

UC Irvine

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

Title

(O-F1) Remote Learner as Team Leader: A High-fidelity Telesimulation Experience for Global Emergency Medicine Trainees

Permalink

<https://escholarship.org/uc/item/5wt9r56w>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 25(1.1)

ISSN

1936-900X

Authors

Boaglio, Sean M.

Latuska, Katelyn

Jhagru, Rayal

et al.

Publication Date

2024

DOI

10.5811/westjem.63021

Copyright Information

Copyright 2024 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

(25, 50] gain levels. All gain levels are highly sensitive and specific for RD. Overall, we recommend incorporating the use of high gain for ocular POCUS to maximize sensitivity without sacrificing specificity. High gain is an effective screening tool for ocular pathologies in acute care settings and may be particularly valuable in resource-limited settings.

6 (O-F1) Remote Learner as Team Leader: A High-fidelity Telesimulation Experience for Global Emergency Medicine Trainees

Katelyn Latuska, MD; Rayal Jhagru, MD; Kristen Dettorre, MD, DTMH; Charles Lei, MD

Oral Presenter: Sean M. Boaglio, DO, MAS, DTMH

Objectives: Telesimulation is a feasible and effective education tool capable of connecting resource-limited training programs with experienced educators and high-fidelity simulators for remote, simulation-based education (SBE) to hone team leadership, communication, and clinical reasoning skills.

Background: Global medical training programs can face significant barriers to SBE, including high learner-to-instructor ratios and limited access to simulation equipment and available space. Telesimulation uses communication technology to connect distanced learners with simulation instructors for SBE. We developed a novel telesimulation modality that enables a remote learner to practice team leadership and communication skills through a high-fidelity, mannequin-based simulation experience.

Methods: Using six Zoom-enabled devices, a team of Vanderbilt University educators facilitated a telesimulation experience for 10 Guyanese emergency medicine resident learners. Each participant individually led the resuscitation of a critically ill simulated patient with aortic dissection. Over Zoom, learners could visualize three real-time audiovisual inputs: foot-of-bed patient view; clinical data; and vital sign monitor. Participants completed anonymous surveys rating aspects of the simulation experience on a five-point Likert scale.

Results: Participants rated the clinical scenario and simulated environment as highly realistic (mean 4.2, SD 0.63; mean 4.2, SD 0.79), finding the virtual format comparable to an in-person simulation (mean 3.8, SD 1.03). The teleconferencing platform was easy to use (mean 4.3, SD 0.67) and did not detract from their experience (mean 4.2, SD 0.79). Learners reported greater confidence in resuscitating critically ill patients (mean 4.2, SD 0.63) and managing aortic dissections (mean 4.7, SD 0.48). Learners wished to participate in more telesimulation sessions (mean 4.6, SD 0.52), describing telesimulation as a valuable educational experience (mean 4.5, SD 0.53) that will improve their team leadership and communication skills (mean 4.6, SD 0.52; mean 4.6, SD 0.52), as well as their performance in an actual

clinical environment (mean 4.7, SD 0.48).

Conclusion: Our novel telesimulation modality is a feasible and effective educational tool. Participants found the virtual platform comparable to in-person simulation, providing a realistic environment for training team leadership, communication, and clinical reasoning skills. Telesimulation may be broadly applicable to the global medical education community, connecting resource-limited training programs with experienced educators and simulators for remote simulation-based education.

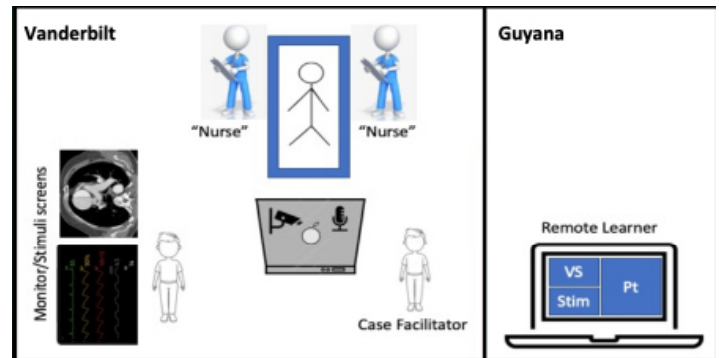


Figure 1. Schematic of telesimulation modality personnel and equipment layout

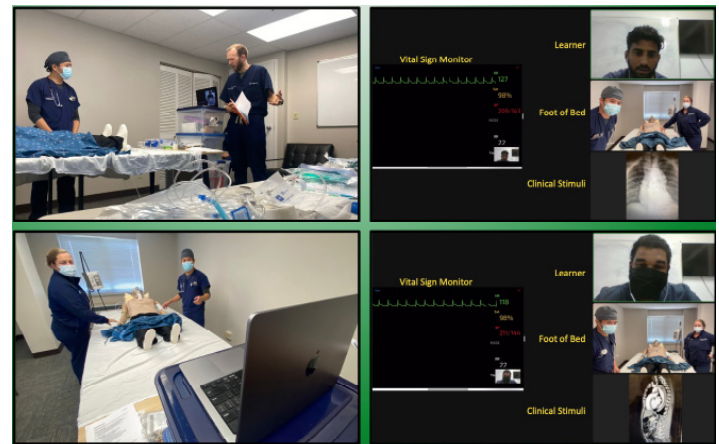


Figure 2. Education faculty facilitate mannequin-based telesimulation for remote Guyanese emergency medicine trainees (left). Remote learners individually lead the simulated resuscitation of a critically ill aortic dissection patient, with real time view of foot-of-bed, the vital sign monitor, and clinical stimuli (right)



Figure 3. Participants completed anonymous surveys rating aspects of the simulation experience on a five-point Likert scale (1 Strongly Disagree, 5 Strongly Agree), cohort mean scores for each queried element were calculated for analysis.