



Global Health Sim

Innovative Education by Simulation

Experiential Learning for Public Health Professionals: An evaluation of educational value

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A red-tinted photograph of a classroom or meeting room. Several people are seated at long tables, some looking towards the camera and others looking down at papers or devices. The room has large windows in the background. The overall atmosphere is professional and collaborative.

INTRODUCTION TO GLOBAL HEALTH SIM

BACKGROUND & HISTORY

2014
1st Sim
in Ottawa, ON

2016
Incorporated as a
Non-Profit

Present





SIMULATION LEARNING

Form of experiential learning where learners prepare for real-world problems by imitating analogous situations.

Education is delivered through use of active problem-solving, immersive role-playing, and knowledge application.

A red-tinted photograph of a classroom. Students are seated at long wooden desks, facing towards the front of the room. The room has large windows in the background. The text "OUR SIMS" is overlaid in the center in white, bold, sans-serif font.

OUR SIMS

BREADTH OF PUBLIC HEALTH TOPICS

Local  Global

Individual  Population

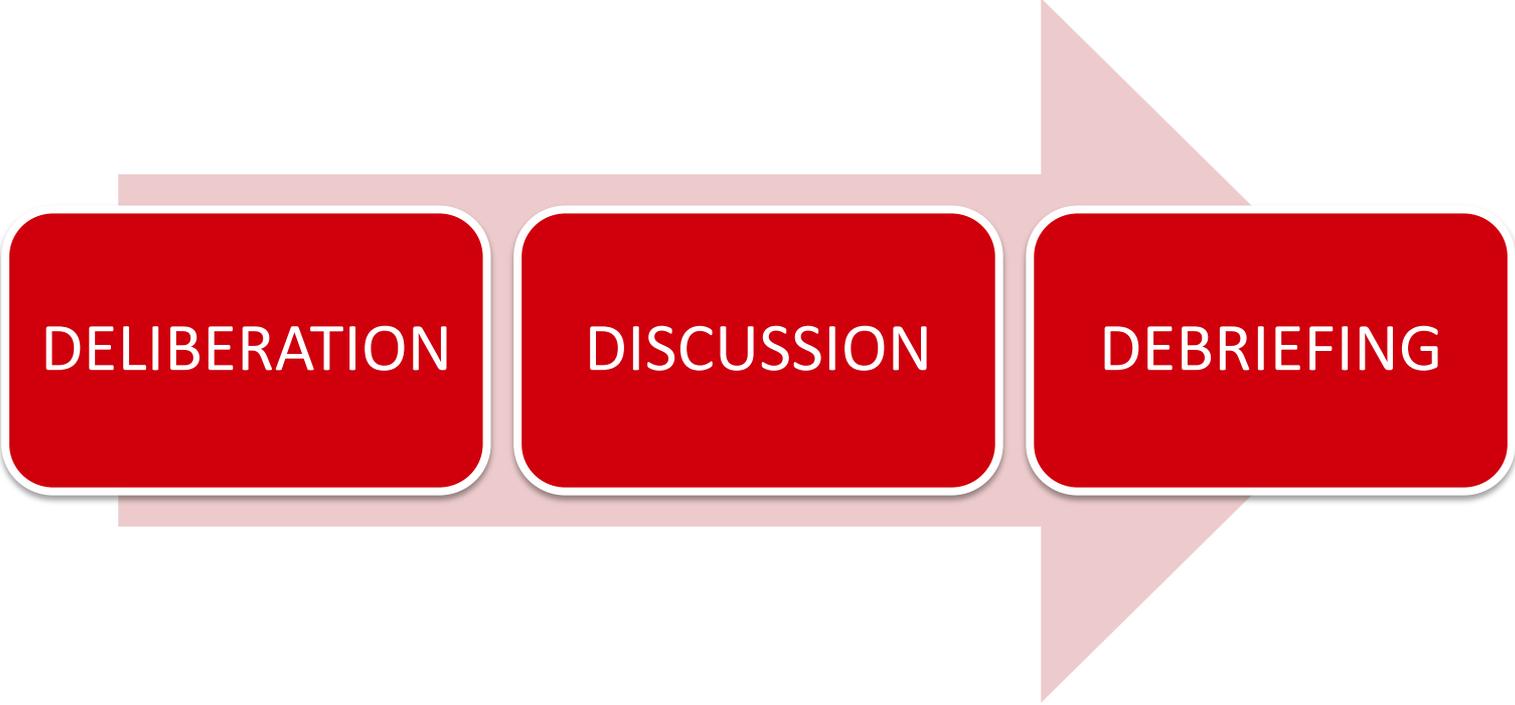
High Income  Low Income

Acute  Chronic

DIFFERENT AUDIENCES

- Conferences
- Undergraduate students
- Graduate students
- High school students
- Public health organizations

A 3-PART EXERCISE



DELIBERATION

DISCUSSION

DEBRIEFING

A red-tinted photograph of a classroom. Students are seated at long wooden desks, some looking towards the front of the room. Large windows are visible in the background. The text 'SAMPLE SIMS' is overlaid in white, bold, sans-serif font in the center of the image.

SAMPLE SIMS

SAMPLE SIM - 13



Global Health Sim
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Simulation #13
Gangs, Guns and Gavels

Author
Thomas Piggott

Tags
Prevention, Local Public Health, High-Income Setting



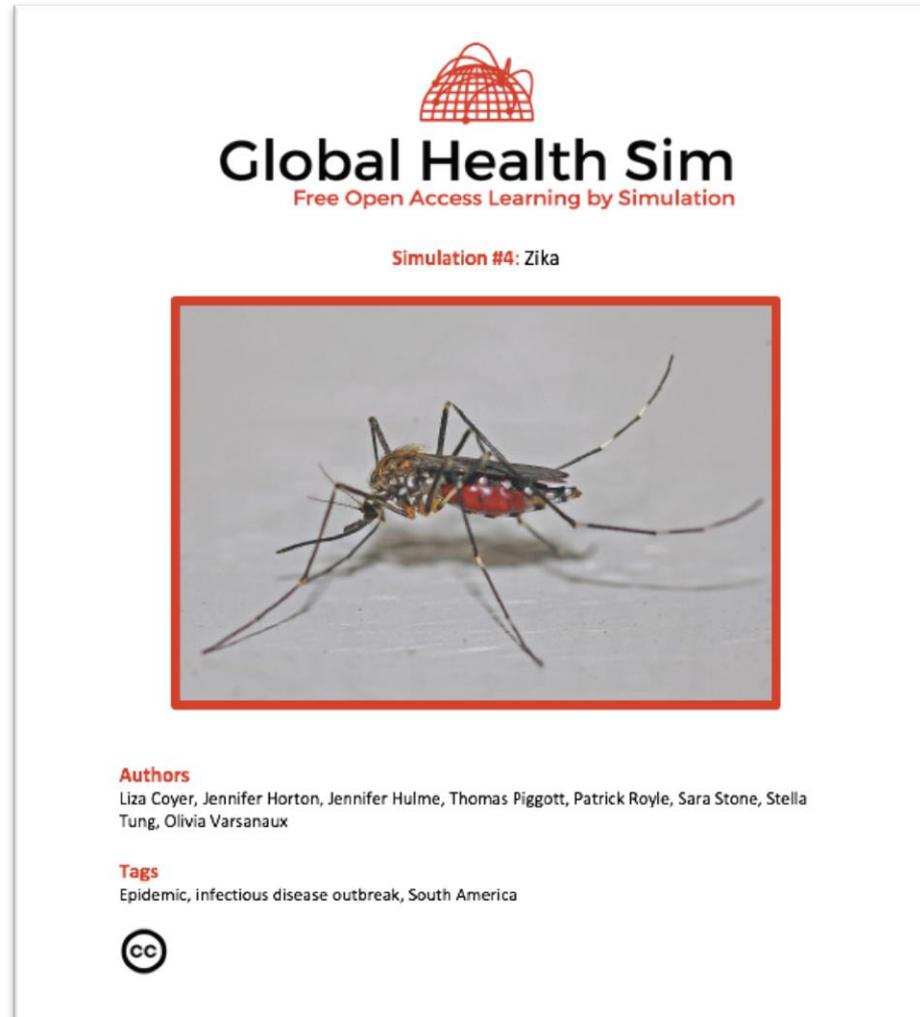
Roles that convene for a town hall meeting:

- Government: Mayor, police, DA, MOH, school principal
- Experts: Field epidemiologists, federal public health service
- NGOs: citizens coalition, not-for-profit

Learning objectives:

1. Identify and debate evidence-based approaches to the reduction of organized crime and homicide.
2. Demonstrate the utility of both top down and bottom up approaches to problem solving at the municipal level

SAMPLE SIM - 4





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Simulation #4: Zika



Authors
Liza Coyer, Jennifer Horton, Jennifer Hulme, Thomas Piggott, Patrick Royle, Sara Stone, Stella Tung, Olivia Varsanaux

Tags
Epidemic, infectious disease outbreak, South America





Members of the Zika Emergency Research and Response Group (ZERRG):

- Government: MOH, President
- Experts: PAHO, US CDC, researcher, WHO HQ
- NGOs: physician group, advocacy groups
- Insurance companies
- Journalist

Learning objectives:

1. Understand the epidemiology and political complexities of responding to an emerging infectious disease.
2. Appreciate the stakeholders and relationship between public health actors.

SAMPLE SIM - 7



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Simulation #7: Diagnose It on the Double



Author

Olivia Varsaneux, Thomas Piggott

Tags

Emerging Infectious Disease; Rapid Diagnostics; Outbreak Response





Roles respond to the WHO's declaration of a "Public Health Emergency of International Concern":

- Government: MOH
- Funders: Global Fund, CHAI, NIH
- Regulators: FDA
- Developers

Learning objectives:

1. Identify the characteristics of an effective rapid diagnostic test for an emerging infectious disease threat.
2. Explore the complexities of the development, regulation, dissemination, and evaluation processes for rapid diagnostic tests

A red-tinted photograph of a meeting room. Several people are seated around a large, light-colored conference table. The room has large windows in the background. The overall atmosphere is professional and collaborative.

EVALUATION ANALYSIS

STUDY OBJECTIVE

The objective of our study is to assess simulation learning as an educational approach in public health.

METHODS

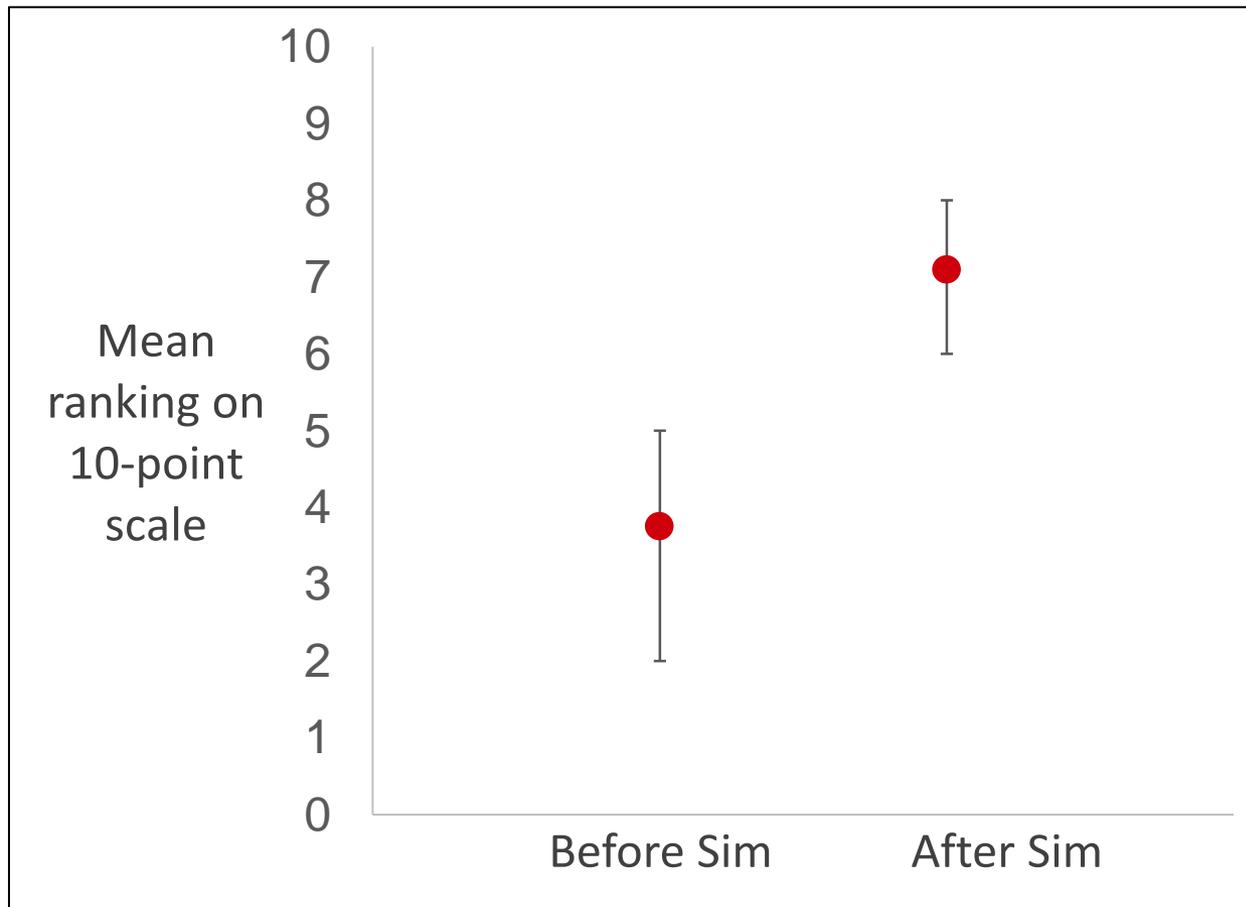
- Simulations facilitated between August 2016 – November 2017
- Mixed-methods evaluation design to describe the topic, content and evaluation results from simulations using:
 1. **Quantitative measures of**
 - Public health content knowledge before and after simulation
 - Participant feedback on facilitation and details of the simulation
 - Participant feedback on education value
 2. **Qualitative thematic analysis** of experience and lessons learned reported by participants

DATA INCLUDED IN ANALYSIS

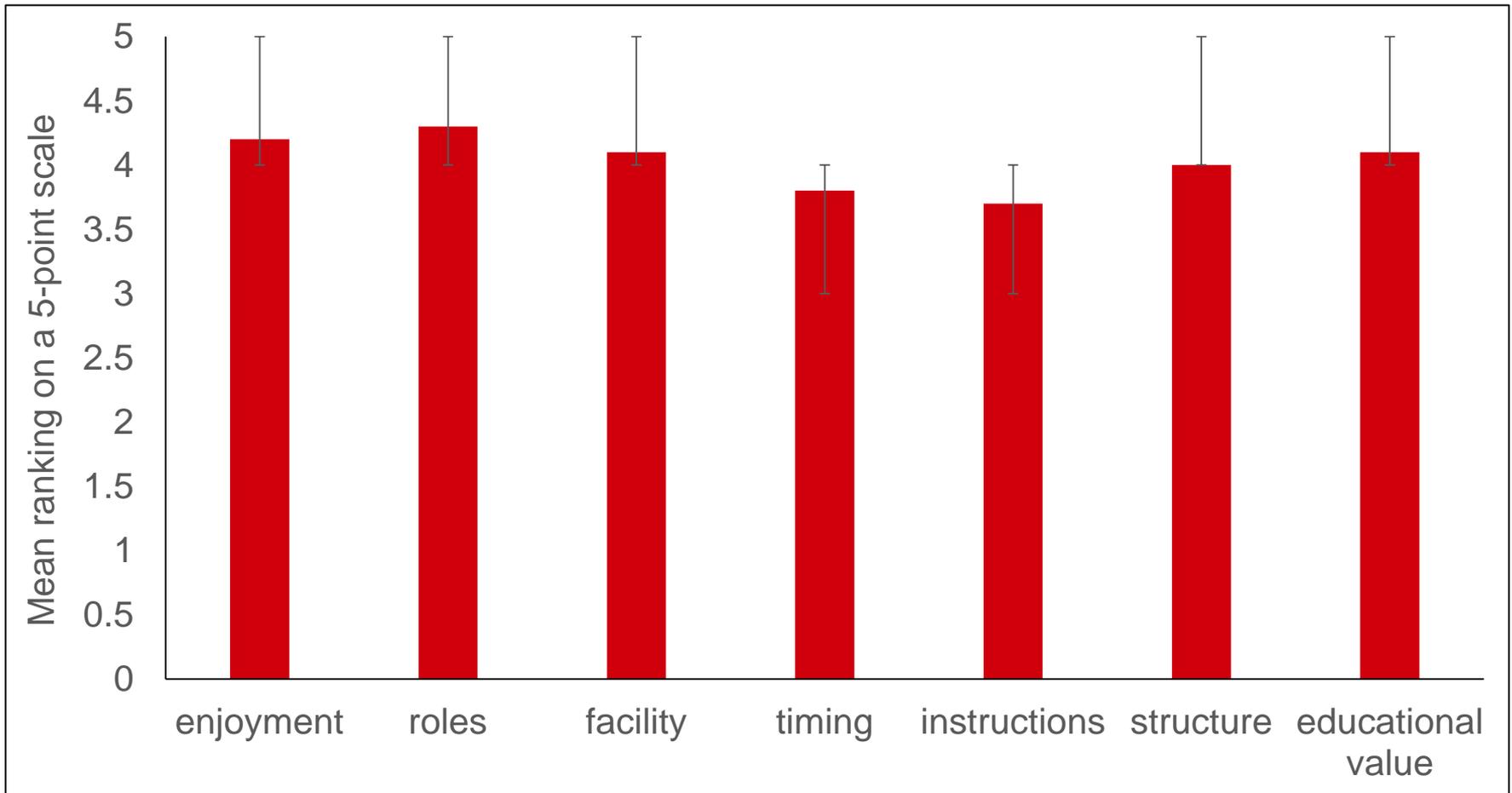
Complete evaluation data was available for:

- 7 different simulation topics
- 87.5% (21/24) events
- 61.0% (128/210) participants

Public health content knowledge before and after simulation



Participant- rating of other aspects of the simulation experience



MAJOR THEMES IDENTIFIED BY PARTICIPANTS

1. Multidisciplinary actors involved
2. Success requires communication and team work, two of the most difficult aspects to achieve
3. Importance of engaging the community you wish to impact most
4. Funding and priority alignment

A red-tinted photograph of a meeting room. Several people are seated at long tables arranged in a U-shape. The room has large windows in the background. The word "CONCLUSION" is overlaid in white text in the center of the image.

CONCLUSION

IN CONCLUSION

- Simulations were of great educational benefit to participants
- Value of simulation learning as a ‘flipped-classroom’ and building capacity in the public health field
- Important to evaluate simulations to:
 1. Improve learning experience
 2. Demonstrate the effectiveness of simulations to prepare public health professionals for contributing to future public health research, policy and practice.

KEYS TO THE SUSTAINABILITY OF GHSIM

- Sim Facilitation Course
- Improving & expanding our evaluation tools



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