Using Simulation to Enhance Environmental Cleaning Practices in Diverse Healthcare Settings

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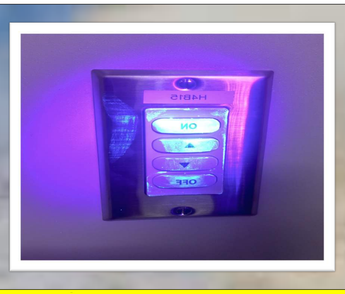
PURPOSE

The purpose of this project is to enhance the environmental cleaning practices (ECPs) of healthcare workers (HCWs) in three diverse healthcare settings located in Central Virginia, Northeast Maryland, and Central Mississippi.

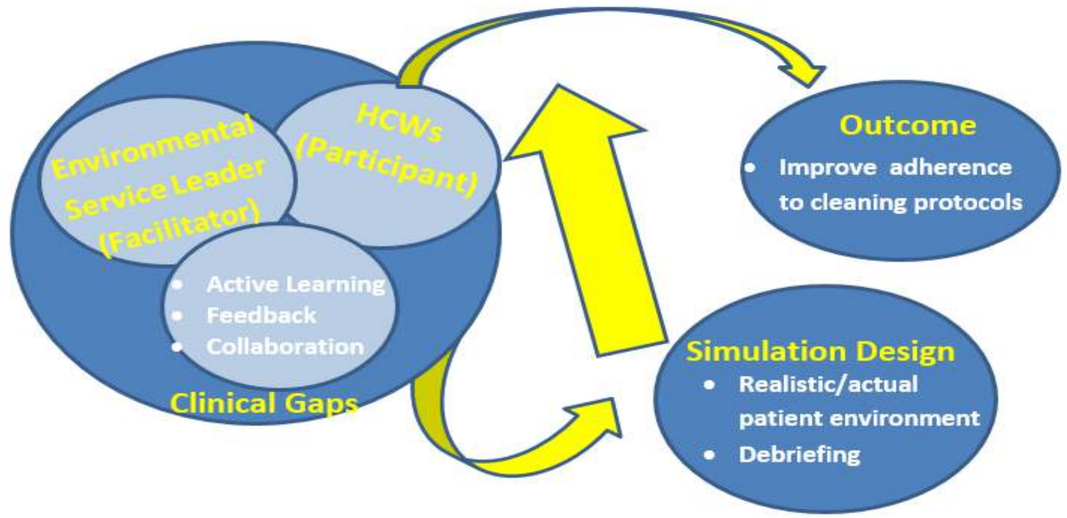
PROBLEM

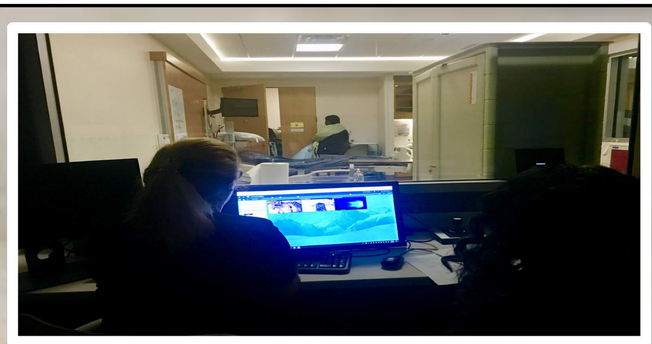
Environmental cleanliness is a key element of infection control across all healthcare settings. Less than half of all surfaces in United States hospital rooms are adequately cleaned. In the three study settings, administrators documented significant incidences of non-compliant ECPs of HCWs, related patient complaints, and the subsequent negative impact on patient satisfaction scores. Inadequate training has been cited as the primary reason for non-compliance to established ECPs.



FRAMEWORK

- The NLN Jeffries Framework highlights the primary components in simulation experiences, key elements, and an order for the development and implementation of simulation experiences.
- Figure below highlights the NLN Jeffries Simulation Framework as a model for improving ECPs of HCWs.





RESULTS

SELF-EFFICACY SCALE

N= 11

Pre: Red Post: Green

	How confident are you that you…	Lack confidence	I have low confidence	Neither	I am confident	I am very confident
1	…know which chemical is used to clean the identified room/patient care area.	0% 0%	18% 0%	9% 0%	18% 18%	55% 82%
2	…know how long the dwell time is for the chemical used to clean the identified room/patient care area.	18% 0%	18% 0%	9% 0%	9% 27%	45% 73%
3	…can correctly clean and disinfect my hands after the cleaning of the patient's room/care area is complete.	0% 0%	0% 0%	0% 0%	36% 18%	64% 82%
4	…can identify and apply the correct personal protection equipment when cleaning a patient's room/patient care area.	0% 0%	0% 0%	0% 0%	27% 18%	73% 82%

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SETTINGS

The three healthcare settings included in this project were a 451-bed regional hospital, a 1,003-bed academic medical center, and a 6-room independent nurse practitioner's office, respectively located in the southeast and mid-Atlantic regions.

PROJECT IMPLEMENTATION

The project was implemented in six stages:

1. Call to action
2. Stakeholder buy-in
3. Facilitator training
4. Developing the template
5. Implementing the intervention through simulation scenarios
6. Short- and long-term evaluation

EVALUATION

- Pre-and post-implementation surveys revealed participants' confidence levels in being able to appropriately follow the established cleaning protocols for each organization
- Project team members completed a survey to provide feedback on the process

PRACTICE IMPLICATIONS

- Implementing an onboarding and annual simulation competency training of ECPs could improve HCWs adherence to ECPs
- Based on post-intervention improved HCW confidence, all three sites plan for long-term implementation of this project
- High potential for utilizing simulation to prepare HCWs to use best ECPs for patient rooms and care areas in response to various infectious pathogens such as coronavirus