

Does the Development of Oncology-Specific Simulations and Hands-On Learning Improve Oncology Nurse Confidence?

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K - BACKGROUND

Nursing staff in the long term acute care environment is largely comprised of new grads who express a lack of confidence in chemotherapy administration and symptom management. Bliss and Aiken (2018) found that simulations and hands-on training improve nurse retention and the application of knowledge. The often-complex dosing, timing, and monitoring of chemotherapy medications can contribute to lower nursing confidence levels versus normal drug administration, prompting a need for a new way to teach and provide ongoing training for oncology nurses.

S - METHOD

The setting was a long-term acute care facility with a dedicated oncology unit with an average length of stay of 38 days. A classroom training and SIM lab educational intervention was developed. Nurses were given a patient case study with hands-on simulation of chemo administration. Following the educational intervention, we conducted a debrief and review. A pre- and post-survey was used to assess nurses’ confidence in caring for oncology patients. Qualitative and quantitative data was collected from 12 oncology nurses during the simulation in October of 2020.

K - PRE/POST SURVEYS

The pre- and post-survey was comprised of 5 questions assessing nurse confidence in chemotherapy administration and providing care to oncology patients. A section at the end of the survey allowed nurses a chance to further explain their concerns and fears about giving chemotherapy.

Oncology SIM Day Pre-Survey

Date:

Years of practice as a nurse:

1. How confident do you feel caring for oncology patients? (1 = very unsure, 5 = very confident)

2. How confident do you feel administering chemotherapy? (1 = very unsure, 5 = very confident)

3. How confident do you feel about caring for a patient post-chemo? (1 = very unsure, 5 = very confident)

4. How interested are you in administering chemotherapy? (1 = not interested, 5 = very interested)

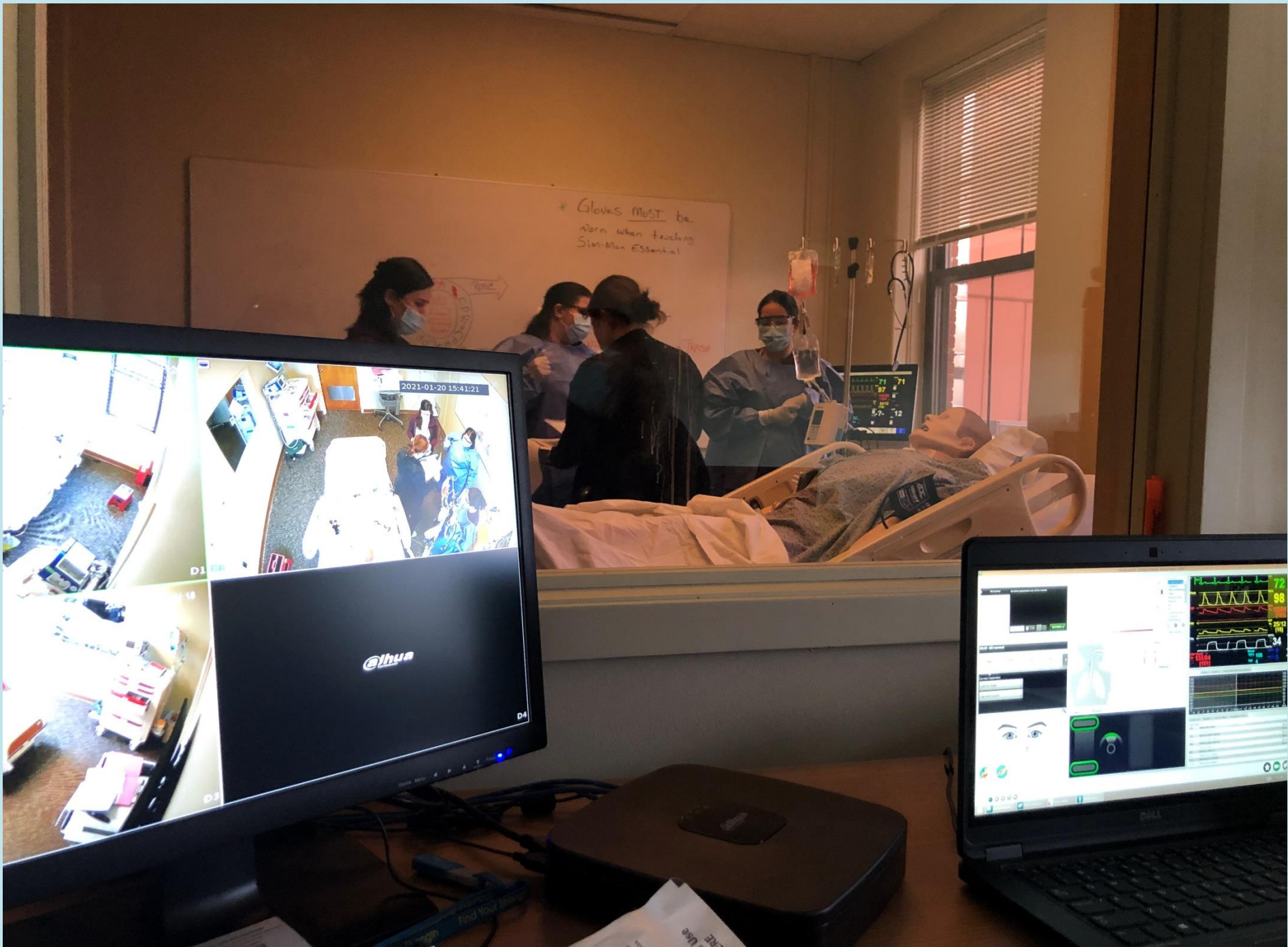
5. How interested are you in caring for post-chemo patients? (1 = not interested, 5 = very interested)

6. What are your concerns or fears around caring for chemo patients, administering chemotherapy, or caring for patients post-chemo?

References
Bliss, M., & Aitken, L. (2018). Does simulation enhance nurses' ability to assess deteriorating patients? *Nurse Education in Practice*, 28, 20-26. doi:10.1016

S - INCREASE IN NURSE CONFIDENCE:

Caring for oncology patients +9% (p = 0.266)
*Administering chemotherapy +48% (p = 0.006)**
Caring for a patient post-chemo +12.7% (p = 0.139)



K - RESULTS

Qualitative responses to the SIM lab experience emphasized the need for more frequent simulation experiences with a focus on potential adverse events, side effects, and symptom monitoring. Responses included fears of patients having allergic reactions, oncologic emergencies, safe administration and handling, and incorrect use of equipment. One nurse wrote, "There were areas to make mistakes judgment free (good learning environment)," in the post-survey evaluation. Another nurse noted that the simulation “helped with confidence in administering chemo.” Many participants identified areas for more education and hands-on practice, including “Different types of chemo and side effects/tips to look out for when caring for post chemo patients,” “Neutropenia/neutropenic fevers,” and more, as well as the following feedback, “Sim labs more frequently would be helpful to keep up with skills.”

S - BARRIERS

Due to COVID-19 social distancing limitations, the simulations were limited to 6 nurses in each session. Nurses are unable to administer chemotherapy on a regular basis due to the volume of chemo patients at the facility. This contributes to nurse anxiety and fear around administering chemotherapy, thus there was a limited population of nurses in the facility interested in participating in the simulation.

K - CONCLUSIONS and RECOMMENDATONS

A simple educational intervention demonstrated a significant increase in nursing chemotherapy administration confidence. Our findings suggest that further intervention is needed to increase confidence levels in other areas.

Based on the success of the pilot, we plan to implement this simulation day as a mandatory hands-on training day for our oncology nurse as a part of the onboarding process. Due to the interest of staff who participated in the simulation day, monthly "Mock Code" style simulations will be offered. These will simulate oncologic emergencies and offer more frequent hands-on practice for staff. We will continue to collect data on nurse confidence and competence in administering chemotherapy and caring for oncology patients pre and post simulation.