

Barriers and Facilitators to Implementation and Adoption of EHR in Home Care

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Summary: As demand for home care services increases to support the health care needs of our aging population, more home health agencies in the United States are implementing electronic health records (EHRs). Home care using skilled nursing services is an increasingly important and effective way to deliver care and manage chronic illnesses in the growing older population. Good communication regarding patient data, status, and care plans is essential for ensuring efficiency, patient safety, and quality of care. An EHR at the point-of-care, in this case, at the home, would facilitate communication and enable access to updated patient health information in a timely fashion. If patient data are integrated and available in real time, a home care EHR has the potential to improve health care decisionmaking and outcomes.

The impact of implementing EHRs in hospital and ambulatory care settings has been studied, but little research has been done on implementing EHRs in home care settings. To address this research gap, Dr. Paulina Sockolow and her research team are conducting a study involving interrupted time-series analysis to assess the impact of a point-of-care home based EHR. This EHR was implemented in 2009 at Penn Care at Home, a nonprofit freestanding home care agency in Philadelphia that provides services to 1,200 patients a month in a five-county area. Retrospective and prospective quantitative data are being collected to understand how EHR implementation affects patient, workflow, and financial outcomes. Qualitative survey and interview data and quantitative EHR-use data will be collected to describe the barriers and facilitators of EHR adoption by home care providers. All Penn Care at Home clinicians who provide direct patient care and document in the EHR, and data from all Medicare patients cared for by the home care nurses will be included in this study. The research findings will inform the development of home care EHR design and implementation recommendations.

Another component of this study involves comparing the home care EHR functionality with ambulatory EHR functionality, as specified in the Department of Health and Human Services Final Rule on Meaningful Use Stage 1 objectives. The home care EHR functionality will be based on the qualitative data collected from home care clinicians' perspectives on EHR functionality, and on qualitative functionality data collected from the EHR documentation. This comparison will result in policy recommendations from the research team on developing Meaningful Use criteria specific for home care EHRs.

Quantifying the impact of the EHR and identifying EHR characteristics associated with better adoption and clinical outcomes will help to inform improvements in home care EHR development, implementation, and training.

Specific Aims:

- Examine the impact of EHR implementation in a home care agency by comparing patient, workflow, and financial outcomes before and after point-of-care EHR implementation. **(Ongoing)**
- Identify the barriers and facilitators to point-of-care EHR adoption and implementation in home care. **(Upcoming)**
- Propose design, implementation, and policy recommendations that address the barriers and facilitators to implementation and Meaningful Use of the EHR in home care. **(Ongoing)**

2011 Activities: Activities centered on data extraction and analysis of the patient, workflow, and financial outcome components of the project. Analysis of the workflow and financial outcomes before and after home care EHR implementation is almost complete and manuscript writing on the analysis and findings is in process.

As last self-reported in the AHRQ Research and Reporting System, project progress and activities are completely on track and the project budget funds are somewhat underspent due to a pending invoice for programming.

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

Target Population: Elderly,* Medicare

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

Business Goal: Implementation and Use

** This target population is one of AHRQ's priority populations.*