

Summer Research Training Program 2019 Project Description – Open textbook of Emergency Medicine

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Project Title: Open Access Textbook of Emergency Medicine

Project Description – include background, hypothesis, proposed methodology, and expected outcomes (one page maximum; you may attach a page to this form):

Background

Free Open Access Medical Education, or FOAM, is an educational trend greatly catalyzed by the surplus of social media in this era (1). Prior to establishing the term FOAM, resources such as Lifeinthefastlane.com were being developed with the ethos of free and accessible high quality medical education (1). FOAM has become a routinely used educational resource for both emergency medicine residents and program directors (2). In one previous study which assessed the percentage of Canadian residents and program directors in emergency medicine accessing various FOAM resources monthly, 95% of residents reported using Wikis monthly and 93% reported using e-textbooks monthly (2). FOAM also has the potential to serve as a high quality resource in resource poor settings. Another survey assessed utilization of FOAM resource in four countries including Botswana (4 participants), Papua New Guinea (7 participants), United Kingdom (10 participants), and Australia (23 participants) (3). They found 100% of participants from lower income countries used traditional textbooks as a primary source of knowledge (3). Some current barriers to use of FOAM resources in low to middle income countries include lack of resources to address common presentations encountered in resource poor settings and lack of access to reliable internet connection (3).

Hypothesis

This research project will seek to examine whether it is possible to create a high quality open access emergency medicine textbook through the writing of chapters by medical students, residents and volunteer physicians.

Methodology

Chapter creation. Each chapter will be written by a medical student, resident or consulting physician using other open and closed textbooks and journal articles as a resource. This writing process will be supervised by a section editor who is in turn supervised by an editor-in-chief.

Currently, a preliminary version of this resource, the Open-Content Textbook of Emergency Medicine (OCTEM), is available at https://en.wikibooks.org/wiki/Emergency_Medicine; however, it is currently in stages of early development with few comprehensive chapters developed. The long term vision for the development of the Open-Content Textbook of Emergency Medicine is to develop of robust collection of

chapters in emergency medicine endorsed by the Department of Emergency Medicine at Western University.

Knowledge base identification. Journal articles and other resources relevant to chapter topics will be entered into Zotero, a free online software resource to create an organized database of bibliographic data. This will be available to the public to make access to high quality resources more available. The overall aim of the survey will be to evaluate the newly developed comprehensive chapter.

Validation. Validation of the chapters will happen through expert peer review.

Publication. When the chapters are ready, they will be published in a textbook reference online and in paper, and will be uploaded to Wikibooks for wide use.

Timeline

Literature review: June – July 2019

Chapter writing: July – September 2019

Peer review: September – December 2019

Initial publication and call for public review: January – March 2020

Publication on paper and to Wikibooks: June 2020

Chapter enhancement and follow-up: June – December 2020

Expected Outcomes

FOAM resources have made a significant impact internationally. We hope to provide a high quality resource that can be easily used and translated without legal or other encumbrances worldwide.

The end product of this effort will be a usable textbook that is published via traditional methods and also online.

Research Environment - Description of the number of research personnel, size of lab, etc.:

Tarek Loubani, Associate Professor in the Division of Emergency Medicine, Department of Medicine.
Carolyn Adams, Resident physician in Emergency Medicine
Kristine Van Aarsen, Research Coordinator

This research will be based in the Emergency department at LHSC, primarily at the Victoria campus. Research in the emergency department is conducted via the Western University Emergency Medicine Research Centre, which is coordinated by Dr. Melanie Columbus and directed by Dr. Jon Dreyer.

Expected Objectives/Accomplishments for Student for Year 1:

- To select two chapters from the Emergency Medicine table of contents
- To conduct a thorough literature search on the selected chapters
- To write a chapter that is usable in clinical situations
- Participate in a peer review process of the chapters.

Expected Objectives/Accomplishments for Student for Year 2:

- Publish chapters to Wikibooks and other digital and print publishers.
 - Receive follow-up and feedback from early users of the resources
 - Revise and improve chapter.
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