Title: Examining the Impact of Nursing Structures and Processes on Medication Errors

Purpose: Determine the relationships among characteristics of the nursing practice environment, nurses’ error interception practices and non-intercepted medication errors in acute care hospitals.

Background:
- Medication errors remain one of the leading threats to patient safety.
- More than 7,000 inpatients die each year due to medication errors.
- Medication errors can originate from a variety of providers including physicians during the prescribing stage, pharmacists during the dispensing stage, support staff during the transcription stage, and registered nurses during the administration stage.
- Research indicates registered nurses (RNs) can serve as a safety net, intercepting medication errors before they reach the patient, regardless of the source or stage of the error.
- Yet, little is known regarding factors and processes that facilitate this important work of nurses.

Methods:
- Mixed methods design included individual interviews with 50 staff RNs from 10 participating hospitals to determine practices used to identify and intercept medication errors before they reached patients.
- Descriptions used to develop measure of error interception practices.
- Quantitative phase consisted of 686 staff RNs, and 82 medical-surgical units recruited from 14 U.S. acute care hospitals. Data collected regarding characteristics of practice environment, error interception practices, and documented non-intercepted medication errors per 1,000 patient days.
- Data were analyzed at the unit level using hierarchical linear modeling.

Key Findings:
- A supportive nursing practice environment was positively associated with nurses’ error interception practices.
- Nurses’ error interception practices were inversely associated with non-intercepted medication errors per 1,000 patient days.

Charts:
- Chart 1. Effects of Practice Environment on Nurses’ Error Interception Practices
- Chart 2. Effects of Practice Environment and Interception Practices on Non-Intercepted Medication Errors.

References