Comprehensive Research Experience for Medical Students
Summer Research Program 2021
Supervisor/Project Information Form
*Due February 24, 2021 by email to crems.programs@utoronto.ca*

**Supervisor Name:** Dmitry Rozenberg, MD PhD, FRCPC

**Project Title:** Accuracy and Reliability of Internet Resources on Pulmonary Rehabilitation

**Hospital/Research Institution:** Toronto General Hospital Research Institute, University Health Network

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**Field of Research (2 keywords):** Pulmonary Rehabilitation, Internet Resources

**Department:** Medicine, Respirology

**School of Graduate Studies Appointment (IMS, LMP, IHPME etc)? Yes/No:** Yes

**If YES, please name:** Institute of Medical Science
**Brief Project Description (<300 words):**

**Background/Rationale:** Individuals with chronic lung disease commonly use the internet as a source of health information, with about 85% of North American adults having internet access. Given the ongoing COVID-19 pandemic and closure of in-person pulmonary rehabilitation (PR) programs, many patients with lung disease rely on online resources for exercise training. Certainly, the internet has benefits as it allows easy and immediate access to health information; however, the accuracy and reliability of content surrounding exercise training has not been evaluated.

**AIM:** To characterize the internet resources on pulmonary rehabilitation and assess content, readability, and quality of websites.

**Methods:** We plan to analyze the first 200 identified English websites searching for “pulmonary rehabilitation” using the top three search engines (Google, Yahoo, and Bing). To characterize websites, we will abstract information on publication dates, geographic location, reading level (Flesch Reading Score), and website type (i.e. scientific resources, news/media, etc). Duplicate websites, scientific articles and websites requiring a fee will be excluded. We will compare the online recommendations provided on exercise training with the international PR guidelines (including virtual delivery) based on a predefined scoring system of key components. Website quality will be assessed using a validated instrument (DISCERN) for treatment strategies and Health on the Net (HON) certification status. The search, content, and quality review will be performed by two reviewers. We will use descriptive statistics to characterize available internet resources and multivariable regression to assess determinants of website quality (DISCERN) and content scores, adjusting for geographic continent, type of website, and HON status.

**Significance:** This review of PR websites will be the first comprehensive assessment of content and quality of available patient-directed online resources. This work will provide critical insight to the medical community and patients on the current state of PR health-related information. Translational work will include journal publications, presentations, and dissemination through patient partner organizations.