



Comprehensive Research Experience for Medical Students  
Summer Research Program 2019

Supervisor/Project Information Form

*Due February 20 2019 by email to [crems.programs@utoronto.ca](mailto:crems.programs@utoronto.ca)*

Supervisor Name:

Colleen McDermott, MSc, MD, FRCSC  
Female Pelvic Medicine & Reconstructive Surgery, Mount Sinai Hospital  
Assistant Professor, University of Toronto

Project Title:

The Efficacy of Antibiotic Prophylaxis for Urodynamic Testing in Women in the Prevention of Urinary Tract Infections: A Systematic Review and Meta-analysis

Hospital/Research Institution:

Mount Sinai Hospital, University of Toronto

Email:

[colleen.mcdermott@utoronto.ca](mailto:colleen.mcdermott@utoronto.ca)

Field of Research (2 keywords):

Urogynecology; Urology

Department:

Obstetrics and Gynecology, Division of Urogynecology/Female Pelvic Medicine & Reconstructive Surgery

School of Graduate Studies Appointment (IMS, LMP, IHPME etc)? No

Brief Project Description (< 300 words):

**Introduction**

Lower urinary tract symptoms are extremely common in women and urodynamic studies (UDS) are instrumental in diagnosing and addressing these issues.

The most significant complication after UDS is a urinary tract infection (UTI). Incidence estimates of UTI post UDS varies widely, however the literature reports rates as high as 28%.

The American College of Obstetricians and Gynecologists does not recommend routine antibiotic prophylaxis for women undergoing UDS based on a 2012 Cochrane review finding “a lack of good quality studies and the need for robustly conducted and sufficiently powered randomized controlled trials”. The Society of Obstetrician and Gynecologist of Canada supports

a decision rule of administering antibiotic prophylaxis for UDS if the incidence of UTI is > 10% which provides little guidance in the context of minimal knowledge on standard infection rates.

A preliminary search of the literature of the last decade reveals numerous new randomized controlled trials on antibiotic UTI prophylaxis for UDS, and no systematic review focusing solely on women. We are thus recruiting a co-author for a systematic review and meta-analysis on the efficacy of antibiotic prophylaxis against UTI in women undergoing UDS.

### **Methods**

MEDLINE, EMBASE, COCHRANE, and DIFFERTATIONS will be searched for appropriate randomized control trials. Selected trials will be analyzed for quality and their results extracted by two independent authors. These data will then be analyzed with the aim to publish the results at conference proceedings and in a peer reviewed journal.

### **Student's Role**

The medical student will work with a staff physician and resident. Their role will include aiding to develop a tool to assess the quality of publications and collect said publications' data. Concurrently with a resident, the student will then independently trial and utilize this tool. Finally, they will be involved in data analyses, study presentation, and manuscript preparation.