Enhancing Medication Safety Through Multi-Site Simulation Training in VA

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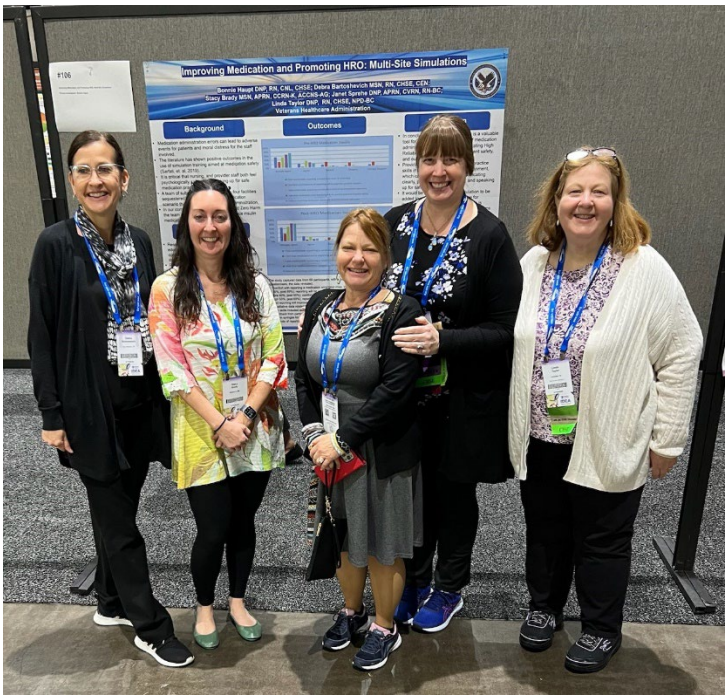

(Organizers from multiple VA facilities developed and led a multi-site simulation training program to enhance medication safety and promote high reliability in patient care.)

Safe medication administration is essential for patient care in VA medical centers. It is a complex process that requires precision and attention to detail. Errors in medication administration can lead to severe consequences, including patient harm, increased health care costs, and emotional distress for health care providers. Given the high stakes, ensuring that health care professionals are well-trained in safe medication practices is imperative. This led to the development of a multi-site simulation training program designed to enhance the skills and confidence of health care providers in administering medications safely.

Why the Team Came Together

Our multi-site simulation was created in response to the *State of Tennessee v. RaDonda Vaught*, a former nurse who was criminally prosecuted and found guilty of a fatal drug error in 2017. The National Coordinating Council for Medication Error Reporting and Prevention defines a medication error as: "… any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare professional, patient, or consumer."

Medication administration errors can lead to adverse events for patients and moral distress for the staff involved. Four out of every ten patients are harmed while receiving care, costing payers an average of $8,000 per admission. It is critical that nurses and providers feel psychologically safe when speaking up

for safe medication practices. Literature has shown positive outcomes from simulation training aimed at medication safety (Sarfati et al., 2019). While medication errors may result from human errors, they often stem from a flawed system with inadequate backup to detect mistakes (Tariq et al., 2023). In VA's commitment to focusing on a systems-centered approach with our journey to become a High Reliability Organization (HRO) and Zero Harm, the team identified best practices to reduce insulin medication errors.

What We Did: Method

A team of subject matter experts from four VHA facilities in different regions developed an insulin medication scenario focused on safe insulin administration. Participants of the simulation included staff from mental health, the emergency room (ER) and intensive care units (ICUs), educators, and new graduate nurses.

The onsite pre-work consisted of reviewing policies related to safe medication administration and a PowerPoint that discussed HRO, the Just Culture concept, the Swiss cheese model of systems, human error, drift, and how/when to report errors. Before the simulations, each participant was pre-briefed and completed an online five-point Likert-type questionnaire. The simulation allowed for the application of didactic pre-work. The scenario focused on identifying signs and symptoms of hyperglycemia, obtaining a blood glucose level, communicating effectively with the provider, and reporting any errors in the safety reporting system if needed. Participants were debriefed as a group to allow for reflection and discussion with the HRO coordinator.

The Results

The study captured data from 69 participants, with a total of 65 completing the post-questionnaire. The data revealed the following improvements:

- Comfort with reporting a medication error/near-miss: increased from 75% (pre) to 89% (post)
- Belief that reporting would be used for punitive purposes: decreased from 40% (pre) to 55% (post)
- Comfort with reporting to an immediate supervisor: increased from 53% (pre) to 69% (post)
- Belief that reporting will promote safety: increased from 66% (pre) to 84% (post)
- Belief that reporting will improve outcomes: increased from 74% (pre) to 83% (post)

Qualitative data identified barriers preventing teams from utilizing their new skills, including lack of confidence, fear of punishment, retaliation, and peer pressure.

Participants recommended more simulations and suggested medical centers should make insulin syringes for low doses available. They also provided positive feedback on the class, stating it was informative and effective. Additional feedback indicated that teams felt more comfortable with transparency in reporting and corrective actions taken.

Conclusion

Simulation education is a valuable tool for enhancing skill competence in medication administration and for incorporating HRO concepts to enhance patient safety and team performance. Providing an opportunity for staff to practice skills in a safe, nonjudgmental environment, which includes clear

communication, attention to detail, and speaking up for safety, is the best scenario. Collaborating with quality and safety teams is necessary for driving health care change toward becoming a high-reliability industry, as expressed by the Agency for Healthcare Research and Quality. Incorporating this simulation into orientation and implementing a just culture will be beneficial. Simulation is critical in enhancing patient care and systems to understand and prevent medical errors or near misses.

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