

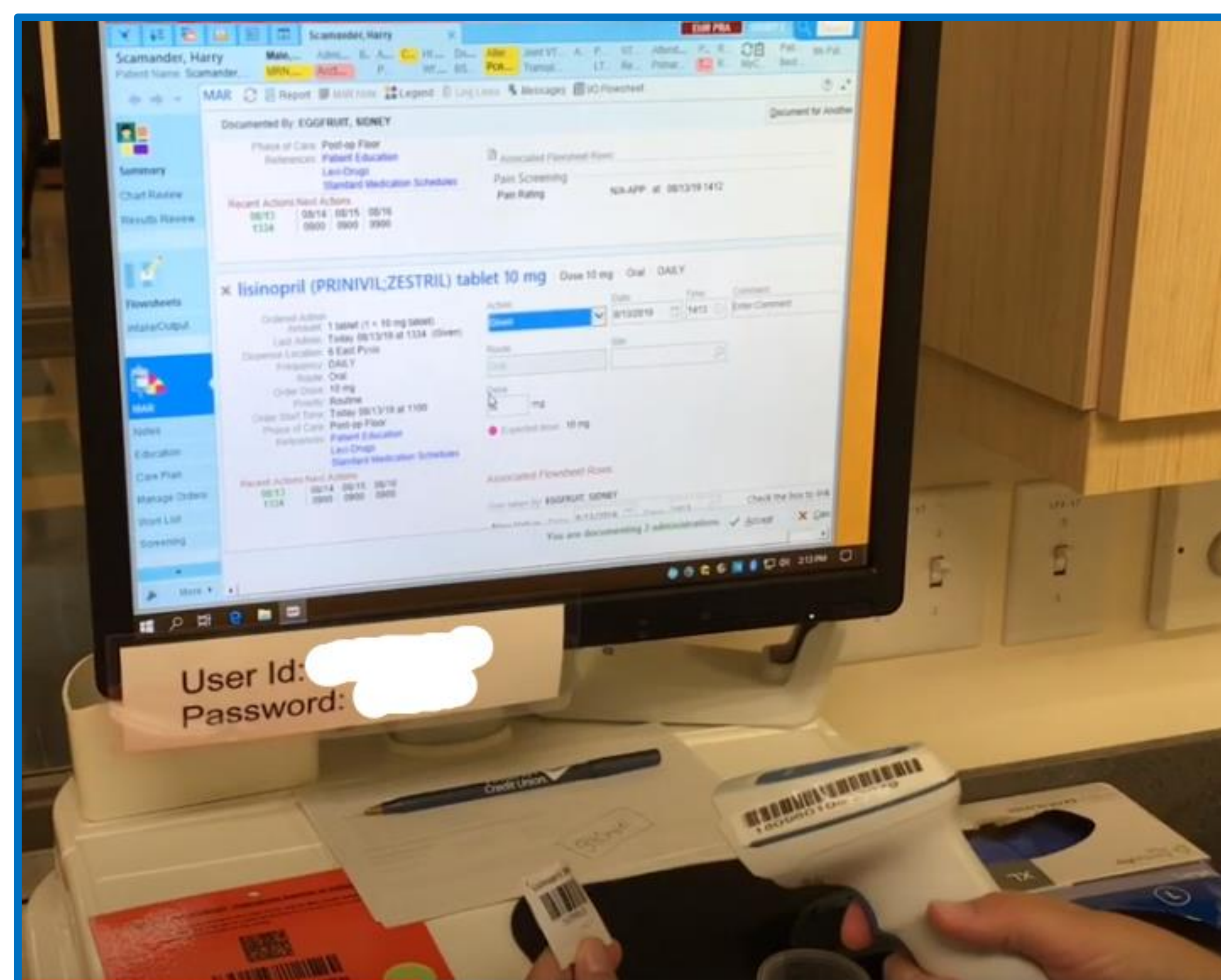
“Is barcode scanning the fourth check?”: Coaching and guiding safe medication administration practices with integrated technology in the simulation learning environment

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Background

Despite advances in technology, medication errors continue to make-up a large portion of adverse medical events. Prelicensure nursing students and new graduates may contribute to adverse drug events due to novice clinical judgement in the process of medication administration. Many students do not have the opportunity to independently practice the entire process of medication administration during nursing school.

The **purpose** of this presentation is to discuss a literature review to inform and support clinical faculty to implement best practices for teaching medication safety practices with the integration of technology in the simulation laboratory environment.



Medication Administration Teaching Module Checklist

Debriefing with good judgement training with a focus on psychological safety	1 hour
Practice with providing clear feedback to students	30 minutes
Simulation lab sessions to walkthrough and practice teaching medication administration processes using the medication dispensing tower, electronic health record and barcode scanning	1 hour
Debrief with nurse educators on the process of teaching the steps of safe medication administration using technology and a standardized competency checklist	1 hour

Results

Simulation infrastructure is needed to create opportunities for nursing students to learn and make mistakes using the increasingly complex medication technology of the health care system. Technology does not replace the checks and balances of medication administration, instead it must be considered an additional safety check in the administration process (Lee, T., Kou, G., & Yeh, M., 2017). Implications from this literature review led to the development of a standardized training module intended to educate faculty using simulation. The training offered faculty the opportunity to review a standardized process for using integrated technology during medication administration and simulated scenarios developed to coach and guide students through the process.

Methods

Nursing literature in medication administration in nursing education from May 2019 to August 2019 was reviewed by utilizing ‘MEDLINE’, ‘CINHAL’, and ‘Google Scholar’ databases. The key words used included: three checks, rights of safe medication administration, medication safety in nursing education, barcode scanning technology, and electronic medication administration record (MAR).

Conclusions

Innovations in electronic health records (EHRs) do not replace the rights and checks of medication administration. Indeed, integrated technology adds an additional layer of safety checks to enhance quality and safety in complex care delivery systems. Therefore, prelicensure nursing students need opportunities to integrate the rights and checks with EHRs in simulation. Further research is needed to establish a standard critical element checklist and best practices to ensure for safe medication administration competency that integrates all technology components.

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