

Impact of Health Information Technology on Delivery and Quality of Patient Care

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Summary: Adverse events in hospitalized patients are costly for individuals, hospitals, and society. Recent figures from the Department of Health and Human Services suggest that more than 13 percent of hospitalized Medicare beneficiaries experience an adverse event during hospitalization and that 44 percent of these adverse events are preventable. Despite a decade of widespread attention and activity, little progress has been made to improve patient safety and reduce preventable adverse events.

The use of electronic health records (EHRs) may improve provider performance, interdisciplinary communication, quality of care, and patient satisfaction. EHR implementation has been linked to an increase in the amount of time hospital-based nurses spend in direct patient care and nurses' perceptions of providing higher-quality care.

This Health Services Research Dissertation (R36)-funded study provides an opportunity to use existing databases to examine individual and cumulative impacts of EHR utilization and functionality, organizational climate, nurse staffing levels, and the delivery of nursing care on patient outcomes in a sample of 72 acute care hospitals.

Specific Aims:

- Quantify the unique and cumulative effects of differing: 1) EHR implementation and functionality; 2) organizational climate; and 3) nurse staffing levels on the delivery of nursing care. **(Ongoing)**
- Quantify the unique and cumulative effects of differing: 1) EHR implementation and functionality; 2) organizational climate; 3) nurse staffing levels; and 4) the delivery of nursing care on patient mortality and non-mortality adverse outcomes such as catheter-related blood stream infections and hospital readmission. **(Ongoing)**
- Quantify the unique and cumulative effects of differing: 1) EHR implementation and functionality; 2) organizational climate; 3) nurse staffing levels; and 4) the delivery of nursing care on patient satisfaction. **(Ongoing)**

2012 Activities: The project is in the start-up phase. Ms. Hessels has obtained the study data from multiple large databases. Her first step is to review the structure of each data set to identify the data elements that are required for this project. Moving forward she will clean the data to prepare for the analysis.

Preliminary Impact and Findings: This project has no findings to date.

Target Population: Adults

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve health care decisionmaking through the use of integrated data and knowledge management.

Business Goal: Knowledge Creation
