

Ambulatory Electronic Medical Record and Shared Access

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Organization:	Sarah Bush Lincoln Health Center
Mechanism:	RFA: HS05-013: Limited Competition for AHRQ Transforming Health Care Quality Through Information Technology (THQIT)
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Project Period:	September 2005 – September 2009, Including No-Cost Extension
AHRQ Funding Amount:	\$1,500,000
Summary Status as of:	September 2009, Conclusion of Grant

Target Population: Medically Underserved

Summary: This project aimed to implement an ambulatory electronic medical record (EMR) across multiple and varied health care settings in a medically-underserved region of East Central Illinois. Sarah Bush Lincoln Health Center (SBLHC), a nonprofit community health care corporation, served as the fiscal agent and lead organization of a collaborative partnership. The goal of this implementation was to improve patient safety and assess provider and patient attitudes about health information technology by: 1) providing access to patient records across hospital services, home health, hospice, physician practices, and nonhospital provider settings and 2) integrating electronic tools for prescription orders and management of medications. The project used a Certification Commission for Health Information Technology-certified EMR, the Medical Practice Management suite of software developed by LSS Data Systems. Project partners included two private practice organizations and the Health Services Division of Eastern Illinois University. The purpose of the EMR was to facilitate coordinated care across services by sharing pertinent patient information with the emergency department and home health, hospice, family, internal medicine providers, and other specialists throughout the rural community. The ambulatory EMR provides a means to share a longitudinal medical record that contains, at a minimum a patient problem list, medication list, allergies, radiology images and data, laboratory data, and a patient care plan.

The SBLHC implemented the software, modified it to their specifications, and piloted it in the organization's ambulatory clinic in Neoga, IL. During the pilot, the information systems team analyzed what worked well and what needed improvement. A spectrum of factors was evaluated, from the training manual format and training environment to followup support. The system implementation's success was measured through direct user feedback.

Specific Aims:

- Upgrade broadband network infrastructure at implementation sites. **(Achieved)**
- Customize system software for implementation sites, including data dictionaries, analogs of paper forms, a billing module, and backup procedures in case of system failure. **(Achieved)**
- Implement the system at 20 clinics in the local area. **(Partially Achieved*)**

2009 Activities: At the end of the project term the EMR was being used by 16 physicians and mid-level providers; approximately one-third of the planned providers. However, by the end of 2010, there were 20 providers in 10 clinics fully implemented. Software is installed by a standard process and standard dictionaries with some personalized templates. The system has a complete billing module including

electronic billing. Data backup systems have been improved with a new “de-duplication technology” that backs up and restores patient data in a fraction of the former time.

Grantee’s Most Recent Self-Reported Quarterly Status (as of September 2009): Project momentum was interrupted due to technological delays, including system functionality development and compatible point-of-care tablet PC device availability. Efforts to expand system implementation beyond the initial 10 clinics to 10 other practices continue.

Impact and Findings: The project team found that emergency department (ED) and inpatient caregivers benefit from having electronic access to the patients’ ambulatory medications. Moving from paper to electronic charts can overwhelm busy clinics, and most physicians, mid-level providers, and nursing staff concluded that the system will not increase productivity until the charts are more established. However, although the users do not view the system as ideal, they would not choose to return to paper charts.

In 2006, the implementation team conducted a survey of ED caregivers. The initial survey results indicated that the caregivers were not always able to obtain a complete list of medications for patients because the patients could not communicate or simply did not understand their medications. When ED caregivers were polled again in 2009 to see if the ambulatory EMR implementation influenced their ability to provide care, all respondents stated that their ability to access patients’ ambulatory medications was enhanced and looked forward to having more information available when the remainder of the clinics implemented electronic records.

The project team learned many lessons that will help them implement the program in future clinics. For example, prior to the first implementation, a group of providers met and decided that anything that did not exist within the Enterprise Medical Record should be scanned into the system. The team discovered that scanning is extremely labor-intensive and should be started well in advance of implementation. They also reported that transcription into the system should be done at the earliest opportunity—even if the clinic will not be electronic right away. More detail on the project findings is included in the project’s final report: [DeLuca 2009 Final Report](#).

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to support patient-centered care, the coordination of care, and the electronic exchange of health information to improve quality of care.

Business Goal: Knowledge Creation

** One aim was not completed prior to the scheduled conclusion of the grant. By the end of 2010, there were 20 providers in 10 clinics fully implemented. Another 10 clinics are pending implementation.*