

Fortifying Canadian One Health practitioners' ability to address complex health challenges Radhika K. Gandhi (gandhir@uoguelph.ca), Jane Parmley, Katie Clow Department of Population Medicine, Ontario Veterinary College, University of Guelph

Background

- Climate change is a major global event that has and will continue to pose significant health challenges across the globe.
- The increased frequency of extreme weather conditions and resultant global crop yield have impacted vulnerable populations worldwide (1).
- Moreover, rise in global temperatures has altered the geographic range and severity of vector-borne diseases (1,2).

The Problem

- Global health challenges, such as climate change, require the use of the One Health (OH) approach that accounts for the interconnection animal, human, and environmental health (1,3).
- In order to apply an integrated approach, health practitioners must demonstrate key One Health competencies.
- There is a need to identify appropriate pedagogical styles that will facilitate the development the OH core competencies.

Objectives

- 1. Identify current pedagogical approaches that foster the development of key skills, knowledge and attributes required to combat complex health challenges.
- 2. Describe students' experiences with various teaching modalities to recommend innovative, learner-centred teaching practices.







Research Chapters

Chapter 1: Knowledge Synthesis

- A scoping review will be used to identify teaching practices across a variety of disciplines that use a OH approach to address complex problems.
- The results will also be used to analyze how pedagogical approaches can be modelled to ensure that they are dynamic and adaptable for modern learners in future generations

Chapter 2: Stakeholder Engagement

• Focus groups will be conducted with students to gain their perspectives on the learning strategies used to address complex problems, such as climate change, in OH classes and programs.

Focus Group Methods

- Focus groups will be conducted online and in person.
- Participants will be stratified based on degree level.
- Audio from the sessions will be recorded, transcribed, and subjected to thematic analysis.

Recruitment

- Focus groups will be conducted with students from the University of Guelph and the University of Western, Ontario.
- Participants will include students from different disciplines that are enrolled in OH programs or have taken OH courses.





Project Significance

Small-scale Significance

Large-scale Significance

- Canada.
- These programs will foster professional that key competencies.

Acknowledgement

This project is supported by the University of Guelph and Public Health Agency of Canada: Department of Infectious Disease and Climate Change. Special thanks to Carrie McMullen for her help in developing this research project.

Ontario Veterinary College



- 394(10211), 1836-1878.
- Medicine (Vol. 35, Issue 5, pp. 501–507). Elsevier Inc. https://doi.org/10.1016/j.amepre.2008.08.018



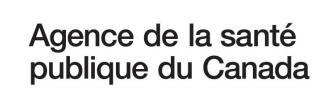
• This research will help amplify student voice. The scoping review will help identify knowledge gaps in pedagogical research. • Results can be used to assess current pedagogical styles.

• The findings can help create robust pedagogical scaffolding for professional OH programs across

demonstrate a strong understanding of the OH

• It will help establish Canadian practitioners as leaders in solving large-scale health problems

Public Health Agency of Canada



1. Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Belesova, K., Boykoff, M., ... & Montgomery, H. (2019). The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. The Lancet,

2. Caminade, C., McIntyre, K. M., & Jones, A. E. (2019). Impact of recent and future climate change on vector-borne diseases. In Annals of the New York Academy of Sciences (Vol. 1436, Issue 1, pp. 157–173). Blackwell Publishing Inc. https://doi.org/10.1111/nyas.13950 3. Ebi, K. L., & Semenza, J. C. (2008). Community-Based Adaptation to the Health Impacts of Climate Change. In American Journal of Preventive





Overview

- solve
- health practitioners
- OH programs across Canada

• Climate change is a major global event that requires the use of the OH approach to

• There is a need to identify pedagogical strategies that will help facilitate the development of OH core competencies in

 Scoping review of existing pedagogical strategies and focus groups conducted with OH students can help create robust pedagogical scaffolding for professional

Human

food insecurity zoonotic diseases housing displacement

biodiversity loss decreased wildlife health range expansion

Animal



Environment

land use changes extreme weather events environmental hygiene