Guidelines for Recognition of Student Contributions to APPE Practice Site Projects or Research

Preamble:

Experiential rotations may provide opportunities for students in various aspects of projects and research, large or small, that may lead to publications in the form of an abstract, poster, paper, presentation or other publications such as a guideline, monograph, newsletter, nomogram, pre-printed order set, tool or chart.

The main guiding principle is that students and preceptors should discuss the potential of publication at the beginning of the rotation to clarify how the student’s contributions will be acknowledged or recognized and this discussion should be continued as new opportunities for publication arise throughout the rotation. These guidelines serve to encourage students to participate in scholarly work and for preceptors and students to follow accepted authorship practices.

The University has policies that deal at length with specific aspects of intellectual property and the conduct of research. These policies can be obtained through the University of Toronto’s website or from the Leslie Dan Faculty of Pharmacy (listed at the end of this document).

Who is an author?

According to the International Committee of Medical Journal Editors (ICMJE), authorship is based on the following 4 criteria:

1. Substantial contributions to the conception or design of the work; or the acquisition analysis, or interpretation of data for the work; AND
2. Drafting the work or revising it critically for important intellectual content; AND
3. Final approval of the version to be published; AND
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Who is a non-author contributor?

Individuals who contributed to the study but who do not meet all of the criteria outlined above may be listed in the acknowledgements section of the manuscript. Authors must ensure that all persons named in the acknowledgements, excluding those providing financial or technical support, have agreed in writing to be named.

Examples of activities that alone (without other contributions) do not qualify a contributor for authorship are:

- acquisition of funding
- developing the protocol
- preparing a Research Ethics Board submission
- data collection and/or analysis
- general supervision of a research group or general administrative support; and
- writing assistance, technical editing, language editing, and proofreading
Those whose contributions do not justify authorship may be acknowledged individually or together as a group under a single heading (e.g. “Acknowledgements”, “Contributors”, "Clinical Investigators" or "Participating Investigators"), and their contributions should be specified (e.g., "served as scientific advisors," "critically reviewed the study proposal," "collected data," "provided and cared for study patients", "participated in writing or technical editing of the manuscript").

How should the order of authorship be determined?

The primary author is usually the individual who is responsible for the conception, design, data collection, analysis and writing of a manuscript and ensures the integrity of the entire project. If two individuals have served jointly in such capacity, first author should be determined by mutual agreement.

The remaining order of authorship is to be determined by the project/research and/or writing team. The following principles should be used to guide to ensure fair authorship attribution:

1. The authors should decide the order of authorship together.
2. Authors should specify in their manuscript a description of the contributions of each author and how they have assigned the order in which they are listed so that readers can interpret their roles correctly.
3. The primary author should prepare a concise, written description of how order of authorship was decided.

Do supervisors have rights to any of the research/inventions students make?

It all depends on the individual circumstances and the applicable governing law, policy, or convention. A supervisor and other parties may have a large or small claim on the intellectual property rights relating to work done by a student. Students and supervisors should discuss this prior to beginning work that could lead to creations or inventions that would be accorded intellectual property rights.

As per the University of Toronto School of Graduate Studies guidelines: “Ordinarily, a student will have no claim to his or her supervisor’s or instructor’s work unless the student is a joint author or joint inventor. Likewise, a supervisor would not have a claim if he/she is not a co-author/co-inventor. If the student’s work was done as part of an ongoing research project, it should be expected that the results can be used, with appropriate attribution, in furthering the research activities of the supervisor and others working in the same laboratory or research group (e.g., in publications, presentations, grant applications, and final reports). It is important to clarify rights to intellectual property prior to the submission of papers for publication or disclosure of research findings at scientific meetings or in any way which places any creation or invention in the public domain.”

Who owns the data/intellectual property produced in a research project?

Research data and tools, are classified as “inventions” under the University of Toronto Inventions policy. Researchers would normally own an invention that he or she invents jointly with the institution, with some exceptions. The institution owns inventions that are:

1. Created under the direction of a faculty or staff specifically with the object of making the invention
2. Created in the course of employment
3. Otherwise commissioned by the institution under an agreement with the inventor
Where possible, a policy on sharing of data should be developed or in place. Where the data is jointly owned, researchers may incorporate results in a thesis/abstract/presentation with permission of the other co-owners. The grant of permission to use data in these instances does not mean right to use the data for other purposes without permission. In all cases, one must provide appropriate attribution of the source of the data.  

Please refer to the following useful links for more detailed information:

1. University of Toronto Guidelines and Policies
   a. [http://www.sgs.utoronto.ca/facultyandstaff/Pages/Intellectual-Property-Guidelines.aspx](http://www.sgs.utoronto.ca/facultyandstaff/Pages/Intellectual-Property-Guidelines.aspx)

2. International Committee of Medical Journal Editors (ICMJE) Recommendations

3. Authorship Guidelines Faculty of Medicine, Harvard University (1999)
   [http://hms.harvard.edu/about-hms/integrity-academic-medicine/hms-policy/faculty-policies-integrity-science/authorship-guidelines](http://hms.harvard.edu/about-hms/integrity-academic-medicine/hms-policy/faculty-policies-integrity-science/authorship-guidelines)

For further clarification and/or in the event of disagreements/disputes, please contact the Office of Experiential Education: oee.phm@utoronto.ca.