addressing diabetes in the U.S.?*
Appropriately Complex: *What are common traits of those suffering from diabetes in America, and how can these commonalities be used to aid the medical community in prevention of the disease?*

The simple version of this question can be looked up online and answered in a few factual sentences; it leaves no room for analysis. The more complex version is written in two parts; it is thought provoking and requires both significant investigation and evaluation from the writer. As a general rule of thumb, if a quick Google search can answer a research question, it's likely not very effective.

Step 2: Choose a research method.

There are several methods to choose from for conducting research.

Qualitative/Exploratory Research
- Qualitative research focusses on the interpretation of a situation, set of behaviors, or a setting.
- Analysis must take place within a context.
  - Note: Different researchers may view the same situation and obtain different results.
- Qualitative research answers "how" and "why."
  - E.g.: How do patients perceive?

Quantitative/Explanatory Research
- Focuses on causal relationships and their impact (outcomes).
- Quantitative Research answers "what" questions.

Descriptive Research

- Descriptive research describes data and characteristics about the population or phenomenon being studied.
- Descriptive research answers the questions "who", "what", "where", and "when."
- The research cannot describe what caused a situation. Thus, Descriptive Research cannot be used to create a causal relationship, where one variable affects another.

- Descriptive research classifies phenomena.
  - E.g.: We may simply wish to describe the participants in a study and how they act, believe, perceive the world, or look.
- Examples of research questions for descriptive studies:
  - What is the clients' degree of satisfaction with the services provided though the clinic's open access model?
  - What percentages of people living in Cairo have incomes below the poverty line?

Step 3: Find an appropriate supervisor.

A supervisor should be interested in your project and available to guide you. If you are having trouble finding one, talk to your resident project site coordinator.

Step 4: Write a research proposal. This will also be required for ethics REB approval.

A research proposal is a study plan that is to be followed in the course of a research study. It is important for you to understand your objectives, method, analysis plan, any budgetary requirements, as well as how prepared you are to do the work required and if you have the needed skills. From this you can identify where you will need assistance.

Research proposal sections:

1. One paragraph **introduction** to your research question/problem, why this is important to study, relevance to family medicine. A good first line of a research proposal begins: "The research objective of this proposal is…"

2. Write a **more in depth introduction**. After you have identified a pertinent problem and framed a purpose statement, then you need to craft an introduction. Among other things, the introduction to the proposal will include:
   a. The problem statement
   b. A brief summary of the literature
   c. A brief description of any gaps in the literature
   d. A Purpose statement as to why you are proposing the study and why others should care about the subject matter of your research proposal.

3. **Background/literature review**. Frame your project around the work of others. Remember that research builds on the extant knowledge base, that is, upon the **peer reviewed published work of others**. Be sure to frame your project appropriately, acknowledging the current limits of knowledge and making clear your contribution to the extension of these limits. Be sure that you include references to the work of others. Also frame your study in terms of its broader impact to the field and to society. Ex. "If successful, the benefits of this research will be…"

4. **Methods**. Determine the Method of Investigation. The method section is the second of the two main parts of the research proposal. In good academic writing it is important to include a method section that outlines the procedures you will follow to complete your proposed study. Many scholars have written about the different types of research methods in articles and textbooks. It is a good idea to

site the method and provide a reference. The method section generally includes sections on the following:
- a. Research design;
- b. Sample size and characteristics of the proposed sample;
- c. Data collection and data analysis procedures

5. **Determine the Research Design**
   - a. The next step in good academic writing is to outline the research design of the research proposal. For each part of the design, it is highly advised that you describe two or three possible alternatives and then tell why you propose the particular design you chose. For instance, you might describe the differences between experimental, quasi-experimental, and non-experimental designs before you elaborate on why you propose a non-experimental design.
   - b. Determine the Sample Size and the Characteristics of the Sample. There are several free online sample size calculators, though you will need a basic understand of statistics to know how to use and interpret them. Some sites include:
     > http://www.stat.ubc.ca/~rollin/stats/ssize/
     > http://www.raosoft.com/samplesize.html
     > http://homepage.stat.uiowa.edu/~rlenth/Power/
   - c. In this section of your research proposal, you will describe the sample size and the characteristics of the participants in the sample size. Describe how you determined how many people to include in the study and what attributes they have which make them uniquely suitable for the study.

6. **Determine the Data Collection and Data Analysis Procedures**
   - a. In this section you will describe how you propose to collect your data e.g. through a questionnaire survey if you are performing a quantitative analysis or through one-on-one interviews if you are performing a qualitative or mixed methods study.
   - b. After you collect the data, you also need to follow a scheme as how to analyze the data and report the results. In a quantitative study you might run the data through Mintab, Excel or better yet SPSS, and if you are proposing a qualitative study you might use a certain computer program like ATLAS.ti to perform your analysis using a specific qualitative approach such as a narrative study, grounded theory study, or framework analysis, that exposes the main themes from the proposed interviews (see Tips and Tricks on Statistics).

7. **Software and analysis: There are several options for creating a database, cleaning your data and conducting your analysis.**
   - a. The only free software for quantitative data analysis through Dalhousie is Minitab, found here: https://software.library.dal.ca/index.php . Note, Minitab is only available for PC (not Macs). User guides and tutorials can be found here: http://www.minitab.com/en-CA/training/ . Additionally, students familiar with conducting statistics in Excel can download the free add-on package to a windows suite. However, reviews demonstrate

that Excel has many issues handling data correctly for analysis and is not as user-friendly as Minitab. If you can afford to buy, or find access to SPSS, it is user friendly and has a good tutorial, though it is not provided to students via Dal.

   b. The top qualitative software programs are Atlas.ti, NVivo, and MAXQDA. Atlas and MAXQDA have a student version for about $99. Atlas.ti is $199 for 12 months for students. Dedoose is available on 6 month ($12.95) and 9 month ($10.95) contracts for students.

8. **Ethics.** You will need to address any ethical considerations and how they will be dealt with including confidentiality, data storage etc. If Research Ethics Board (REB) approval is required for your study, you should check the website for the relevant REB review. Each site has its own REB process.

Step 5: Ask the experts.
Review your proposal with your supervisor and resident project site coordinator. Depending on your research needs, you may also consult with the Research Methods Unit (RMU) at Dalhousie University. An initial consultation is free, though to use their services for data analysis is $100 an hour. Early consultation can help you avoid costly mistakes.

Tips and Tricks when applying to a Research Ethics Board (REB) for a Family Medicine Resident Project

- When collecting data for a resident (research) project involving human beings, an ethics review from a recognized **Research Ethics Board (REB)** is required**.**

- This application requires a proposal with a brief background, methods and data analysis   section. In addition, the REB is particularly interested in the **consent process** regarding research participants. It is paramount that research participants are volunteers, who are fully aware to what they consenting.

- The Tri-Council - Canadian Institutes for Health Research (CIHR), Social Science and Humanities (SSHRC) and National Science and Engineering Research Council (NSERC) – has developed a joint research ethics policy.   See this link for the entire policy:
  http://www.pre.ethics.gc.ca/pdf/eng/tcps2/TCPS_2_FINAL_Web.pdf

  > The Tri-Council states:
  > *REBs shall consider whether information is identifiable or non-identifiable. Information is identifiable if it, alone or when combined with other available information, may reasonably be expected to identify an individual. The term "personal information" generally denotes identifiable information about an individual.*

  > However, there are some exceptions. The Tri-Council states:
  > *Research that relies exclusively on publicly available information does not require an REB review when: (a) the information is legally accessible to the public and appropriately protected by law; or (b) the information is publicly accessible and there is no reasonable expectation of privacy.*

- Chart reviews, or chart audits, also require REB approval when the resident is planning to discuss the results publicly (Resident Project Day). If a Chart audit is only used to improve the practice, no REB approval is required.

- A REB application adds time to the resident project; however, the work for the REB will be used for the final project.

- Many resident projects are considered "minimally invasive" and they may qualify for an "expedited review." An expedited review usually takes between 3 to 4 weeks, while a full review may take up to 2 months.

- After REB approval has been obtained, no changes to the research instruments or recruitment strategy can be made. If that is required, the REB needs to be informed.

- Each family medicine resident, who requires REB approval, needs to obtain it in the province, or hospital, of their residency (Dalhousie University recognizes the REB certificate from Horizon Health Network (HHN) for New Brunswick residents and vice versa).

- Here are some links for REB websites in various provinces that residents can access for a specific REB application information and forms (each institute has a different process).

New Brunswick
http://www.horizonnb.ca/home/research.aspx#

http://www.mta.ca/reb/Vitalite%20Guide%20Feb%202011%20English.pdf

Nova Scotia
http://www.dal.ca/dept/research-services/services/ethics-research-reviews/research-ethics-board-approval.html

Prince Edward Island
http://www.healthpei.ca/reb

- Please consult with your **resident project site coordinator** regarding the need for an REB application and how to go about it.

Tips and Tricks When Doing Statistics
Family Medicine Resident Project

If you want to do a resident project that involves collecting data and requires statistical analysis, here are some tips of how you can go about that. Keep in mind that you are responsible for doing the work, and should be prepared to know how to collect data, enter data, run your own analysis and interpret your findings, though some resources are available to assist you.

ASSISTANCE RESOURCES:

BEFORE you start collecting data, find somebody you can discuss your plan and statistical needs with. It could be your project supervisor, your resident project site coordinator and/or somebody else who can help you who is experienced with statistics. Resident project site coordinators can help you find someone to assist you. Also the Dalhousie University Research Methods Unit (see below) can be consulted. There will likely be a cost associated with receiving assistance, and these should be appropriately budgeted. Each resident has access to $50 towards their resident project. Additional funds would require an application with proposal and budget to your resident project site coordinator. Funding is at the discretion of the Department.

Dalhousie Research Methods Unit
If you need more sophisticated help you can consult with the Dalhousie Research Methods Unit http://www.cdha.nshealth.ca/discovery-innovation/research-methods-unit. The initial consultation with them is free.

Software Resources
Several software packages are available to assist with statistical analysis and they often have helpful tutorials. Here are some examples:

MINITAB
Minitab is likely the easiest solution to your statistical software needs. You can directly enter your data in Minitab or import from excel. This program is free of charge from the Dalhousie website;   http://its.dal.ca/helpdesk/licences.html (not for MAC users). Minitab is useful for basic statistics, regression, ANOVA, reliability and survival analysis.

Here is a youtube getting started video: http://www.youtube.com/watch?v=Ql88ytNBNgw Or tutorials from Minitab: http://www.minitab.com/en-GB/training/tutorials/default.aspx

SPSS
Statistical Package for Social Sciences (SPSS) is a popular statistical analysis program that is fairly easy to learn with several resources available. Only Dalhousie University faculty can download SPSS programs. Resident project site coordinators can sometimes assist in finding access to a computer with SPSS.

Microsoft Excel
Microsoft Excel is included in most MS office suites and can be used to conduct some basic statistics and creates attractive charts and graphs. However, a quick Google search will provide concerns as the reliability of its statistical analysis accuracy, so use with caution. You can use Microsoft Excel sheets to enter data. These Excel sheets can be easily imported to the statistical package Minitab. In theory you can also import the Excel data sheet in SPSS but it has caused some problems in the past.

Here are some videos that may help with Excel sheets:

http://noether.uoregon.edu/~dps/243/EXCEL.pdf

http://people.umass.edu/evagold/excel.html

http://office.microsoft.com/en-us/training/excel-statistical-functions-RZ001091922.aspx

http://www.youtube.com/watch?v=OTz2PQ-CdJU

Statistical Analysis Software (SAS)
If you require more advanced statistical techniques than the above options provide, you may want to use SAS or STATA, and unless you have advanced training and experience, you will likely need to hire assistance. It is recommended you consult with your supervisor, resident project site coordinator and/or the Research Methods Unit.

R
R is free software for statistical computing and graphics. It compiles and runs on a wide variety of platforms such as Windows and MacOS. You can download from http://www.r-project.org/

Tips and Tricks When Creating an Educational Tool
Family Medicine Resident Project

Before you start thinking about developing an educational tool, you need to consult the literature to find out the following:

- Does a tool already exist?
- Could you revise an existing tool?
- Could you adopt an existing tool to local conditions?

If no educational tool exists for what you want to do, go back to the literature. Remember, an educational tool's information has to be grounded in the scientific literature.

Also, if you select an educational tool as your resident project, it needs to be accompanied by a literature review paper. The purpose of this is that the reviewer can assess that the information in the educational tool is scientifically sound.

Once you have determined that you want to create your own educational tool, you need to consider the following:

- Who is your audience?
- What is the message you want to provide?
- What is the medium you want to use for the educational tool?
    - Paper, Internet, Video etc.
        - Do you have easy access to such mediums?
- What reading level should you aim for? (readability)
- Should the tool be interactive, passive?
- Consider the cost of an educational tool?
    - Do you need professionals to help with the design and what is the cost?
    - Are you going to distribute the tool and how many copies and what is the cost?

Also, you need to consider if you will test your tool on the target audience. Even a small pilot test may inform you about the readability and validity of the educational tool.

An educational tool should be

- Fun
- Visually compelling
- Use images
- Limit text
- Make your material easy to understand
- Create a "story" plot

Some references that may be of interest:
http://www.ncbi.nlm.nih.gov/pubmed/23044857
http://www.ncbi.nlm.nih.gov/pubmed/22720382   and
http://www.ncbi.nlm.nih.gov/pubmed/21070533

Tips and Tricks when doing a Literature Review
Family Medicine Resident Project

When doing a literature review, you need to adhere to some conventions. Before you start you may find it helpful to consult with a university/hospital librarian on how best to access resources for the literature review.

1) Research question has to be relevant to family medicine.
2) Assess the level of evidence of the studies you are reviewing (page 2).
3) Focus of literature review (page 3).
4) Create a table that is the focus of your review (page 4).
5) Do not repeat word for word what you have in the tables in the text.
6) Use the same outline as a regular scientific study.
    a. Introduction: why did you want to do this project
    b. Background: set up the research question with some general literature.
        i. Finish the section with a clear research question.
    c. Methods need to include the following:
        i. Search terms
        ii. Inclusion and exclusion criteria
        iii. Grey literature, if used
        iv. Data sets used - e.g. PubMed
        v. Number of articles pulled and ultimately reviewed
7) In the discussion describe the strengths and weaknesses of each article and synthesize the data. Use headings to help the reader. Answer the research question.
8) In the conclusion pull it all together, no new information should be added.
9) Acknowledgments: supervisor and others that may have helped you.
10) Use a standard bibliography format and do not mix bibliography styles.

LEVELS OF EVIDENCE

Level of Evidence	Study Design	Definition	*How does sleeping with a bottle of juice versus a bottle of water affect children's dental hygiene?*
1	Randomized Control Trials (RCTs)	RCTs are considered the most reliable form of scientific evidence. They involve the random assignment of participants to interventions and controls.	A group of children are randomly selected from the general population (each child has the same likelihood of being selected as all the others). This group is then randomly divided into two groups (A and B). Again, each child has an equal chance of being placed in either group. Group A is given a bottle of juice to sleep with at night. Group B is given a bottle of water to sleep with at night. The effect on the children's teeth is monitored for a set amount of time.
2	Cohort Studies	A Cohort Study is a study in which participants who presently have a certain condition and/or receive a particular treatment are followed over time. They are then compared with another group who are not affected by the condition.	A group of children who have poor dental health are followed across time. The habit of sleeping with a bottle of juice or water of the poor dental health group is compared to the sleep habits of a control group.
	Ecological/ Epidemiological Studies	Ecological studies look for associations between the occurrence of disease and exposure to known or suspected causes. The unit of observation is the population or community and may be defined in various ways.	Children with poor dental health are identified. Then correlations are made between (a) sleeping with a bottle of juice and dental health and (b) sleeping with a bottle of water and dental health.
3	Case-Controlled Studies	Case-control studies are a frequently used in epidemiological studies. Case-control studies compare participants who have a specific condition with participants who do not have the condition. Otherwise similar in order to identify factors that may contribute to the condition of interest.	Comparing children with poor dental health, with those who have good dental health who are the same age, ethnicity, socio-economic background, number of dental check-ups, etc.
	Non-Randomized Control Trials	The participants and interventions are not randomly assigned.	The first 50 to volunteer are instructed to have their child sleep with a bottle of juice, with the last 50 volunteers are instructed to have their child sleep with a bottle of water.
4	Case-Series	A number of individual cases of a particular condition are identified and followed individually over time.	Ten cases of poor dental hygiene in children are identified and intensely followed for a set amount of time.
5	Expert Opinion	The opinion of a professional who is considered an expert in their field.	The advice/opinion of a dentist who specializes in children's oral health and who has worked in the field for a long period of time.

SAMPLE PAPER OUTLINE

A review of evidence in support of school-based health promotion programs[3]

Introduction (1/2-1 page)

Background (1page)
       Obesity
       Why school-based programs?

Research Question: What are the features of a successful school based health program?

Methods (1/2-1 page)

Results (4-5 pages):
       Features of successful programs
              Peer-led
              Collaborative – community
              Dedicated school health coordinators
              Incorporates national/provincial/regional guidelines
              Parents as integral part of program and source of support for
      children
              Role of family doctors in the school-based health program model
              Gender and other subgroup analysis

Discussion (4-5 pages)

Conclusion (1 page)

Acknowledgement

Bibliography

Tables: the table becomes the central piece of your review. Do not repeat what is in the table in the text, but describe it in general terms.

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[3] Dr. Kappagantula provided permission to use her resident project as a sample project outline and literature review table.

Sample Table for a Literature Review

Author	Design	n	Variables	Results	Limitations
Bjelland et al.	RCT	14 65	Sugared beverage intake, sedentary behaviour	Preventive initiatives more effective in girls, need to study gender subgroups	Crude estimates of sedentary behaviours, sampling bias, social desirability in data
Brown T, Summerbell C.	Literature Review	38	Weight outcome	School based interventions may have benefit but inconsistent, may be short-term, girls/younger children have more benefit, physical activity must be combined with diet interventions	Heterogeneity of studies evaluated, therefore difficult to generalize any findings.
Bryn Austin S et al.	Qualitative	9	Effectiveness of *School Health Index*, Role of external facilitator	Presence of external facilitator influenced effectiveness of *SHI* and ability of schools to implement health promotion initiatives	Most schools in one geographical location (New England), reliance on self-reported data, did not include an objective data source
Card A, Doyle E.	Qualitative	40	Effectiveness of School Health Coordinator in implementing health promotion strategies in Nfld.	School health coordinator can change the approach of health promotion in schools to involve social, environmental as well as physiological health determinants	Vague descriptors regarding effectiveness of school health coordinators, results very preliminary in nature
Crawford PB et al.	Position paper	n/a	n/a	Using a bioethics framework further justifies the promotion of nutritional health through schools	n/a