



# Bridging the Education to Practice Gap: Virtual Patient Simulation to Evaluate Student Prioritization and Interprofessional Communication Skills

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## Leadership Skills in New Graduates

### Background

Prioritization and interprofessional communication skills are essential for new graduate nurses who are transitioning into the hospital workforce. Despite nursing programs believing that their nursing students are fully prepared to provide safe and effective care, hospital and health system leaders have brought up concerns about new graduates' practice readiness (Berkow et al., 2008). Due to the need to provide undergraduate students with more applied learning experiences prior to practice, virtual patient simulations have arisen as one engaging and innovative approach to teach these skills (Foronda et al., 2014; Jakovich, 2018; Peddle et al., 2019; Umoren et al., 2018)

### Purpose

The purpose of this study was to evaluate a pilot version of a virtual patient simulation designed to teach the concepts of nursing prioritization and interprofessional communication skills to students enrolled in the last semester of their pre-licensure program.

### Simulation Learning Objectives



Describe current leadership and nursing models/theories employed for the delivery of patient centered care

Analyze effective communication strategies when working as a member of a healthcare team, including interprofessional team development

Apply concepts of quality and safety to identify clinical questions and discuss impact on delivery of patient

Explain ethical decision making strategies and ethical standards to promote patient advocacy, collaboration, social justice, confidentiality and right to privacy

## Study Methodology

### Participants

The Leadership virtual simulation was pilot tested asynchronously with 25 pre-licensure students who were enrolled in their last semester of school. These students came from various online and traditional pre-licensure nursing programs across the United States.

### Measures and Procedure

After completing the simulation, students responded to a 22-item (5-point Likert-type and open-ended) online survey related to their overall experience with the virtual simulation, including usability, quality, and realism. Other areas explored were the effectiveness of pre-brief and instructions, usefulness of the virtual nursing tablet, value of learning activities, and fairness of scoring. Responses were confidential and opting out of the survey did not interfere with students' patient exam simulation in any way.

## Simulation Role and Scenario



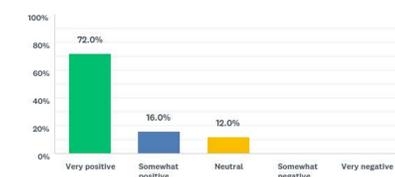
In this simulation, the student assumed the role of a registered nurse (RN) newly assigned to a medical-surgical unit at a hospital using a day-in-the-life narrative framework. The simulation scenario represented the first portion of a 12-hour nursing shift.

## Simulation Learning Activities

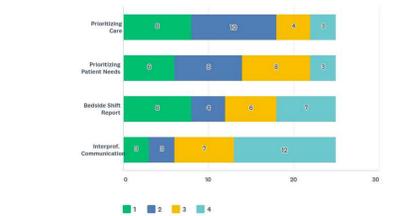
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**Bedside Shift Report**  
 Receive two patient bedside shift reports from another nurse in a SBAR style.
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**Prioritizing Delivery of Care**  
 Prioritize delivery of care for two patients according to leadership models and theories.
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**Prioritizing Individual Patient Needs**  
 Conduct a thorough but focused patient assessment in order to best prioritize nursing interventions and in-room care.
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**Interprofessional Communication**  
 Effectively communicate new patient information to a provider.
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**Debrief**  
 Using a debriefing framework, learners reflect and discover how they can improve their thinking and apply their learning to clinical situations

## Main Results

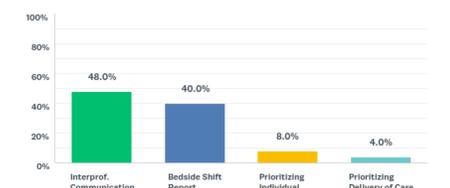
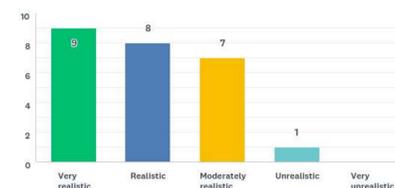
What is your first reaction to the Leadership simulation?



Please rank the following Leadership simulation activities in order of preference, with 1 being your most preferred activity and 4 being your least preferred activity.



How realistic did the Leadership simulation feel? What was the most difficult activity in the Leadership simulation?



Overall, 86% (22) of students had a positive reaction to the Leadership simulation. Prioritization of multiple patients, doing SBAR bedside shift reports, and having the sense of agency in the role of a nurse were mentioned as reasons behind their satisfaction. The most preferred activity by students was Prioritizing Delivery of Care (2.91/5). Not having much practice with prioritization in a hospital setting and seeing it as an important skill to have were mentioned as reasons for their preference.

## Conclusions and Implications for Practice

Virtual patient simulations can help students develop a critical understanding of the core concepts behind prioritization and interprofessional communication in nursing as well as the opportunity to apply key leadership knowledge, skills, and competencies needed prior to entering the workforce. Bedside clinical nurses must apply clinical leadership skills to ensure safe, high-quality patient care as well as positive patient outcomes. Using these types of scenarios can help educators to teach safe, patient-centered care leadership skills and hospital and health system leaders with better prepared new graduates that can contribute to best patient care and outcomes.

## References

Berkow, S., Virkstis, K., Stewart, J., & Conway, L. (2008). Assessing new graduate nurse performance. *The Journal of Nursing Administration*, 38(11), 468-474/  
 Foronda, C., Budhathoki, C., & Salani, D. (2014). Use of multiuser, high-fidelity virtual simulation to teach leadership styles to nursing students. *Nurse Educator*, 39(5), 209-211.  
 Jakovich, E. (2018). Creating interprofessional simulation scenarios in virtual learning environments. In Gordon, R., & McGonigle, D. (Eds.). *Virtual simulation in nursing education* (223-232). New York, NY: Springer Publishing Company, LLC.  
 Peddle, M., Mckenna, L., Bearman, M., Nestel, D. (2019). Development of non-technical skills through virtual patients for undergraduate nursing students: An exploratory study. *Nurse Education Today*, 73, 94-101.  
 Umoren, R. A., Scott, P. J., Sweigart, L., Gossett, E., Hodson-Carlton, K., Johnson, M., Jones, J. A., Poore, J. A., Rybas, N., Truman, B., & Das, R. (2018). A comparison of teamwork attitude changes with virtual TeamSTEPS® simulations in health professional students. *Journal of Interprofessional Education & Practice*, 10, 51-55.