



Island Health Pharmacy Practice Residency INFECTIOUS DISEASES AND ANTIMICROBIAL STEWARDSHIP ROTATION

Preceptor:

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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.

ROTATION GOALS AND OBJECTIVES

Goal 1: Develop and integrate the knowledge required to provide direct patient care as a member of the interprofessional 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)
2. Relate knowledge of pharmacology, pharmacokinetics, pharmaceuticals, and evidence-based therapeutics to patient-specific clinical findings to make appropriate, 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 interprofessional 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/interprofessional 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 interprofessional 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 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.

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 ITER)