



## **Pharmacy Residency Research Project Proposal**

### **ANTIMICROBIAL CONSUMPTION MEASUREMENT – A SURVEY OF CANADIAN HOSPITAL PHARMACISTS**

#### **PRINCIPAL INVESTIGATOR**

Piera Calissi, BSc(Pharm), PharmD, FCSHP – Pharmacy Co-ordinator – Antimicrobial Stewardship Program

#### **CO-INVESTIGATORS**

John Groumoutis BSc (Pharm) – RIH Clinical Pharmacist – Antimicrobial Stewardship Program

Sean Gorman, BSc (Pharm), PharmD – Pharmacy Manager

Edith Blondel-Hill MD – Medical Director – Antimicrobial Stewardship Program

#### **RESEARCH SITE(S)**

KELOWNA HEALTH SERVICES

#### **PROPOSED RESEARCH QUESTION(S)**

##### **POPULATION:**

HOSPITAL PHARMACISTS AFFILIATED WITH CANADIAN ANTIMICROBIAL STEWARDSHIP PROGRAMS

##### **INTERVENTION:**

- STRUCTURED INTERNET-BASED SURVEY OF ANTIMICROBIAL STEWARDSHIP PROGRAM PHARMACISTS AT CANADIAN HOSPITALS CONDUCTED BETWEEN SEPTEMBER 2023-MARCH 2024
- THE SURVEY WILL INCLUDE QUESTIONS ABOUT PROGRAM'S PRACTICES, ROLE AND RESPONSIBILITIES RELATED TO MEASUREMENT AND REPORTING OF ANTIMICROBIAL CONSUMPTION

##### **COMPARATOR:**

- NOT APPLICABLE

##### **OUTCOMES:**

- PHARMACIST EXPERIENCE / EDUCATION
- INSTITUTIONAL CHARACTERISTICS
- ANTIMICROBIAL STEWARDSHIP PROGRAM PATIENT CARE TEAM MEMBERS
- ANTIMICROBIAL CONSUMPTION METRIC (S) EMPLOYED, SOURCE OF DATA, ANTIMICROBIALS INCLUDED AND EXCLUDED FROM MEASUREMENT, LIMITATIONS OF SOURCE DATA

- ANTIMICROBIAL CONSUMPTION REPORTS PRODUCED AND REPORT RECIPIENTS
- USE OF CONSUMPTION DATA TO MEASURE IMPACT OF INTERVENTIONS OR IDENTIFY AREAS OF CONCERN
- PROGRAM PERSONNEL INVOLVED IN DATA COLLECTION, ANALYSIS AND REPORTING
- FREQUENCY OF DATA COLLECTION, ANALYSIS AND REPORTING
- EXAMPLES OF HOW CONSUMPTION DATA IS USED TO MEASURE THE IMPACT OF INTERVENTIONS OR IDENTIFY AREAS OF CONCERN

### **OBJECTIVES (SHOULD LINK TO OUTCOMES)**

- TO DESCRIBE ANTIMICROBIAL STEWARDSHIP PROGRAM PRACTICES, ROLES, AND RESPONSIBILITIES TO MEASURE AND REPORT ANTIMICROBIAL CONSUMPTION

### **RATIONALE**

Antimicrobial stewardship programs (ASP) provide co-ordinated interventions to optimize antimicrobial use in order to improve patient outcomes, prevent adverse events and slow development of resistance.<sup>1</sup> ASPs measure and report the impact of these interventions on antimicrobial consumption and costs using a variety of methods. For example, prescription data typically is used to calculate days of therapy (DOT) before and after an intervention to optimize usage, compare facilities, benchmark or identify areas of concern.

Guidelines suggest that ASPs measure the DOT to evaluate the impact of interventions.<sup>1</sup> Beyond measurement, some hospitals participate in global point prevalence surveys to better understand how antimicrobial agents are used (i.e. patient populations, indications, treatment vs. prophylaxis) within facilities.<sup>2</sup> To measure the impact of interventions to de-escalate from broad-spectrum to narrow spectrum antibiotics, use of the “antibiotic spectrum index” and “days of antimicrobial spectrum coverage” metrics have been proposed.<sup>3</sup> Consensus on how these measures are selected, used and reported is lacking.

### **SIGNIFICANCE**

Since inception in 2014, the Interior Health ASP annually measures antimicrobial DOT and reports year-to-year changes in consumption to hospital leadership and committees. The program has discussed how to optimize use of the data to monitor and report antimicrobial consumption, measure the impact of interventions and identify area of concerning antimicrobial use at facilities within the health authority. This survey of Canadian hospital ASP antimicrobial metrics will help inform decisions on how best to use the data within Interior Health.

### **PROPOSED RESEARCH METHODS**

Internet-based, structured survey of Canadian ASP hospital pharmacists.

### **FUNDING SOURCES**

None

### **ANTICIPATED START DATE OF THE RESIDENCY PROJECT**

June 2023

## **ANTICIPATED END DATE OF THE RESIDENCY PROJECT**

**APRIL 2024**

## **PROJECT SUITABILITY (*FOCUS ON RESIDENCY PROJECT SUITABILITY*)**

After consideration of the “**FINER**” criteria (Feasible, Interesting, Novel, Ethical, Relevant) I believe that the project meets all the Project Suitability Criteria - Yes

## **EQUITY, DIVERSITY, INCLUSION CONSIDERATIONS (contact Sean if you have questions)**

This proposed research has the potential to:

- Reduce healthcare and health disparities in equity-deserving groups (will apply to ASP metrics methodology at tertiary, regional and community facilities)