

Using Interprofessional System Simulation to Identify Gaps and Solutions for COVID-19 Clinical Care Response and Maintenance of Readiness

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INTRODUCTION In novel emerging infectious disease outbreaks (example: Ebola), in situ interprofessional team simulation has been described in the training and iterative refinement of local guidelines and expertise of clinical teams. In situ system simulation allows different interprofessional clinical teams to rehearse, troubleshoot, and improve clinical care processes, donning and doffing of personal protective equipment, and drills to identify system gaps in care. Interprofessional team simulation is a vehicle to identify process and system latent threats, gaps in knowledge or skill, and identify solutions to problems by front-line clinical and non-clinical staff.

HYPOTHOSIS

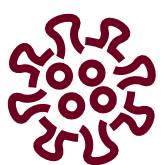
- 1 In situ interprofessional sim training helps refine expertise of rarely encountered, high-stakes infectious disease outbreaks
- 2 Different interprofessional clinical teams rehearse, troubleshoot, donning and doffing, identify gaps in care
- 3 Method to identify process and system latent threats, gaps in knowledge and skill, identify solutions by front-line clinical and non-clinical staff
- 4 Variety of COVID-19 patient presentations

Goal: increase comfort and knowledge, identify gaps, report back to modify incident command protocols and recommend solutions

METHODS

- 1 Team of critical care clinicians and sim educators identified March 2020: 7 scenarios of varying acuity and challenges were created
- 2 Post-sim gap analyses reported back to clinical leadership for rapid cycle improvement
 - Participants: all available clinical staff on day and evening shifts at different times
 - Equipment: QCPR Annie mannequin
 - Where: Emergency Department, Radiology, Critical Care, hospital floors at VA Pittsburgh
- 3 RRT mock code process to capture nonclinical response providers (police, environmental services, staff assistants)

RESULTS *March – May 2020*



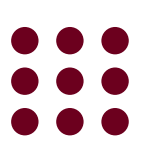
14 COVID-19
system simulations



169
staff



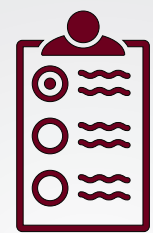
312 learning
hours



Multiple system
issues identified

Latent Safety Hazards	Communication	System Process
Donning/ Doffing PPE for Conservation Education	Rapid Response Team Communication	Rapid Response Modifications
Signage to identify PUI & type of PPE required	Communication at junctions of care: <ul style="list-style-type: none">• DE to Radiology• ED to ICU• ED to hospital floor	Clinical Process Modifications
Videos made of correct donning and doffing procedure to conserve PPT Laminated cards on wall	Non-Clinical staff safety Patients as PUI Write on doors Barrier/mask on patient	Transport routes to reduce unnecessary exposure: <ul style="list-style-type: none">• ED to hospital floors

CONCLUSIONS



In situ interprofessional simulations are vitally important for hospitals/ healthcare systems to maintain preparedness



Inter-departmental and multi-specialty involvement increases success of identifying system latent threats



Enhances staff engagement in a culture of safety



Improves morale