

RESEARCH BRIEF

- Title:** Examining the Impact of Nursing Structures and Processes on Medication Errors
- Authors:** Linda Flynn, Dong-Churl Suh, Geri Dickson, Ming Xie
- 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**
- Flynn, L., Liang, Y., Dickson, G., Xie, & Suh (2012). Nurses' Practice Environments, Error Interception Practices, and Inpatient Medication Errors. *Journal of Nursing Scholarship*, 44(2), 180-186.
- Dickson, G.L., & Flynn, L. (2011). Nurses' Clinical Reasoning: Processes and Practices of Medication Safety. *Qualitative Health Research* (lead article), 2(1), 3-16.