

ANTIMICROBIAL STEWARDSHIP ROTATION DESCRIPTION

SITE/PRECEPTOR:

This rotation incorporates service to Toronto General Hospital, Toronto Western Hospital, Princess Margaret Cancer Centre, and the Toronto Rehabilitation Institute. Since the Antimicrobial Stewardship is a joint program between UHN and Sinai Health, there are programmatic learning opportunities that include Mount Sinai Hospital and Bridgepoint Health.

Preceptors: Jennifer Curran, Mark McIntyre, Miranda So, Jenna Sauve

Note: A UHN-based Antimicrobial Stewardship Program (ASP) Pharmacist will be assigned as the primary preceptor, but the resident will have opportunity to shadow any of the ASP team pharmacists.

DURATION:

4 weeks

OUTCOMES:

The resident will develop the clinical knowledge, skills and professional values to

- A. provide evidence-based patient care as a member of an interprofessional team
- B. provide medication- and practice-related education
- C. manage one's own practice of pharmacy for patients followed by the joint SH+UHN ASP service

GOALS and OBJECTIVES:

Please refer to the ***UHN/MUHC HIV Advanced (Year 2) Clinical Rotations: Goals and Objectives*** document for the overall goals and objectives for this clinical rotation.

Specific goals and objectives for this rotation are focused on clinical practice and education.

Clinical practice:

The resident will be expected to be able to:

Knowledge

- explain the goals and objectives of the ASP in the institution
- recognize the value of antimicrobial stewardship to patients, the healthcare system and in society in general
- demonstrate proficient knowledge in infectious diseases, pharmacology, pharmacokinetics, pharmacodynamics, microbiology, susceptibility pattern and epidemiology through active participation in Antimicrobial Stewardship rounds
- describe the internal and external reporting structures of the ASP
- Describe the role of collaboration with IPAC and the Microbiology laboratory as it pertains to types of ASP interventions
- gain an introductory understanding of behaviour change techniques, quality improvement and implementation science concepts

Skills

- collaborate with members of the ASP team and identify the role of each member
- demonstrate the role of the ASP pharmacist in guiding the patient care teams to adopt a rational approach to antimicrobials use by focusing on:
 - knowledge translation
 - interprofessional communication
 - critical appraisal for evidence informed decisions

Action

- describe and participate in the various interventions the ASP employs to guide patient care teams

Education and Knowledge Translation:

The resident will be expected to be able to:

- Prepare and present educational materials for clinicians on topics related to ASP.
- Facilitate the development of clinical pathways and guidelines

DESCRIPTION:

This elective clinical rotation is offered through the SH+UHN ASP. ASP seeks to optimize antimicrobial use in all patients, with the motto “Getting Patients the Right Antibiotics When They Need Them”. The resident will learn the basic principles of antimicrobial stewardship, and how to apply such skills in an interprofessional patient care team setting.

Teaching will be provided by a variety of methods including self-directed learning, patient case discussions, participation in Antimicrobial Stewardship rounds, resident-preceptor therapeutic discussions, multi-disciplinary teaching rounds, and pharmacy department rounds.

Residents can expect to participate in peer-to-peer, as well interprofessional teaching and learning

RESIDENT RESPONSIBILITIES:

1. Provide previous rotation assessment, longitudinal knowledge tracking, and rotation specific objectives to preceptor at start of rotation.
2. The Resident will prepare for Antimicrobial Stewardship rounds for areas serviced by the ASP. The Resident may focus on one patient care unit, but is expected to attend all Antimicrobial Stewardship rounds at least initially to gain exposure. The area of focus will be determined based on the Resident’s interest, prior experience (e.g. clinical rotations already completed) and the preceptor’s primary area of practice. The Resident may choose to limit the number of patients to review initially, or to focus on certain diseases until he/she becomes proficient with the process and knowledge.\
3. The Resident will meet with and understand the role of the various members of the ASP team including but not limited to data analysts, research coordinator, clinical site leaders and ASP physicians.
4. Using the electronic health record, the resident will be reviewing patients who have been

prescribed antimicrobials. The Resident will determine whether any recommendations can be made to the patient care team on antimicrobial selection, dosage, route, and duration of therapy. They will also assess patients who require an antimicrobial but are not currently prescribed one.

5. Recommendations will be reviewed with the preceptor prior to interaction with the care team. The resident should be able to communicate their recommendations for patients under to the Patient Care Team by Week 3.
6. Attend Antimicrobial Stewardship meetings (i.e. team, clinician and research)
- 7.. Present a case, journal club or evidence-based topic presentation to a clinician team. Presentation topic (with supplementary readings, journal articles, etc) must be emailed to staff pharmacist one week in advance.
8. Attend the following educational rounds:
 - pharmacy education (clinical sharing or clinical foundations)
 - journal clubs (optional)
 - pharmacy resident presentations (as applicable)
 - inter-professional education/collaboration (IPE/C) (as applicable)
 - Educational rounds (i.e. ID rounds, tropical medicine rounds, etc) (optional)
9. Complete the following assessments:
 - written midpoint self-assessment (forward to preceptor prior to meeting to discuss)
 - verbal and written self-assessment after each presentation
 - written assessment of the rotation and preceptor at the end of the rotation
 - longitudinal knowledge tracking

RESIDENT ASSESSMENT:

Residents will be assessed in the following manner:

- verbal formative feedback provided on a daily basis.
- mid-point meeting and review of resident self-assessment (Clinical Rotation Assessment form)
- written final rotation assessment completed by preceptor (Clinical Rotation Assessment form).

Assessments will be based on patient care work-ups, therapeutic interventions, participation in inter-professional rounds, resident-preceptor therapeutic discussions, case presentations, teaching activities and professional conduct.

**Appendix A:
Infectious Diseases Syndromes and Microbiology Commonly Encountered during
Antimicrobial Stewardship Rounds**

Microbiology:

- Antimicrobial resistance and local epidemiology
- Mechanisms of bacterial resistance
- Microbiology lab principles and practices

Rotation Core topics:

- Pneumonia (CAP/HAP/VAP) and aspiration pneumonitis
- Intra-abdominal infections
- Urinary Tract Infections and asymptomatic bacteriuria
- Central nervous system infections
- Skin and soft tissue infections
- Bone and joint infection
- Blood stream infections, particularly *Staphylococcus aureus* bacteremia
- Infective endocarditis and other endovascular infections
- Neutropenic fever management and prophylaxis
- Invasive fungal infections (candidiasis and aspergillosis)
- *C. difficile* infection
- Surgical antibiotic prophylaxis

Additional topics

- Fever in the returned traveler
- Cardiovascular infections
- Parasitic infections
- Select viral infections

References and suggested readings:

As supplied by preceptor.