



**CFMS**  
Canadian Federation  
of Medical Students

**FEMC**  
Fédération des étudiants et des  
étudiantes en médecine du Canada

## PROSPECTUS: CFMS NATIONAL ANNUAL SURVEY

### 1. BACKGROUND

The Canadian Federation of Medical Students (CFMS) is the national voice for over 8000 undergraduate medical students in Canada, representing 14 Canadian medical student societies. Since 2003, the CFMS has published 45 policy papers and position statements on the topics of medical education, global health and equity, health care and systems. It has also supported a number of student led research activities that have the capacity to inform such policies and positions. For example, the CFMS orchestrated one the first national studies on the diversity and demographics of Canada's medical students. This work yielded data indicating rural, indigenous, and black students as well as students from low socioeconomic status backgrounds to be underrepresented in medical school in comparison to the proportion of the population they comprise (Dhalla, *et al.* 2002). It also documented medical student concerns associated with rising tuition costs (Kwong, *et al.* 2002). More recently, the CFMS has completed a comprehensive national study on medical student mental health and well-being. This work has enabled the CFMS to characterize the current landscape of medical student health, professional consequences of poor health, and areas for intervention or improvement of existing services and resources. However, the process of conducting the survey encountered many challenges in national deployment. We propose that the CFMS is poised to contribute to the current undergraduate medical environment research but would benefit from a predictable and reliable research structure.

The CFMS faces the challenge of balancing the political goal of advocating for Canada's current cohort of medical students with the long-term goal of creating research-based knowledge that will improve Canadian medical education in future generations. This Prospectus aims to outline the use of a CFMS-directed National Survey Platform (NSP) of Canadian medical students to assist in informing Canadian medical faculties of the current landscape and factors of importance to students for the purpose of improving medical school curricula and advancing policies sensitive to medical student training at the local and national level.

### 2. PURPOSE

As the national voice for the Canadian medical student body, the CFMS is well-poised to support longitudinal cross-sectional studies led by student-investigators that comprise its membership. This Prospectus outlines the framework for the NSP, which will serve as the first formal and standardized opportunity for student-investigators to participate in research pertaining to the Canadian medical student body.



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### **3. METHODS**

#### **3.1 NSP FOUNDATION**

The NSP will ask medical students two types of questions. The first type will be longitudinal and repeated annually to track demographic and experiential information about Canada's medical students. These questions will be developed by the CFMS National Officer of Research (NOR) and will be reviewed by the CFMS Executive. The types of demographic questions to be asked are not yet decided, but as the organization works through this prospectus and implementation process the types of demographic questions that most need to be asked will be identified. Presumably, the annual questions in the NSP will track trends in student age, area of upbringing, debt levels, wellness and other important aspects the Canadian medical student experience. The Research Ethics Board (NOR) approval for this ongoing longitudinal data collection will be reviewed in full by a selected Canadian university every 8 years, and revisions will be reviewed every 2 years.

#### **3.2 PROJECT DISCOVERY**

The second type of questions will belong to discrete research projects proposed by the CFMS Executive or general membership. In the first years of the NSP, the questions from discrete research projects will come from projects individually identified by the CFMS. Currently, no formal process exists for the soliciting or evaluating research projects. The creation of the NSP will co-occur with the development of a formal evaluation process in collaboration with the AFMC. The first step in the evaluation process is the identification of research projects of sufficient interest to the CFMS.

In the initial years of the NSP, research projects will require sponsorship from members of the CFMS Executive. If in future years the CFMS determines it has sufficient capacity to solicit proposals from the general membership the CFMS will put out a call each spring for letters of intent (LOI) for cross-sectional studies that will be included in the online CFMS NSP (Figure 1). The electronic web-based NSP will be sent out in fall of the following year and will contain at most three unique studies and their corresponding questionnaires. These studies will be led by CFMS members with support from the CFMS executive and supervision from faculty at Canadian universities. The LOI will consist of the following sections: introduction, problem statement, research questions, methodology, and research team to a maximum of three pages. LOIs will be directly submitted to the CFMS VP Education and evaluated via a (yet-to-be-created) Research Committee consisting of: a member the Education Committee, VP Education, National Officer of Research, one additional member of the CFMS Executive, one general student member, and the CFMS president (ex officio). Decision to proceed for a given LOI will be based on the application's suitability to increase knowledge about the CFMS membership, to generate opportunities for CFMS advocacy on behalf of its membership, and/or to create meaningful new knowledge about Canadian undergraduate medical education. The Research Committee will vote on the decision with a majority or tie being sufficient to proceed. A voting quorum will consist of 3 members.

#### **3.2 Mentorship**



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LOIs that are not successful must receive a letter of response with detailed feedback about how the project could be improved or reasons it was not selected to proceed. While conducting medical student research is important for the improvement of Canadian medical education, one of the important aspects of the NSP is to foster research skill-building amongst Canadian medical schools. Therefore, The VP Education will provide detailed feedback to rejected projects in consultation with the National Officer of Research and the National Research Chair (currently Dr. Glenn Regehr). This feedback may include directing the researchers toward medical education research literature, matching of the research team with potential research faculty, and iterative redrafting of the research project.

### **3.3 RISK ASSESSMENT**

LOIs that are deemed to be of significant interest to the CFMS membership will proceed to risk assessment. Risk assessment will be conducted by the CFMS in collaboration with the Association of Faculties of Medicine of Canada (AFMC) in a two-part process. An initial risk assessment of the successful LOIs will be performed by the CFMS Executive, VP Education, National Officer of Research, and National Research Chair. Those applications that have been recognized as sufficiently safe for learners by the CFMS will proceed to review by the AFMC. The AFMC will have the opportunity to provide their feedback on CFMS-approved LOIs.

The consultative process with the AFMC is the cornerstone of the NSP. Medical students can ask research questions of their own members that the AFMC cannot, and the AFMC has insight into risks to medical students that the CFMS may not be able to easily foresee. Therefore, while the feedback received from the AFMC during the risk assessment process will be non-binding, the CFMS Research Committee representatives to the AFMC Research Committee must attempt to collaborate in good faith and attend to the concerns raised by the AFMC. If during this consultative process irresolvable discrepancies arise, the CFMS will seek guidance from the CFMS National Research Chair, who will be an appointed faculty member at a Canadian university and serves the CFMS by consulting on medical education-related research questions. The role of the CFMS National Research Chair is continuously evolving as it is our hope that this position provides the CFMS with an expert critical voice in determining the utility of CFMS-based projects and how these topics may be of value for the wider medical education community.

### **3.4 SUBMISSION OF FULL PROPOSAL**

Those LOIs that are considered sufficiently safe will be approved for submission of the full proposal to the CFMS VP Education. This will include all data collection instruments and Research Ethics Board (REB) applications prior to submission to the institution of the student-researcher or their supervisor. The VP Education, National Officer of Research, National Research Chair, and Education Committee will evaluate the effectiveness and utility of the questions proposed by the research team. While this step may appear overly laborious, we at the CFMS believe that it is integral to ensure that our membership's time is not wasted on ineffective research. A maximum of three proposals will be approved for inclusion in the NSP (pending appropriate REB approval).

### 3.5 RESEARCH ETHICS BOARD SUBMISSION

A maximum of three proposals will receive final approval and be given a letter of support for REB submission indicating the CFMS' willingness to include the proposed questionnaire in the NSP. Collaboration between the CFMS and AFMC will be required to ensure that only one REB application will have to be submitted such that no additional approvals will be requested by AFMC members. The CFMS will contact the Research Ethics Boards and UME offices at every Canadian University with a medical school to discuss the viability of this plan. **Its success is crucial to the conduct of student-led (faculty-supervised) medical education research that often happens without significant administrative support to submit multiple REB applications.** Since some individual medical schools have a unique review body apart from the university's REB for research involving medical students, it is our hope that any concerns raised by the AFMC will ensure due diligence and obviate the need for review by individual medical school's medical education research board as these additional barriers can prove fatal to student sponsored research. The REB process will also include provisions for the inclusion of new CFMS Executive Members onto the research team for each year. Additional provisions with respect to data ownership will need to be further explored since while the CFMS is assisting in collecting data on its members, these studies will be student-investigator driven and therefore may preclude the CFMS from holding the data for an indefinite period of time. REB approval will be requested for the CFMS to hold data on its research database. Data no longer approved to be held will be permanently destroyed.

## 4. Workflow

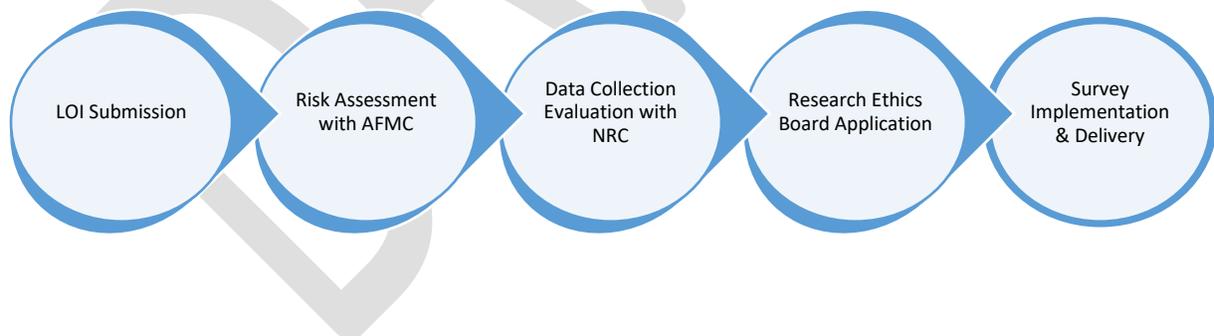


Figure 1. National Survey Platform application approval process



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## 5. Development Process

The process of developing this survey platform will take place over the 2017-2018 year. The CFMS will work with the AFMC Undergraduate Medical Education Research Working Group to refine the prospectus. Once the vetting process is complete the CFMS will propose the prospectus to the AFMC Board to both improve the prospectus and facilitate implementation at a national level. The target for implementation of the prospectus will ideally be September 2017, but that date will depend on the availability of the CFMS, AFMS, institutional REBs, and institutional UME offices over the spring and summer of 2017. The primary CFMS contact during this process will be Tavis Apramian (Vice President Education, CFMS), [vpeducation@cfms.org](mailto:vpeducation@cfms.org), (519) 854 -0538. Please feel free to contact Tavis personally with any questions or concerns.

## 6. Conclusion

As the national voice for the Canadian medical student body, it is our hope that the NSP will facilitate the development of longitudinal Canadian student-investigator driven medical education research. The current Prospectus outlines the framework for the NSP, which will serve as the first formal and standardized opportunity for CFMS members to participate in research pertaining to the Canadian medical student body.

## References

Dhalla IA, Kwong JC, Streiner DL, Baddour RE, Waddell AE, Johnson IL. Characteristics of first-year students in Canadian medical schools. *CMAJ*. 2002;166:1029-1035.

Kwong JC, Dhalla IA, Streiner DL, Baddour RE, Waddell AE, Johnson IL. Effects of rising tuition fees on medical school class composition and financial outlook. *CMAJ*. 2002;166:1023-1028.



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## APPENDIX 1. SURVEY PLATFORM DRAFT REB TEMPLATE

### **METHODS**

This is a cross-sectional study that employs an electronic survey of members of the Canadian Federation of Medical Students (CFMS), medical student advocacy organization. A team of CFMS student leaders will coordinate this project.

### **Sample**

The study sample will be created from the CFMS membership, which comprises all current medical students in all years currently registered at 14 Canadian medical schools and their distributed medical education sites: University of British Columbia, University of Alberta, University of Calgary, University of Saskatchewan, University of Manitoba, Northern Ontario School of Medicine, Western University, McMaster University, University of Toronto, Queen's University, University of Ottawa, McGill University, Memorial University of Newfoundland, and Dalhousie University. As of 2017, the number of medical students at CFMS member schools falls between 8300 and 8500 in a given year according to the Association of Faculties of Medicine of Canada (AFMC).

Members of the CFMS and FMEQ executive, as well as any other medical student who has contributed to the creation of this survey will be excluded from participating. Students who have begun residency will also be excluded from the study. Exclusion criteria will be posted as a separate page preceding the online survey and students will be instructed that by clicking to proceed, they are verifying that they do not belong to any of the exclusion criteria.

### **Survey Instrument Development**

The information collected for this project will consist solely of survey questionnaire responses. Individual survey items have been taken verbatim, where possible, from previously validated instruments. Wording was altered in questions only when necessary and only to improve clarity and applicability to the medical student population. Survey instruments utilized in this survey include (abbreviations correspond to annotations on the draft questionnaire):

#### *List survey items*

The investigators drafted novel survey items for outcomes without validated survey items.  
*Describe the novel survey items.*



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Where possible, we will compare our outcomes with those obtained from the populations sampled in the instruments above, including medical students in the United States and Australia, Canadian medical residents and physicians, and the general Canadian population.

The online survey questionnaire will be offered in both English and French, and will be translated into French by Francophone members of CFMS when possible. In these cases, it will be reverse translated and piloted for validity by separate Francophone members of the CFMS. The online questionnaire will be created by the project investigators using a proprietary survey platform with longitudinal data holding on CFMS servers in Canada. Questions will be transcribed verbatim from the attached Survey Questionnaire document, and skip logic will be applied as described on the questionnaire document to allow participants to avoid irrelevant questions. The questionnaire will be piloted by a focus group composed of members of the CFMS executive board. The online survey will be initially tested on a small number of participants (approximately 20-30) in both English and French to ensure ease of use of the online survey and validity of any novel or modified questions. This small group of pilot participants will consist of CFMS executive members who will be excluded from official survey participation due to their role in survey creation.

### **Methods of Survey Distribution**

The survey will be distributed to CFMS representatives from each medical schools for distribution in the method that best serves the individual schools. The distribution message will remain identical at each school, but the method of delivery will depend on the medical student government's approach to distributing information to students via individual email, email listserv, social media, or online webpages.

The CFMS general membership will be contacted via the CFMS listserv and provided with the online survey link via email. Specifically, the email will contain details regarding the purpose of the study, contact information for the primary research team, nature of voluntary participation, information about incentives, and the survey link. Survey consent information, instructions, and recruitment will all be provided to all students in both English and French. Survey instructional and recruitment materials will be translated into French by Francophone members of CFMS and will be reverse translated by separate Francophone members of the CFMS to ensure validity.

### **Survey Recruitment**

Participants will be asked to complete the survey within 4 weeks of distribution, during which we will engage students with general survey promotion. Participants will be given an additional 2 weeks following this deadline.

### **Pre Contact**



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Using the same communication strategy outlined above for survey distribution, participants will be pre-contacted to promote the survey in a single email communiqué that will be sent out 2 weeks prior to survey release. The email will contain similar information to the survey distribution email, excluding the survey link, and will notify students of the date of survey distribution.

During this two-week period of pre-contact, the survey will also be promoted using CFMS social media platforms, specifically Facebook, Twitter, and the CFMS website. Social media promotion will begin 2 weeks prior to survey release, with no more than 1 announcement per platform per week. A budget has been set aside to boost any Facebook posts to increase the audience viewing these posts, and CFMS reps will be encouraged to share these social media posts with their colleagues. Social media (Facebook, CFMS website) promotional language will be brief and will only contain information on study purpose, incentives, researcher contact information, and a date of survey release. Twitter language will contain only information regarding the date of release of the survey.

#### General Follow-up Recruitment

During the initial 2 weeks of data collection, a reminder email will be sent to students using the CFMS email distribution strategies outlined above. In addition to the initial invitation email, a single reminder email will be sent to students at the 1-week mark. A similar social media strategy used for pre-contact will also be used for the follow-up recruitment with a limit of 1 announcement per week per platform (Facebook and Twitter). During survey recruitment we will also make use of a common Twitter and Facebook hashtag for promotion. A promotional graphic will be developed containing information about study purpose, instructions for accessing the survey, incentives for completion, and contact information for the principal investigators and local Research Ethics Board. We will share this graphic through the use of snowball recruitment on social media sites Facebook and Twitter, along with the aforementioned hashtag. At no point will social media or website posts contain a link to the survey and participants will only be able to access the survey through emails containing full information about voluntary participation, contact information for the research team, and study purpose.

#### **Data Analysis**

Questionnaire data will be entered and analyzed by an investigator or research assistant using the latest version of SPSS. Descriptive statistics will be examined for each outcome using experienced statistical consultation with desired outcomes and correlations. For survey items where comparative data is available, comparisons will be made with the appropriate population (U.S. or Australian medical learners, health professionals, or the general Canadian population).



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### **Data Privacy and Confidentiality**

No direct identifying data will be collected from participants. Demographic data that may have the potential for identifying students will be kept confidential by the research investigators. All data, including demographic data, will only be presented at the aggregate level, with no identification of or reference to individual participants in published and presented reports.

Data will be collected through the use of an online proprietary survey platform. Initial data will be stored longitudinally on secure CFMS servers, located in Canada. Collected data will be stored on a CFMS account indefinitely (even if the account subscription is cancelled) for a period of 10 years. Data extracted from the survey platform will also be kept on two encrypted memory devices in a locked location in the CFMS office in Ottawa, Ontario for a ten-year period at which time it will be destroyed. A database consisting of the project data will also be kept on the encrypted memory devices for the purpose of data-mining for future related projects. Data will be shared only as necessary with our statistical consultant, using encrypted storage devices and transfer methods. Any unprocessed data which links the participants' answers to their identifying data will only be seen by the principal investigators and the statistical consultant.

The CFMS survey platform will be through a secure online provider, and a password will be required to access the account. Only the principal investigator and co-investigators will have access to the password. The other security features provided by our platform include a Secure Sockets Layer (SSL) involving data encryption and user authentication, which ensure only authorized users have access to data, a firewall and advanced intrusion detection systems. The headquarters building is protected with several layers of physical access security and 24-hour surveillance.

### **Ethical Considerations**

Ethics is being sought from lead investigators' local institutional REB. Consent information will be displayed prior to initiation of survey questions and participants will be instructed and required to click a button indicating consent prior to proceeding to the survey questions. An option to quit and exit the survey will be available on all screens throughout the entire survey process. Upon obtaining participant consent participants will be able to complete the online survey. Students recruited for the questionnaire study will be fully informed of the objectives of the study and will have the right to refuse or withdraw at any time. Participants will also be made aware of the sensitive nature of some of the questions in advance of their consent to participate. They will also be encouraged to discontinue participation and seek support should they become distressed at any point during the survey process. Data will be presented in peer-reviewed journal publications along with national and/or international



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conferences. Participants will be informed of these intentions in both the letter of invitation and project information page. Survey results may also be used to inform and guide the development of further collaborative initiatives in the field and in grant proposals.

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## APPENDIX 2. AFMC PROPOSED UGME RESEARCH PRINCIPLES

*AFMC Working Group on UGME Research - March 2017*

The work of the group will be guided by the following principles:

1. We are committed to the quality and sustainability of research involving and/or investigating Canadian UGME. Challenges to orthodox practice, ongoing quality assurance, critical appraisal and innovation should be supported where they follow good academic principles of respectful inquiry.
2. We acknowledge that a variety of individuals and groups may engage in inquiry and that these individuals and groups are likely to have varying levels of experience in doing so and will be pursuing different agendas.
3. We acknowledge the distribution of expertise in UGME: deaneries, researchers, and students do not have a monopoly on knowledge, expertise, or authority in determining the direction of research in to UGME.
4. We acknowledge the limited resources available to UGME and to researchers in this area. To that end we are respectful of the deaneries capacity to support research above and beyond day-to-day operations, and the limited time and funds available to researchers.
5. We acknowledge the many possible conflicts of interest associated with Canadian UGME research activities, including, but not limited to: deaneries and schools protecting reputations and limiting disclosure of failures and weaknesses, and researchers seeking to advance their careers, pursue ideological agendas, or competing with other researchers.
6. While our primary focus is on protecting medical students as research subjects, we acknowledge that medical students may also act as investigators. To that end we are attentive to the need for medical students to be afforded the opportunity to act as investigators and to be supported in doing so.
7. We recognize the importance of transparency and accountability in any oversight or advisory role in Canadian UGME research. Trust is central to this work. To that end we are attentive to open and transparent governance, communication, and representation as a way of establishing and maintaining credibility in our many communities.
8. We acknowledge the complexities of Canadian UGME research given our geography, languages, provincial politics, and limited funding.
9. Although there is a will to national integration and collegiality, there are limits to how binding any national initiative can be without commitment from all parties. To that end we acknowledge the importance of consensus, dissent, and debate in advancing this kind of initiative. We are committed to an open and appreciative dialogue regarding the ongoing development of these principles and the work that is based on them.

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## APPENDIX 3. AFMC PROPOSED UME RESEARCH LOCAL OVERSIGHT

**Submitted for consideration by the Working Group on UGME Research** (Drs. B. Cummings, R. Ellaway E-R Gagné, C. Hodgson, A. Sanfilippo and Mr. T. Apramian and Ms. J. Laliberté)

Undergraduate Medical Education (UGME) programs in Canada:

1. Appreciate that high quality, innovative medical education research in Canada is essential to the advancement of UGME;
2. Only participate in research that is appropriately approved by ethics (IRB / REB), in accordance with local requirements; and
3. Recognize that there is local variation due to Faculty & School policies and context (See Appendix A for examples)

Local oversight by UGME Programs should:

1. Follow a well-defined process that is accessible to investigators and students (See Appendix B for sample process for reviewing studies involving medical students as subjects; See Appendix C for example of local UGME Office oversight review form)
2. Ensure that the study:
  - a. Is addressed to the appropriate population  
For example, what might be appropriate to a 3<sup>rd</sup> year student in one school, might be appropriate to a 2<sup>nd</sup> or 4<sup>th</sup> year student in another school, depending on the curriculum structure and sequence
  - b. Is appropriately timed  
For example, does not conflict with required program activities, including exams, program evaluation or accreditation activities
  - c. Does not pose undue risk to students  
For example, a study might threaten the anonymity of students at a particular school (e.g., in cases where certain demographic information could lead to responses being directly attributable to an individual in the local program) though this would not be the case in another program  
For example, a study addressing a particularly sensitive topic (e.g., dealing with issues of wellness or mental health) must have sufficient safeguards are in place
  - d. Does not impose an undue burden on students  
For example, a study might be redundant with other surveys recently circulated, or with local program evaluation efforts
  - e. Has a principle investigator (PI) or co-PI who is a faculty member from a Canadian university with an undergraduate medical education program
3. Be coordinated with local ethics board (IRB / REB) procedures. This requires communication and collaboration with the local IRB

# AFMC DRAFT

4. Refrain from unduly obstructing appropriate research projects

## APPENDIX A: Examples of local variation

There is already known to be differences between schools / faculties in:

1. Distinguishing between what constitutes research requiring IRB approval and what constitutes program evaluation meeting the definition of article 2.5 of the Tri-Council Policy Statement (2014)
2. Requirements for a local investigator (some require a local PI, others do not)
3. Differences in requirements for language of consent forms and surveys (some require bilingual studies or that the study be conducted specifically in French or English)

## APPENDIX C: Example of local UGME Office oversight review form (borrowed from Dr. Sanfilippo, Queen's University)

*UGME Review of Research Projects Involving Medical Students as participants*

Study Name:

Principal Investigator:

Local Study: Yes / No. If no, Home University for study:

Home University Ethics notes (if applicable):

Local contact (if applicable):

Reviewed by:

Review date:

Area of Review	Study's Area of Concern	Suggestion
Potential conflict with UGME teaching or assessment <i>(for example: teaching something in a different way or at an earlier time than in our curriculum; providing an assessment advantage to one group of students over the others)</i>		
Potential conflict with student's responsibilities to the UGME program (attendance at class and other mandatory events, completion of assignments, etc.)		

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<i>(for example: participation required during a mandatory class event; participation required during a scheduled assessment)</i>		
Potential undue pressure / influence (real or perceived) for students to participate		
Other concerns *		

\* This includes a wide range of potential concerns, such as use of space, cooperating faculty, time of year, etc. *(For example: proposal assumes availability of space or personnel; duplicates studies already underway.)*

UGME Approval Granted: Yes / No

Email sent to IRB on (date):