

## Improving Care Transitions for Complex Patients through Decision Support

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<b>Principal Investigator:</b>	Eisenstein, Eric, D.B.A.
<b>Organization:</b>	Duke University
<b>Mechanism:</b>	RFA: HS08-002: Ambulatory Safety and Quality Program: Improving Management of Individuals with Complex Healthcare Needs through Health Information Technology (MCP)
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<b>Project Period:</b>	September 2008 – September 2012
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**Summary:** The care of patients with complex health care needs is often fragmented because patients receive care from multiple providers in disparate locations and because information related to this care is often not transmitted between providers or locations. Inadequate inter-provider communication and care coordination significantly lowers care quality and compromises patient safety. This project seeks to improve outcomes, quality, and coordination of care for patients with complex health care needs by facilitating the availability of information following three types of care transitions into ambulatory care: hospital discharge, emergency department (ED) discharge, and specialty care referrals.

The project built upon the Community-Oriented Approach to Coordinated Healthcare, an existing regional health information exchange (HIE) network that connects providers serving Medicaid beneficiaries in rural and urban North Carolina. The project team implemented an open-source clinical decision support (CDS) application called ClinicaCDS to detect care transitions and produce and send care event summary reports to patients, patients' assigned medical homes, and care managers. These intervention notices support traditional clinic-based models of care as well as models that incorporate population health management and cross-disciplinary teams.

The impact of the interventions are currently being evaluated by randomizing patients with complex health care needs by family unit into one of three arms: 1) information on care transitions is sent to patients and clinic-based caregivers; 2) information on care transitions is sent to patients, clinic-based caregivers, and care managers; and 3) no information is sent (i.e., usual care). As a primary outcome measure, the research team used the overall rate of ED use. In addition, the economic impact of the intervention will be measured relative to usual care. Information-augmented care transitions between sites are expected to improve care coordination, quality, and appropriateness of care.

### Specific Aims:

- Enhance the existing HIE network and decision support tool. **(Achieved)**
- Implement and evaluate the intervention. **(Ongoing)**
- Conduct the economic attractiveness assessment. **(Upcoming)**
- Disseminate the findings. **(Upcoming)**

**2011 Activities:** The CDS system and interventions were finished and tested in February 2011. The study went live in March 2011. Data collection is ongoing for the evaluation and will be complete when the randomized controlled trial (RCT) ends in March 2012. The focus going forward until the end of the study period will be to conduct the clinic site visits and continue to provide support for the project and the interventions. By the end of 2011, the 1-, 3-, and 6-month site visits were completed and the coordination team had begun initiation of the 9-month site visits. As part of these visits, the contextual evaluations are being conducted with clinic staff personnel as well as clinic care providers. This contact with the sites helps the project team to informally evaluate the system, hear the sites' concerns, and identify ways to increase the benefit of the interventions and decrease the information overload to sites. For example, the project team customized the sending of interventions (care event summaries and requests for information) based on the location (e.g., hospital of service) and type (e.g., ED, hospital, specialty encounters) of care event.

The research team continued telephone surveys of randomly-selected patients to confirm receipt of the letters and to ask whether they took the letters to their followup appointments with their primary care clinicians. They modified their patient contact protocol so that patients are called a week rather than a month after an event to lessen the impact of elapsed time on patient recall. Finally, the research team, with the assistance of clinicians, has continued to work on their patient education brochures, which will be completed in January 2012 after the required departmental and State Medicaid program review process.

As last self-reported in the AHRQ Research Reporting System, project progress and activities are mostly on track. The project budget funds are slightly underspent due to the conservation of funds to complete the RCT. The project team is using a 1-year no-cost extension to ensure adequate time for the RCT, which was delayed due to previous years' delays in programming the interventions and subsequent analysis and manuscript preparation. In addition, personnel change resulted in one of the co-investigators taking on the role of project principal investigator.

**Preliminary Impact and Findings:** Evaluation outcomes will not be available until the RCT is complete. However, during the site monitoring visits, clinics have reported that they are pleased with the intervention and feel the reports can be integrated into their workflow with minimal disruption.

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**Target Population:** Chronic Care\*, Medicaid

**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

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