Medications, Barcodes, and Apps - Oh My!! Implementing BCMA in a Pediatric Facility with a Hand-held Communication Device

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Abstract

Nursing is a field of nurture and healing. Nevertheless, even with the best education, skill, and intention, nurses still make errors that harm patients. Errors involving medications can result in extended hospital stays, cause permanent injury, and attribute to death. In fact, over 7,000 of the reported preventable adverse drug events in 2012 resulted in patient death . Nurses are at the sharp end of the medication delivery process, and are often the last barrier to prevent medication errors. However, one estimate suggests that nurses are the cause of over 64% of medication errors . Various technologies have been offered to decrease these medication errors, but the application of these technologies has produced mixed results. Much research has been done to evaluate the effectiveness of Bar-Code Medication Administration (BCMA) on decreasing medication administration errors. Research has investigated nursing work-arounds related to BCMA, but fewer studies have assessed BCMA's impact on nursing workflow. This presentation will provide an overview of implementing BCMA with the use of a hand-held communication device via a mobile application in a pediatric teaching hospital. The project team did much to prevent known work-arounds, including implementing a unique bar-code for the patient armband and evaluating bar-code scanner devices for visibility of BCMA alert screens. Ultimately, the use of the RN's mobile communication device, which has an embedded bar-code reader, was selected for scanning medications for BCMA. The mobile and app technology related to BCMA is not well studied and has unique benefits and risks associated with its implementation. This presentation will be aimed at giving an overview of this complex project and discuss benefits and lessons learned from the project implementation.