



## **Island Health Pharmacy Practice Residency INFECTIOUS DISEASES AND ANTIMICROBIAL STEWARDSHIP ROTATION**

### **Preceptor:**

Jolanta Piszczek, BSc Pharm, PharmD, MSc EBM (candidate)  
Clinical Pharmacy Specialist, Infectious Diseases and Antimicrobial Stewardship  
Royal Jubilee Hospital

250-589-8507 or ext. 12318  
jolanta.piszczek@viha.ca

---

### **ROTATION DESCRIPTION**

This rotation involves two distinct services – the Antimicrobial Stewardship Program (AS) as well as Infectious Diseases (ID) consult service. This rotation is based in Victoria at the Royal Jubilee Hospital (RJH). Each day, the resident will take on the care of one new patient, either from the ID consult service list, Outpatient Parenteral Therapy Service (OPAT) or a selected patient requiring an AS consult. It is therefore expected that the resident follows 20 patients during their 4 weeks. Each day, a new therapeutic topic will be covered that is relevant to the patient case that day.

The AS portion of this rotation will provide the resident with the opportunity to learn about the appropriate use of antimicrobials on various wards at RJH. With the goal of stewardship in mind, the resident will provide clinical patient care to selected patients who have a drug therapy problem related to optimization of antimicrobial therapy. The resident will work to identify and resolve the patient's DTPs, make suggestions to the team, monitor therapy and provide education regarding the optimal use of antimicrobials. The resident will also spend time learning about the different modalities of providing AS services (audit and feedback, protocol development, education etc.) and about the different moving parts of the program (medical microbiology, laboratory medicine, infection prevention and control, ID, research etc.).

The ID portion of this rotation will provide the resident an opportunity to learn about the role of the infectious disease consultation team as well as the pharmacist's role within such team. For select patients where ID is consulted, the resident will have the opportunity to make initial assessments and recommendations and then provide follow-up and monitoring for commonly seen infectious diseases. The level of involvement may range depending on patient factors, however, most patients referred to the consultation team have complex disease processes, whereas AS patients will usually involve be simpler cases. One week rotation at OPAT will also be included.

## **REQUIRED ACTIVITIES**

A calendar of activities will be provided on the first day of the rotation, and will include:

- Meeting with the rotation preceptor on the morning of the first day to review the rotation objectives/activities and calendar
- A one day orientation in the microbiology lab and will in return provide a short 15min presentation to the lab technologist on an antimicrobial drug or drug class (to be discussed with preceptor).
- Prepare for and attend patient care rounds
- Daily meeting with preceptor to review patients and care plans
- Daily meeting with preceptor to review chosen topic for discussion (usually relevant to patient cases)
- Other activities as agreed upon by preceptor and student (e.g. metrics, patient quality and safety, AS meetings/seminars etc.)

## **PRECEPTOR CONTACT TIME**

1. The preceptor will spend a minimum of two hours 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. This will not include time spent with the resident during patient care rounds.
2. The preceptor will spend a minimum of three 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.

### **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 (Direct Patient Care Rotation In-Training Evaluation of Resident, or ITAR)

## **ROTATION GOALS AND OBJECTIVES**

**Goal 1:** Develop and apply knowledge and clinical skills specifically related to Infectious Diseases and Antimicrobial Stewardship

### **For the AS portion of the rotation:**

1. Demonstrate an understanding of the role and purpose of Antimicrobial Stewardship and be able to list and describe various components of a successful and sustainable program.
2. Be able to differentiate AS from ID.
3. Demonstrate the proficiency in resolving common AS-related DTPs, including
  - a. IV to PO switch
  - b. De-escalation of broad spectrum antibiotics
  - c. Determining start and stop dates
  - d. Monitoring for efficacy and safety
  - e. Cost containment
4. Demonstrate a basic knowledge of the metrics used for evaluating antimicrobial management and stewardship programs and be able to list the pros/cons and barriers to each.
5. Be familiar with AS-related resources available.

### **For the ID portion of the rotation:**

1. Demonstrate the required degree of drug and disease knowledge in the following areas, as opportunity arises (usually ~10 ID topics will be covered during the ID portion of the rotation):
  - a. Diseases: pneumonia, endocarditis, meningitis, septic joint infections, SSTI, intra-abdominal infection, UTI/pyelonephritis, infections in the immunocompromised host, clostridium difficile infections, osteomyelitis, blood stream infections
  - b. Pathogenic organisms: describe common infectious agents in terms of epidemiology, pathogenesis and antimicrobial susceptibility/resistance
  - c. Drugs: students are expected to have familiarity with commonly used antimicrobials. Newer and less commonly used agents and multidrug therapeutic strategies may be discussed during the rotation.

**\*\*Please note that scheduled therapeutic discussions on select topics mentioned above will be confirmed at the start of the rotation and other items may be discussed informally according to the resident's area(s) of interest/need for learning and the type of patients who are seen during the rotation. These topics will generally be preceded by assigned readings.**

2. Demonstrate understanding of the following patient-related non-therapeutic knowledge as it pertains to the patients encountered in the rotation:

- a. ethical issues (e.g. treatment of infections in palliative patients )
  - b. cultural issues (e.g. implications of vaccine refusal)
  - c. socioeconomic issues (e.g. risk factors for certain pathogens eg. CA-MRSA, HIV)
  - d. other: (e.g. infection prevention and public health related issues, microbiologic antimicrobial consumption surveillance)
3. Provide accurate and relevant drug information to other health-care members in a timely manner, if available.

## **Goals and Objectives for All Direct Patient Care Rotations**

### **Goal 2:**

Develop and integrate the knowledge and skills required to provide direct patient care as a member of the inter-professional team (CPRB 2018 Standard 3.1).

### **Objectives:**

The resident will be able to:

1. Relate knowledge of the pathophysiology, risk factors, etiology and clinical presentation of medical conditions, including symptoms, physical assessment, relevant diagnostics, and laboratory findings, to patient-specific clinical findings to make appropriate, patient-specific drug therapy recommendations. (2018 CPRB 3.1.1.b)
2. Relate knowledge of pharmacology, pharmacokinetics, pharmaceuticals, and evidence-based therapeutics to patient-specific clinical findings to make appropriate, patient-specific drug therapy recommendations. (2018 CPRB 3.1.1.b, 3.1.2.a.b.c)
3. Acquire and utilize knowledge of safe medication practices to manage and improve medication use for patients (2018 CPRB 3.2.5, 3.2.6, 3.3.2) by demonstrating safe and appropriate:
  - a. Medication ordering and/or prescribing
  - b. Order clarifications (using approved abbreviations)
  - c. Medication incident reporting
  - d. Application of medication administration policies (eg. parenteral medications), and
  - e. Use of prescribing tools such as pre-printed clinical order sets
4. Develop the skill required to appropriately triage and prioritize providing care to patients who are most likely to experience drug therapy problems. (2018 CPRB 3.1.1.a, 3.1.7)
5. Develop the skill to establish a respectful, professional, ethical relationship with the patient and/or their caregiver(s), and the ability to engage in empathetic, compassionate, non-judgmental, culturally safe and tactful conversations. (2018 CPRB 3.1.4, 3.1.8.a)
6. Develop the skill to gather, evaluate and interpret relevant patient information from all appropriate sources in an organized, thorough and timely manner, including effectively eliciting a patient history and performing assessments, including the

ability to report all pertinent findings and explain their significance. (2018 CPRB 3.1.8.d.e). Examples of information gathered include but are not limited to:

- a. Chief complaint,
  - b. History of present illness
  - c. Past medical history
  - d. Social history
  - e. Review of systems
  - f. Investigations
  - g. Past and current medications
  - h. Ability to report all pertinent findings and explain their significance.
7. Develop the skill to generate a prioritized medical problem list and describe the currently active issues that are responsible for the patient's admission or clinic visit. (2018 CPRB 3.1.8.f)
8. Develop the skill to identify, justify, and prioritize a list of patient-specific drug therapy problems and the ability to assess medication orders for appropriateness using all available information to resolve problems. (2018 CPRB 3.1.8.c, 3.2.4)
9. Develop the skill to establish and incorporate patient's desired outcome(s) of therapy and principles of shared decision making into his/her practice, advocating for the patient in meeting their health-related needs and establishing care plans for individual patients that include consideration of the patient's goals and the roles of the other team members. (2018 CPRB 3.1.5, 3.1.6, 3.1.8.b.f)
10. Develop the skill to 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. (2018 CPRB 3.1.2.b.c, 3.1.8.d.e.f)
11. Develop the skill to create, prioritize, justify, defend and implement a list of patient-specific recommendations for identified drug therapy problems based upon the resident's patient-centred clinical assessment and proactively communicating issues to affected stakeholders, including patients and their families to resolve those issues, when possible (2018 CPRB 3.1.1.d, 3.1.3.c, 3.1.6, 3.1.8.f.g)
12. Develop the knowledge and skill to proactively monitor drug therapy outcomes, revise care plans on the basis of new information and provide patient education related to their medication, self-management and/or monitoring of their condition as applicable. (2018 CPRB 3.1.8.h.i)
13. Develop the knowledge and skill to establish and maintain effective inter- and intra-professional working relationships for collaborative care (2018 CPRB 3.1.3.a.b.e.f) by:

- a. Engaging in respectful, compassionate, non-judgmental, culturally safe, tactful conversations with members of the healthcare team
  - b. Work effectively with other healthcare professionals by actively participating with other care providers in making care decisions.
  - c. Provide safe and effective transfer of care responsibility during care transitions
  - d. Recognize when care should be handed over to another team member.
14. Develop the skill to proactively communicate care plans using written or electronic means of documentation about the care being provided, in a manner that will optimize clinical decision-making, patient safety, confidentiality and privacy. (2018 CPRB 3.1.1.d, 3.1.8.i)
15. Develop the knowledge and skill required to respond to medication- and practice-related questions (2018 CPRB 3.1.2.a.b.c, 3.5.1.a.b.c.d.e) by:
- a. Educating others in a timely manner at a level of detail appropriate to the requestor.
  - b. Effectively selecting and navigating resources
  - c. Utilizing a systematic literature search and critical appraisal skills to formulate a response and,
  - d. Communicating responses both verbally and in writing, as appropriate.
16. Develop the skill to independently prioritize tasks, think critically, use scientific reasoning, problem solve and manage own time. (2018 CPRB 2.1.5.3, 3.1.1.c, 3.4.1)

### **Goal 3:**

The resident shall apply skill in the management of his/her own practice of pharmacy, to advance his/her own learning, to advance patient care, and to contribute to the goals of the program, department, organization, and profession (2018 CPRB Standard 3.4).

### **Objectives:**

The resident will develop and exhibit the attitudes and behaviours that are hallmarks of a practice leader and mature professional (2018 CPRB 2.1.5.3, 2.1.5.4, 3.1.1.c, 3.4.1) by:

17. Learning to demonstrate responsibility for own learning, by:
- a. Exhibiting self-direction, motivation
  - b. Modifying behaviour in response to feedback
  - c. Engaging in professional conduct by exhibiting punctuality, communication about deadlines, accepting responsibility for recommendations and reliably following through on all assigned tasks.

18. Learning to recognize role (2018 CPRB 2.1.5.6, 3.1.3.a.b.c.d, 3.2.2, 3.3.4) by:

- a. Demonstrating commitment to the profession and ethical conduct.
- b. Exhibiting respect for colleagues and members of care teams and
- c. Understanding role within the inter-professional team

#### **Goal 4**

To provide the resident with the opportunity to take responsibility for their own learning and to customize their individualized learning plan to meet their educational needs and to exhibit the ability to manage one's own practice of pharmacy (CPRB 2018 2.2.2.6 a, e and 3.4.1 and 3.4.2)

#### **Personal Learning Objectives:**

To meet this goal the resident shall develop and revise their personal learning plan by developing and documenting personal learning objectives for the rotation.

#### **Process to Document Personal Learning Objectives**

Prior to the start of the rotation, the resident will enter three to five personal learning objectives into their one45 procedure log. The resident and preceptor will review these personal learning objectives together on the first day of the rotation. Once the preceptor has read and discussed these personal learning objectives with the resident, they will sign off in the procedure feedback log. The preceptor will then take steps to integrate learning activities into the rotation to help the resident achieve these learning objectives.

**The achievement of these objectives will be assessed and documented in section D. of both the midpoint and final evaluation forms.**