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| **Applications will be accepted from:** [ ]  Both MD & non-MD Undergraduates [x]  MD undergraduate students only [ ]  non-MD undergraduate students only |
| **Project Duration:** [x]  Suitable for either a 4 or 8 week project (Only Yr 3 MD students are eligible to apply for 4-week projects) [ ]  Only suitable for an 8-week project [ ]  Only suitable for a 4-week project  |
| **Additional information for potential student partners:** E.g. desired skills/interests/experience, scheduling restrictions for the project timeline, additional info you want applicants to provide when contacting you about this position, etc.      |

## PROJECT INFORMATION

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| **Project Title:**     Assessing anxiety and depression as risk factors for prolonged opioid use after surgery |
| **Hypothesis or Research Question being addressed (400 character limit, ~55 words):**The opioid crisis is a primary public health issue, as many addicts are introduced to opioids through health care. A quarter from opioids prescribed for postoperative pain, and approximately 7% of surgery patients develop prolonged opioid use. We hypothesize that depression and anxiety are potential risk factors that could signal a need for careful management of postoperative pain.  |
| **Keywords:** **Provide approximately 5 key words that describe the proposed research project.**     Surgical outcomes, postoperative pain, pain management, depression, anxiety |

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| **Project Attributes and Benefit to the Student**Please review the [online adjudication criteria](http://www.med.ubc.ca/current-learners/summer-student-research-program/adjudication/) carefully prior to completing the next two sections to ensure your application is addressing the adjudication criteria outlined in “Project Attributes and Benefits to the Student”. |
| **A) Background and Summary of Proposed Research. Summarize the proposed project including the rationale for the project, the context within the relevant field of research, the proposed research approach and the expected project outcomes.** *If this is an ongoing project of >8 weeks duration (or 4 weeks for MD 2022 students) clearly distinguish the expected project outcomes at the end of the FoM SSRP funding period from the overall project objectives.* **Please write in lay terms for a non-specialist audience.** **Character Limit: 3050 characters (~430 words)**British Columbia, and Canada, are gripped by an escalating opioid crisis. The primary driver of the increase in opioid deaths is the entry of fentanyl into the illicit drug supply, and yet it is increasingly clear that there has been a dramatic increase in people who develop chronic addiction after being prescribed opioids. Nearly a quarter of these prolonged users developed their addiction after using opioids prescribed for postoperative surgical pain. This is pertinent to all surgical fields, where approximately 7% of postoperative surgery patients develop prolonged opioid use. Three factors contribute to prolonged opioid use after surgery; patient characteristics, practice environment and surgeon behavior. The documented patient risk factors include gender, age, disability, mental health, and prior use. Prior work has shown that Preoperative depression and anxiety negatively impact surgical outcomes in female patients undergoing major surgery. There is also evidence that women with preoperative anxiety appear to have greater odds of increased postoperative pain. There is a need to define clear risk factors that can be sought in the preoperative period to trigger postoperative efforts to limit long-term opioid use. Specific Objectives of the Study are:1. Determine the association between preoperative anxiety and prolonged opioid use after surgery
2. Seek co factors that might strengthen associations
3. Propose potential risk factors for post-surgical prolonged opioid use.

The study will use an existing database (N=~1,000) used to investigate the impact of preoperative depression and anxiety on surgical outcomes. The database will be augmented by data on filled opioid prescriptions through Pharmnet.  |
| **B) Outline the student’s role in the project and describe how they will benefit from their involvement.** This section must address how involvement in this project will help the student gain an understanding of how high quality research is conducted. This includes addressing the opportunities to learn new skills in the context of the relevant learning objectives listed in the [adjudication criteria](http://www.med.ubc.ca/current-learners/summer-student-research-program/adjudication/); their anticipated interactions with other researchers and the available resources that will contribute to a beneficial experience.*Clearly indicate which items will be completed during the FoM SSRP funding period and which (if applicable) will be completed before or after the funding period if the student and supervisor have chosen to also work together outside of the funding period. Project feasibility is considered during the adjudication process; 4-week and 8-week projects will be adjudicated separately, with appropriate consideration given to each.***Character Limit: 3800 characters (~540 words)**The student will act as the primary investigator, overseen by the faculty member, who will serve as a mentor and collaborator with the end of teaching the student how to independently pursue a research question. This will begin with a literature review on postoperative prolonged opioid use and established risk factors. The student will then prepare a Research Plan and develop a REB Proposal. Once it is approved, they will begin data collection. The existing database includes; the Beck Depression and Beck Anxiety Inventories (BDI-II and BAI), postoperative complications, length of stay (LOS) and early readmission, demographics, preoperative pain, pain tolerance/catastrophizing, coping mechanisms, postoperative pain, and intraoperative opioid use. This will be augmented by Pharmanet data on opioid prescriptions filled at 6 weeks after surgery. Once the data collection is complete, the student will be responsible for cleaning and analyzing the data under the supervision of a statistician. They will then prepare an abstract for presentation at conferences, write a manuscript for publication and engage in targeted online knowledge translation. |

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| **Please indicate if your project requires the following and indicate their status as appropriate.** This will help clarify the scope of the project for potential student partners. |
| **This project requires ethics approval (human or animal):**[x]  Yes [ ]  NoIf yes please indicate if you:[ ]  Already have approval [ ]  Will obtain approval before the SSRP funding period [x]  Intend for ethics application to be a focus over the funding period\*Please note that as ethics approval can be a lengthy process it is recommended that this be obtained well in advance of the funding period unless the intention is for this activity to form a major part of the FoM SSRP-funded portion of the project.**This project requires access to electronic medical records:**[x]  Yes [ ]  NoIf yes please indicate if you: [ ]  Already have approval [ ]  Will obtain approval before the SSRP funding period [x]  Plan to obtain approval during the SSRP funding period**This project requires operational/institutional approval:**[ ]  Yes [x]  NoIf yes please indicate if you: [ ]  Already have approval [ ]  Will obtain approval before the SSRP funding period [ ]  Plan to obtain approval during the SSRP funding period |

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| **Research Location (As applicable, indicate where the project will be conducted.)** |
| City or Region: Vancouver, BCResearch Centre:      Hospital: St Paul’s HospitalProgram or Unit: OBGYNAdditional information (building, lab etc.): 1125 Howe Street, Suite 930      |
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| **Supervisor’s Information** |
| **Supervisor Last Name:**      Cundiff | **Supervisor First Name:**      Geoffrey |
| **FoM Department/School (Main FoM Appointment):**      Obstetrics & Gynaecology | **UBC FoM Division (if applicable):**     Gynaecologic Specialties |
| **Preferred contact method (for students)****[ ]** Phone supervisor[x] Email supervisor | **[ ]** Phone alternate contact[x] Email alternate contact |
| **Preferred Phone:**       | **Supervisor Rank (Instructor, Professor etc.):**     Professor |
| **E-mail Address:**       geoff.cundiff@ubc.ca |  |
| **Optional Alternate Contact** (e.g. co-supervisor, research/lab coordinator, assistant etc.) |
| **Contact’s Name: Nicole Koenig**      | **Contact’s Role: Research Coordinator**      |
| **Contact’s Phone Number:604-806-9829**      | **Contact’s E-mail Address:**     nkoenig@providencehealth.bc.ca |