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

Supervisor Name: Dr. Timothy Jackson

Project Title: Impact of Preoperative Opioid Use on Surgical Outcomes Following Bariatric Surgery

Hospital/Research Institution: Toronto Western Hospital, University Health Network

Email: timothy.jackson@uhn.ca

Field of Research (2 keywords): bariatric surgery, opioid use

Department: General Surgery

School of Graduate Studies Appointment (IMS, LMP, IHPME etc)? Yes/No: Yes If YES, please name: IHPME

Project Title: Impact of Preoperative Opioid Use on Surgical Outcomes Following Bariatric Surgery

Brief Project Description (<300 words):

The opioid epidemic has become a major public health concern. Although opioids play a key role in the management of acute pain, chronic opioid use is associated with a number of significant harmful effects such as nausea, vomiting, and respiratory depression. Complications of chronic opioid use extend beyond these immediate effects and can further negatively impact postsurgical outcomes. For example, preoperative opioid use before elective abdominal surgery has been independently associated with increased length of stay, rates of readmission, and morbidity.

The influence of chronic opioid exposure on outcomes after bariatric surgery remains unknown. The population represents a large proportion of patients treated within the Division of General Surgery at Toronto Western Hospital, with over 500 patients undergoing bariatric procedures annually. Patients undergoing bariatric surgery may be particularly vulnerable to opioid dependence due to chronic knee and back pain associated with obesity. Thus, preoperative opioid use in this patient population represents a potentially modifiable risk factor and an immediate target to improve surgical quality of care at our institution.

This study will investigate the impact of preoperative opioid use on bariatric surgical outcomes. The student will perform a retrospective review of our existing internal database to 1) determine the prevalence of opioid use and dependence in patients undergoing bariatric surgery, 2) describe the relationship between preoperative opioid use with postoperative adverse events and mortality, prolonged length of stay, time to recover, and readmission rates, and 3) identify patient and procedural factors which are associated with high-risk opioid use. The student will benefit from this project as he/she will learn how to apply appropriate statistical methods to analyze a large set of clinical data and how to prepare a manuscript for a peer-reviewed journal. Findings from the study may inform better guidelines to improve outcomes for patients with preoperative opioid use.