



Greater Cincinnati Beacon Collaborative Shared Community Infrastructure for Beacon and Beyond

Background

On September 2, 2010, the Greater Cincinnati Beacon Collaboration (GCBC), a group of six community organizations, was awarded a \$13.75 million Beacon Community cooperative agreement from the U.S. Dept. of Health and Human Services (HHS). Greater Cincinnati is one of 17 innovative communities nationwide selected by HHS to showcase how better information, connectivity and innovative process improvement can deliver lower costs, higher quality and better health outcomes.

A major objective of the Greater Cincinnati Beacon Collaboration is to leverage the existing health information technologies (HIT) and health information exchange (HIE) (i.e., HealthBridge) to provide advanced technology capabilities that prepare the region for changes in how we pay for health care, such as accountable care, shared and bundled savings, and primary care incentive programs.

HealthBridge has worked with its board and partners in the Greater Cincinnati community to develop a plan for a new, advanced Shared Community Infrastructure. At its October 2011 meeting, HealthBridge's board approved eight Shared Community Infrastructure elements to meet the goals of the Beacon program as well as ensuring the community has sustainable infrastructure for improvement for years to come. (See diagram below.) The Shared Community Infrastructure elements, when fully functional and utilized, will assist in improving information flow along a continuum of needs – whether for ensuring information is available for health care providers treating patients, for improvement specialists looking for strategies to improve care for all patients with a specific condition or leaders looking at outcomes at a community level.

Key Elements of the Shared Community Infrastructure

The Community Infrastructure elements include the following elements:

1. Patient Disease Registry – a quality improvement technology used in a practice or other health care setting to analyze care and provide reporting for a population of patients with a specific diagnosis, condition, or procedure. This application can be integrated with existing electronic health records, practice management systems, HealthBridge community data and other sources to ensure clinicians have a more complete view of their patients and ensure patients receive all recommended care.
2. Enhanced Data Feeds – Secure, HIPAA compliant connections between specific information systems or data stores and HealthBridge. These enhanced data feeds will allow the identification of patient panels each participating provider that are used to



bring together all of the relevant patient data for analysis and improvement efforts. These enhanced data feeds will also provide discrete structured patient-centric clinical, financial, and operational data that will aid in direct patient care, transitions in care, and the coordination of care.

3. Transaction Database – A database that captures both discrete and non-discrete patient information flowing among providers and other appropriate health care entities. Examples of transactions include lab results, radiology reports and other common information that must be shared securely for better patient care. The transaction database enables and supports the creation and distribution of patient ED and Admission Alerts, and the longitudinal view of a patient’s medical information by ED physicians.
4. Semantic Normalization Tool Set – Tools that translate among various clinical terminologies and coding systems (e.g. LOINC, SNOWMED, CPT4, ICD-9, and ICD-10) and will allow different information systems to “speak the same language.” These tools will normalize and standardize data so that it can be collected, integrated and analyzed as accurately as possible across different data sources.
5. Master Patient Index – Software that establishes a unique community identifier for every individual as well as tracks all provider assigned identifiers for each individual. This ensures that systems within the HealthBridge Shared Community Infrastructure can accurately identify, match and transmit information about a patient within an organization and across the community. This positive identification of both the patient and the provider enables the aggregation of a patient’s information, the accurate delivery of that information, a longitudinal view of a patient’s information, and the analysis of the information to support care planning, care delivery, and measurement.
6. Analytics and Reports Distribution– Software that allows authorized individuals secure access to data, analytics and reporting available through HealthBridge’s Shared Community Infrastructure. This collaboration tool set will enable individual providers and care teams to access and run reports to support care planning, care delivery, transitions in care, and measurement.
7. Data Warehouse, Analytics and Reporting - A database structure and software that facilitates highly reliable integration and analysis of large data sets from multiple clinical, financial and operational data sources. These tools enable the analysis and reporting of clinical quality measures, cost measures, and utilization measures at the practice, organization, and community levels.
8. Claims Data Warehouse, Analytics and Reporting – A database structure and software that are tailored and optimized for claims data, with defined data marts to store, retrieve and analyze data over time. These tools enable a cost and reimbursement based analysis and reporting of clinical quality, cost of care, and utilization at the practice, organization, and community levels.

Diagram #1
Beacon Infrastructure Investment

