

## A Community-Shared Clinical Abstract to Improve Care

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<b>Organization:</b>	Fairview Health Services
<b>Mechanism:</b>	RFA: HS05-013: Limited Competition for AHRQ Transforming Health Care Quality through Information Technology (THQIT)
<b>Grant Number:</b>	UC1 HS 016155
<b>Project Period:</b>	September 2005 – January 2010, Including No-Cost Extension
<b>AHRQ Funding Amount:</b>	\$1,482,674
<b>Summary Status as of:</b>	January 2010, Conclusion of Grant

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**Target Population:** Adults, Congestive Heart Failure

**Summary:** This project seeks to improve continuity of care for emergency department (ED) patients by implementing a health information exchange (HIE) among three health care systems. Handoffs between medical providers are recognized as a potential source of medical error. Such risks are compounded during emergency visits, when patients may use the nearest available ED rather than their usual source of care. The project assesses the effect of providing additional clinical information during care transitions.

The project initially planned to exchange full continuity of care documentation among EDs in three health care systems; however, recent additions to Minnesota privacy law made this goal infeasible. The plan was revised to have ED clerical personnel prepare patient record abstracts from ambulatory care electronic medical record (EMR) systems and make them available to clinicians in the participating EDs.

An observational study of congestive heart failure (CHF) patients at an ED in each health system was conducted to assess the effect of prior information on care quality and efficiency measures. Although project partners are still interested in advancing the HIE model and applying it to the local area, regulatory changes and the early status of the statewide Minnesota Health Information Exchange (MN HIE) delayed electronic exchange of patient record abstracts beyond the timeframe of this project.

### Specific Aims:

- Extract and analyze de-identified patient ED visit data from participating facilities in order to determine which populations would be best served by implementation of the HIE. **(Achieved)**
- Evaluate if the existence of prior clinical information accessible in the EMR would diminish information gaps and be associated with better quality and efficiency of care compared to patients for whom such information was not available at the time of the ED visit. **(Achieved)**

**2010 Activities:** The project team conducted statistical analysis of outcome measures and developed the final report.

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**Grantee's Most Recent Self-Reported Quarterly Status (as of January 2010):** The MN HIE was conducting a number of pilot studies and was not available before the project's end date. The contingency plan of creating and evaluating paper-based health summary reports was completed successfully. Overall, at the end of the grant period, progress and spending was roughly on target.

**Impact and Findings:** The impact of several external factors forced the project team to amend their

plans. The EMR vendor common to the three health systems adopted a closed exchange strategy that required customers to agree to an unlimited geographic scope of exchange rather than a regional exchange. Privacy and security concerns about the vendor's approach limited the health systems' acceptance until later in 2009. The Minnesota legislature updated privacy regulations to accommodate HIE and to affirm its commitment to a state-based HIE organization; however, these changes led to uncertainty among the legal counsels of the health systems and delayed implementation decisions. Recognizing the need for an exchange organization in Minnesota led to the inception of the MN HIE in late 2007. The project's executive board committed the project to use the nascent HIE once its communication services became available to avoid developing redundant and temporary communication channels. Finally, the national health information technology (IT) picture dramatically changed over the term of this project. While health IT attained much higher visibility and has substantial Federal financial incentives, the temporal prioritization of HIE has not increased. Rather, meaningful use criteria are being established by the Federal government to drive deployment of health IT functions and have effectively postponed exchange until 2013 and beyond, a full decade after the current project was envisioned. Although national efforts are now bringing about encouraging progress, most of these barriers still remain.

Once it became clear that true exchange was not going to be feasible during the project's term, the team modified the evaluation plan to focus on two ED patient groups, internal and external, at each of the three participating EDs. Internal patients are those with CHF who already had an electronic clinical record in that health system at the time of their first ED visit in the study period, and external patients are those with no available electronic record. There were 5,166 patients designated as index cases with 3,974 (77 percent) determined to be internal patients. After adjusting for age, sex, race, marital status, and comorbidities, internal patients in one of the settings had fewer orders for laboratory tests and medications while in the ED; lower odds of hospitalization; and if hospitalized, lower odds of mortality than external patients. The study has shown that once multiple barriers to HIE are overcome, an HIE-supported equivalent process can become a valuable adjunct in the care of ED patients.

More detail on the project findings is included in the Dr Connelly's final report: [Connelly 2010 Final Report](#).

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

**Business Goal:** Synthesis and Dissemination