

Project Title:	Evaluation of Effectiveness of a Health Information Technology-based Care Transition Information Transfer System
Principal Investigator:	Ciemins, Elizabeth, Ph.D.
Organization:	Billings Clinic Foundation
Mechanism:	RFA: HS08-002: Ambulatory Safety and Quality Program Improving Management of Individuals with Complex Healthcare Needs through Health IT (MCP)
Grant Number:	R18 HS 017864
Project Period:	09/08 – 09/11
AHRQ Funding Amount:	\$1,155,371
Summary Status as of:	December 2008

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

Summary: Dr. Ciemins and her team launched their project in late September 2008. This new project proposes to improve the coordination of care for patients with two or more chronic conditions who are discharged from an acute hospital stay back to rural primary care clinics or other care sites. The grantees will develop, implement, and evaluate a Care Transition Information Transfer (CTIT) system that the rural clinics can access—a modification of the current Billings Clinic system. Four of the clinics will access CTIT through the Billings Clinic health information technology network, as they are electronic health record (EHR)-integrated systems, and four will access the Billings Clinic Health Information Technology (Health IT) network through a Web-based portal or through the receipt of e-fax, e-mail, or phone call. The system will provide patients and their primary care providers with discharge information, particularly focused on medication management, but also including information such as follow-up visits, laboratory testing, operative reports, and so on. They will conduct a prospective study to evaluate whether the intervention improved patient clinical outcomes, system efficiency and process outcomes, and patient and rural provider satisfaction with the hospital discharge process. The Billings Clinic uses the Cerner EHR system. The CTIT system will be integrated into the Cerner EHR system; the Access database is solely for research purposes to evaluate outcomes among study participants.

Specific Aims

- Develop a health IT-based care transition information transfer (CTIT) system. **(Ongoing)**
- Evaluate the effects of the CTIT system on timely communication of patient information. **(Upcoming)**
- Evaluate the effects of the CTIT system on clinical and systems-level outcomes. **(Upcoming)**
- Evaluate the effect of the CTIT system on system efficiency. **(Upcoming)**
- Evaluate the effect of the CTIT system on satisfaction with care transitions among rural primary care providers. **(Upcoming)**
- Evaluate the effect of the CTIT system on patient satisfaction with care transitions. **(Upcoming)**

2008 Activities: Dr. Ciemins and her team have begun developing the Access database. They have also developed the chart review collection instrument. The team has begun to administer the patient telephone surveys to collect baseline outcomes data, having developed the data abstraction tool to identify possible candidates. They have presented information about the intervention to a number of clinicians, including

internal medicine physician groups, cardiologists, and hospitalists—physicians specializing in non-surgical care of hospital inpatients. They collected baseline data on patient satisfaction and have begun collecting baseline data on provider satisfaction with hospital discharge. The team visited seven of the eight participating rural clinics in order to collect information about the clinical context, staff satisfaction with hospital discharge, and generally to generate interest in the intervention. In addition, they have also established several committees, including the Information Technology Task Force Committee, the Discharge Process Task Force, and the Project Steering Committee. More important than the development of the Access database (which is only for evaluation of outcomes) is the initiation of the process of developing the information transfer system that will be integrated into the current Cerner EHR system.

Preliminary Impact and Findings: Although there are no key outcome findings, because they are still developing the intervention, Dr. Ciemins’ team identified a preliminary finding based on their assessment of workflow processes. They determined that there is currently no standard hospital discharge process, so the team will have to develop a standard procedure before they can automate the discharge procedure. The discharge process is on the hospital end, not at the participating clinics, although the team is attempting to improve the communication process with the participating clinics when their patients are discharged.

Selected Outputs

Telephone Survey tool and accompanying script: the telephone survey tool is related to specific outcome measures. The tool is not being completed by rural clinics, but by rural patients and does not supplement data on contextual factors. Instead, it will directly measure outcomes.

Fact Sheet: developed to describe the project to participating organizations.

Chart Review tool: used to collect medication-related and health care utilization data on patients.

Series of Satisfaction Surveys, including a telephone and Web-based survey for patients and a Web-based survey for providers.

Presentation to present the project to key stakeholders, including participating rural clinics, participating hospitals, and clinical staff.

Grantee’s Most Recent Self-Reported Quarterly Status: The project is completely on track, meeting 100 percent of its milestones.

Milestones: Progress is completely on track.

Budget: Spending is roughly on target.