

**Project Title:** Improving Asthma Care in an Integrated Safety Net through a Commercially Available Electronic Medical Record

**Principal Investigator:** Brottman, Gail, M.D.

**Organization:** Denver Health

**Contract Number:** 290-06-0020-5

**Project Period:** 09/07 - 12/09

**AHRQ Funding Amount:** \$484,760

**Summary Status as of:** December 2008

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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 in care settings, and the use of electronic exchange of health information to improve quality of care.

**Business Goal:** Implementation and Use

**Summary:** This project seeks to improve the quality and patient-centeredness of asthmatic ambulatory care for children and adults. We will link a computerized decision support software application (electronic asthma action plan, or e-AAP) and a commercially available electronic health record [EHR] (Epic), two widely used applications that currently do not “talk” to each other. Providers then will be able to call up the e-AAP from Epic to help determine asthma severity, develop the best treatment plan, and print a one-page asthma action plan for the patient to take home. The intervention will be evaluated for its impact on the quality of asthma care. The development site is Hennepin County Medical Center (HCMC) in Minneapolis, Minnesota.

### Specific Aims

- Develop the electronic decision support tool, with content based on the recommendations presented in the National Asthma Education and Prevention Program (NAEPP) 2007 Guidelines for the Diagnosis and Management of Asthma. **(Ongoing)**
- Create a mechanism that enables a user to call up the e-AAP while logged into a patient’s EHR. **(Ongoing)**
- Introduce the e-AAP to providers at eight HCMC primary care clinics, emphasizing how the e-AAP supports quality asthma care. **(Upcoming)**
- Create an asthma registry populated by data generated by the e-AAP and merged with asthma-relevant data generated by patient EHRs, and use the registry as the data source for regular reports showing clinic-by-clinic measures of asthma care quality. **(Upcoming)**

**2008 Activities:** We completed the model for the e-AAP, and the software developers began coding in December 2008. Technical development during 2008 also involved articulating the vision for the mechanism that would enable users to access the e-AAP from Epic.

**Preliminary Impact and Findings:** Preliminary findings to date concern the magnitude of effort required to convert recommendations for disease management expressed in a 450-page natural language narrative into executable computer code. The project extensively documents the issues encountered. Upon release in 2009, this documentation likely will have an impact on the processes by which clinical guidelines are developed and disseminated.

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### **Selected Outputs**

The primary output to date is the model for the e-AAP, which is represented using the Microsoft product Visio as provided to AHRQ.