Beacon Community Program

Awardee of The Office of the National Coordinator for Health Information Technology

The Beacon Community Program goals include building and strengthening a health information technology infrastructure; improving health outcomes, care quality, and cost efficiencies; and spearheading innovations to achieve better health and health care.

Southeastern Minnesota Beacon Community

Overview of the Southeastern Minnesota Beacon Community

The 11-county area in Minnesota served by the Southeastern Minnesota Beacon Community has been identified as one of the most advanced communities in terms of health information technology (health IT). Virtually 100 percent of primary care providers in the area have electronic health records (EHRs), and Winona County already has a decade of "wired" connectivity of health information among health care and community partners. The challenge of this Beacon Community is to expand the exchange of health information across all 11 counties and importantly, to identify specific new ways of using the system to facilitate better care coordination and clinical transformation among clinics, hospitals, the public health department, and schools in the community.

Data indicate Southeastern Minnesota to be a community in need of more effective and comprehensive care for patients with diabetes and asthma. Diabetes is a costly chronic illness that disproportionately affects the elderly in Minnesota, whose care is often under-managed. The Mayo Clinic has already experienced some success in improving health outcomes for patients with diabetes through shared health information. The Beacon Community has further extended the reach of this program to a wider area that includes different health care systems.

Mayo Clinic serves as the coordination hub for all Southeastern Minnesota Beacon program activities. In this role, Mayo Clinic is providing the community with access to its deep resources in the areas of health IT, quality improvement, health policy and research, and grants/financial administration.

In Olmsted County, it has been shown that sharing action plans for children with asthma across primary care clinics, schools, and the public health department reduces health care utilization and improves school attendance. The Community Collaborative Asthma Project, established by Olmsted Medical Center, the Mayo Clinic, Olmsted Public Health, and the Rochester School District, uses health information exchange to identify and manage asthma cases among public school students. In its first year, the program staff discovered 700 previously undiagnosed cases in the county, in addition to the 1,100 cases already known to school health personnel. The Beacon Community will expand this program to another 10 counties, bringing better asthma care to more children.

Goal of the Program

The Southeastern Minnesota Beacon Community is using the expanded availability of EHRs and health information exchange to:

- Enhance patient involvement in the management of chronic illness through shared decision-support tools
- Incorporate patient reported outcomes and quality of life measures in the standard set of disease metrics used to treat patients diagnosed with diabetes
- Reduce costs associated with hospitalization and emergency services for patients with diabetes or childhood asthma
- Address health disparities for underserved populations and rural communities

Through the expanded health information exchange made possible by the Beacon Community, the area will see widespread use of health IT along with lower health care costs, increased care management through streamlined workflow, and improved community health.

Using Health Information Technology to Make a Difference

The Mayo Clinic has already seen improvements in patient care from the use of health IT, such as computerized clinical decision-support systems and patient data sharing among members of the health care team. When more physicians and other providers have access to these tools, more patients will benefit from comprehensive, evidence-based treatment plans.

Technology enables providers to promptly and reliably implement treatment plans and identify barriers to optimal care much more effectively than would be possible using traditional paper and phone-based transmission of health information. For instance, the Community Collaborative Asthma Project found that electronically sharing action plans for children with asthma reduced the need for urgent care and improved school attendance for students and work attendance for parents. Increased communication among the different partners also connected previously undiagnosed students with necessary health care services, particularly among underserved and minority youngsters.

Use of health IT improves workflow and increases efficiencies in care that can reduce costs by eliminating duplicate tests and averting emergency room use, hospitalization, and readmissions through more coordinated care.

A Team Approach

The Southeastern Minnesota Beacon Community is a collaborative effort among the Mayo Clinic, the Mayo Health System, Olmsted Medical Center, Winona Health Services, and several other health and social service organizations in the region. The collaborative includes area doctors and hospitals, public health departments, school districts, the Bureau of Prisons, Veteran's Administration Clinic, and the Prairie Island Indian Reservation.

Improvements for Patients and the Community

The use of EHRs and the health information exchange gives patients in the service area of the Beacon Community the opportunity to:

- Become more engaged as partners in their health care. For example, the Beacon Community is developing an Internet-based tool for adult patients with diabetes that will make it easier for them to work with their providers on setting and achieving goals for managing the condition (e.g., controlling blood pressure and cholesterol levels, maintaining optimal blood sugar levels, taking daily aspirin, and staying tobacco free). This tool gives patients and providers a more accessible platform from which they can work to improve health outcomes.
- Better manage their diabetes care through regular blood sugar level monitoring and other clinical quality measures. The Southeastern Minnesota Beacon Community is closely following a set of clinical measures to inform the community's progress and the need for revisions of interventions.

- Better manage childhood asthma through a coordinated community-wide effort involving schools, the public health department, clinics, and hospitals.
- Participate in an advisory group consisting of patients to help Beacon organizers design systems of care that improve health statistics and that serve the needs of patients.

While the initial work of the Southeastern Minnesota Beacon Community will focus on asthma and diabetes and exchanging data locally, the project design ensures that adequate and appropriate infrastructure is developed to leverage lessoned learned into other diseases and areas of primary prevention along with data exchange with other Minnesota entities.