

**Island Health Pharmacy Practice Residency**

**INTERNAL MEDICINE ROTATION**

**Preceptors**

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**ROTATION DESCRIPTION**

The clinical rotation in internal medicine provides the Pharmacy Resident with training and experience in cardiovascular disease (particularly ACS), respiratory, diabetes, renal, anaemia, and infection. The rotation will occur on Floor 1 at NRGH, which is one of the only wards offering telemetry and has a capacity for approximately 32 patients presenting with various complex medical issues. The medicine team consists primarily of internal medicine physicians and hospitalists though there is a regularly circulating respirologist, hematologist, cardiologist, and nephrologists as well. The inter-professional team also includes registered nurses, registered care aides, physiotherapists, social workers, dieticians, occupational therapists, speech-language pathologists, and the clinical pharmacist. Multidisciplinary students (pharmacy and nursing) and family medicine residents are regular participants in the unit. Majority of rotation time is spent on direct patient care activities, including but not limited to:

* proposing interventions and discussing care plans with physicians and nurses
* managing specialized therapies through developing and implementing patient-specific dosing schedules with monitoring plans
  + particularly for warfarin, vancomycin, phenytoin, gentamicin, digoxin
* documenting interventions and recommendations in the patient’s online chart
* documenting resolved drug therapy problems in rDTP tracker
* answering drug information questions from patients, physicians, and RNs
* completing consults on renal dosing of medications
* interviewing and counselling patients

The remainder of the time is comprised of working on assigned projects such as journal club, a case presentation, teaching an antithrombotic class for 2nd year nursing students, and participating in scheduled therapeutic discussions. The resident is provided with informal feedback on a daily basis and is formally evaluated at the rotation midpoint and at the end of rotation by one or both preceptors.

**ROTATION GOALS AND OBJECTIVES**

**Goal 1:** Develop and integrate the knowledge required to provide direct patient care as a member of the inter-professional team.

**Objectives:**

The resident will be able to:

1. Relate knowledge of the pathophysiology, risk factors, etiology and clinical presentation of common medical conditions (including symptoms, physical assessment, relevant diagnostics, and laboratory findings) to patient-specific clinical findings to make appropriate, patient-specific drug therapy recommendations. (CPRB 3.1.4.e)
   1. Common disease states/topics encountered that may be discussed:
      1. Anticoagulation management and VTE prophylaxis
      2. Acute Coronary Syndromes (UA/NSTEMI, STEMI)
      3. Atrial fibrillation
      4. Infections (endocarditis, genitourinary, respiratory, skin and soft tissue)
      5. Renal failure – acute and chronic
      6. Diabetes
      7. Acute exacerbation of COPD
      8. Acute management of heart failure exacerbation
      9. Management of cirrhosis and associated complications
      10. Laboratory values
      11. Pharmacokinetics
      12. Others as desired/requested by resident, or as applicable to patients encountered
2. Relate knowledge of pharmacology, pharmacokinetics, pharmaceutics, and evidence-based therapeutics to patient-specific clinical findings to make appropriate and patient-specific drug therapy recommendations. (CPRB 3.1.4.e)
3. Acquire and utilize knowledge of safe medication practices to manage and improve medication use for patients. (CPRB 3.2.5)

**Goal 2:**  Demonstrate the necessary clinical skills to provide direct patient care as a member of the inter-professional team.

**Objectives:**

The resident will be able to:

1. Place a high priority on, and be accountable for, selecting and providing care to patients who are most likely to experience drug therapy problems. (CPRB 3.1.3)
2. Establish a respectful, professional, ethical relationship with the patient and/or their caregiver(s). (CPRB 3.1.4.a)
3. Gather relevant patient information through patient interview and from all appropriate sources. (CPRB 3.1.4.c.d)
4. Develop a prioritized medical problem list and describe the currently active issues that are responsible for the patient’s admission or clinic visit. (CPRB 3.1.4.e)
5. Identify, justify, and prioritize a list of patient-specific drug therapy problems. (CPRB 3.1.4.b)
6. Advocate for the patient in meeting their health-related needs and their desired goals of therapy. (CPRB 3.1.2)
7. Identify, prioritize, assess, and justify a list of reasonable therapeutic alternatives and discuss pros/cons of each, considering efficacy, safety, patient factors, administration issues, and cost. (CPRB 3.1.4.e)
8. Develop, prioritize, justify, defend and implement a list of patient-specific recommendations for identified drug therapy problems. (CPRB 3.1.4.e.f)
9. Design and implement monitoring plans and/or plans for continuity of care that accommodate new or changing information. (CPRB 3.1.4.g)
10. Proactively provide patient education and seamless care. (CPRB 3.1.4.h)
11. Proactively communicate healthcare issues (including medication order clarifications) and care plans verbally to the appropriate team members and/or patient, as appropriate. (CPRB 3.1.4.f.i, 3.2.4.c)
12. Proactively document healthcare issues (including medication order transcriptions/clarifications) and care plans, as appropriate (CPRB 3.1.4.e.f.i, 3.2.4.b.c)
13. Effectively respond to medication- and practice-related questions and educate others in a timely manner, utilizing systematic literature search, critical appraisal skills and appropriate means of communication (verbal or written, as appropriate). (CPRB 3.5.1.a.b.c.d.e)

**Goal 3:** Demonstrate the attitudes and behaviours that are hallmarks of a practice leader and mature professional.

**Objectives:**

The resident will:

1. Demonstrate responsibility for own learning, through the refinement and advancement of critical thinking, scientific reasoning, problem-solving, decision-making, time management, communication, self-directed learning, and team/inter-professional skills. (CPRB 3.4.1)
2. Demonstrate commitment to the profession, collaboration and cooperation with other healthcare workers, and an understanding of the role of the pharmacist in the inter-professional team in the improvement of medication use for patients. (CPRB 3.1.1, 3.2.2, 3.3.3)

**Goal 4:** Develop and apply knowledge and clinical skills specifically related to this rotation.

**Rotation-Specific Objectives:**

1. Apply knowledge of risk factors of venous thromboembolism versus haemorrhage to assess the appropriateness and recommend a regimen of prophylactic anticoagulation in internal medicine patients. Emphasis will be on managing warfarin therapy in a variety of multicomorbid patients.
2. Relate knowledge of the pathophysiology, risk factors, etiology and clinical presentation of atrial fibrillation including symptoms, physical assessment, relevant diagnostics, and laboratory findings, to patient-specific clinical findings to make appropriate, patient-specific drug therapy recommendations in acute and chronic cases.
3. Relate knowledge of pharmacology, pathophysiology, and evidence-based therapeutics to make appropriate drug therapy recommendations for unstable angina/NSTEMI, STEMI, and cardiomyopathy.
4. Relate knowledge of the pathophysiology, risk factors, etiology and clinical presentation of type II diabetes including symptoms, physical assessment, relevant diagnostics, and laboratory findings, to patient-specific clinical findings to make appropriate, patient-specific drug therapy recommendations.
5. In the setting of infectious disease, relate knowledge of antimicrobial susceptibility, pharmacokinetics, pharmacodynamics, patient compliance, and therapeutics to assess and formulate recommendations to narrow antimicrobial therapy and/or step-down from intravenous to oral therapy.
6. Relate pharmacological knowledge of relevant medications to pathophysiology of AKI/CKD to make/suggest appropriate and patient specific renal dose adjustments.
7. Relate knowledge of pharmacology, pharmacokinetics, pharmaceutics, and evidence-based therapeutics to patient-specific clinical findings to make appropriate, patient-specific drug therapy recommendations for at least TWO of: vancomycin, gentamicin, phenytoin, and/or digoxin

**REQUIRED ACTIVITIES**

In addition to the stepping into the role as a ward pharmacist (e.g. fielding questions, documenting recommendations, discussing drug therapy options directly with care staff, etc.) the resident must:

1. Present patient cases to preceptor on a daily basis and discuss appropriate management and follow-up.
2. Discuss select therapeutic disease states including pathophysiology and treatment.
3. Deliver a case presentation to pharmacy staff and/or prepare and present an in-service to nursing students. Topic to be decided as appropriate.
4. Facilitate a Journal Club for pharmacy staff.

**PRECEPTOR CONTACT TIME**

1. The preceptor will spend a minimum of one hour per day with the resident discussing patient cases and approaches to identification, prevention, and resolution of drug-related problems, development of therapeutic plans, and development of monitoring plans.

2. The preceptor will spend a minimum of two hours per week with the resident discussing select therapeutic disease states.

**EVALUATIONS**

The resident and preceptor shall complete and review together the mid-point and final evaluations. The mid-point evaluation should be completed at the half-way point of the rotation. Final evaluations shall be completed at the end of the rotation. The resident is to facilitate/ coordinate handover meeting between current preceptor and following preceptor.

**Mid-point evaluations:**

* Preceptor’s evaluation of the resident

**Final evaluations:**

* Resident’s self-evaluation
* Resident’s evaluation of the rotation and preceptor
* Preceptor’s evaluation of the resident
  + To be discussed with following rotation’s preceptor as well for handover