Beacon Communities: Leading the Way in Health Care Transformation

BEACON COMMUNITIES EXECUTIVE SUMMARY

This report provides an overview of the federal Beacon Community Cooperative Agreement Program and highlights, through case summaries, the distinct experiences in Southeastern Michigan and Rhode Island Beacon Communities. This report identifies program and funding characteristics in these communities and examines the evolving state health agency role, and offers options for other states to engage with health IT and primary care quality improvement initiatives. The 2009 American Recovery and Reinvestment Act (ARRA) authorized the Beacon Community Cooperative Agreement Program (Beacon program). Under the Health Information Technology for Economic and Clinical Health (HITECH) Act—which includes the Beacon program and other health IT initiatives—the federal government invested in several coordinated funding strategies to advance health IT, improve care delivery and reduce health care costs. Beacon Communities are required to coordinate Beacon funding with other health IT and health information exchange (HIE) initiatives and funds.

The Beacon Community program has three primary aims[1]:

- Demonstrate how health IT-enabled quality, cost and population health improvements are possible in diverse parts of the country.
- Support lasting innovation networks in communities through which a wide range of stakeholders can collaborate, design and implement new technology-enabled ideas that improve health and health care, now and in the future.
- Trade lessons, implementation insights and best practices with each other and with other communities.

State and territorial health agencies can benefit from the experiences and lessons learned from Beacon Communities as they move forward with their implementation. Already, they offer several options that state and territorial health agencies may want to consider for improving primary care. Recommendations and next steps include:

- Promote health IT adoption in community health centers.
- Promote Medical Homes to improve quality of care.
- Promote patient engagement in managing health.
- Leverage federal and state health IT and practice redesign initiatives.
- Identify linkages between public health and health IT strategies.

INTRODUCTION

In May 2010, the Office of the National Coordinator for Health Information Technology (ONC) launched the Beacon Community Cooperative Agreement Program- a $250 million initiative aimed at spurring innovation and health care improvement in 17 designated communities. Beacon funding aims to demonstrate how health information technology (health IT), in tandem with other health care delivery interventions, can reduce costs, improve quality of care and, most important, improve the health of the community.

More than one year into a three-year grant period, Beacon communities are seeing results. On their way to ambitious and large-scale transformation, they are

[1]Aaron McKethan; U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Learning Health IT from ONC Beacon Communities. http://www.healthit.gov/buzz-blog/ehr-case-studies/learning-health-it-onc-beacon-communities/ Published Dec. 8, 2010. Accessed Jan. 11, 2012.

offering important lessons to other communities and states about health IT's pivotal role in facilitating health system innovation and transformation. According to former Director of Beacon Community Program, Aaron McKethan, communities are pursuing large-scale, innovation-driven changes. "We intend to drive real health care improvements, and we are also encouraging the Beacon communities to be bold in their aspirations, creative in their strategies and transparent about how these interventions are working so that learning can happen and so that refinements can be made along the way," McKethan said.[2]

This report provides an overview of the federal Beacon Community Cooperative Agreement Program and highlights, through case summaries, the distinct experiences in Southeastern Michigan and Rhode Island Beacon Communities. This report identifies program and funding characteristics in these communities and examines the evolving state health agency role, and offers options for other states to engage with health IT and primary care quality improvement initiatives.

WHAT ARE BEACON COMMUNITIES?

The 2009 American Recovery and Reinvestment Act (ARRA) authorized the Beacon Community Cooperative Agreement Program (Beacon program). Under the Health Information Technology for Economic and Clinical Health (HITECH) Act—which includes the Beacon program and other health IT initiatives—the federal government invested in several coordinated funding strategies to advance health IT, improve care delivery and reduce health care costs. Beacon Communities are required to coordinate Beacon funding with other health IT and health information exchange (HIE) initiatives and funds.

The program complements other federal efforts to facilitate adoption of meaningful use of health IT, such as funding for regional extension centers and state health information exchanges (see figure 1). Beacon funding enables communities to adopt a comprehensive and coordinated health IT strategy to enrich their health care delivery improvements. For example, some states and communities are using electronic records and decision support tools (e.g., patient and physician reminders and care guidelines) to strengthen the quality and efficiency of care offered in their patient-centered medical home practice. Beacon funding enables synergies among multiple, coordinated interventions aimed at achieving better health.

BEACON COMMUNITY FUNDING AND ASSISTANCE

ONC reviewed applications from 120 communities and awarded $250 million in grants to 17 communities that demonstrated progress in adopting electronic health records.[3] These communities also had a track record of successful partnerships among key stakeholders, including hospitals and health systems, physicians, community health centers, public health, universities and other community-based organizations. Although Beacon communities represent and involve a consortium of partners, a lead

[2] Aaron McKethan; U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Learning Health IT from ONC Beacon Communities. http://www.healthit.gov/buzz-blog/ehr-case-studies/learning-health-it-onc-beacon-communities/ Published Dec. 8, 2010. Accessed Jan. 11, 2012.

[3] U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Beacon Community Program. http://healthit.hhs.gov/portal/server.pt?open=512&objID=1805&parentname=CommunityPage&parentid=2&mode=2&cached=true. Accessed Jan. 11, 2012.

agency received and coordinates Beacon funds. These lead agencies are typically nonprofit organizations that represent the local health care community. The lead agency collaborates and subcontracts with state and local stakeholders.

Grants ranged from $11.9 million for the Colorado Beacon Consortium to $16.2 million for the Southeastern Michigan Beacon Community[2]. In addition, ONC awarded $15 million for evaluation and technical assistance to support Beacon initiatives and inform similar initiatives in other communities.

The cooperative agreement required communities to use funds for the following purposes:

- Support health IT and information exchange infrastructure.
- Improve and expand the use of health IT by public health departments.
- Adopt certified electronic health records.
- Disseminate best practices for integrating HEALTH IT into providers' delivery of care.
- Develop infrastructure and tools to promote telemedicine and quality reporting and registries.
- Engage patients and families in their health management through use of information technology.
- Protect health information.

According to the 2009 Cooperative Agreement, "These investments are expected to work together to promote the specific health care and population health goals of each community."

GOALS AND OBJECTIVES: *INNOVATION NETWORKS* SPUR COMPREHENSIVE AND LASTING CHANGE

During the three-year grant, Beacon Communities will focus on achieving measurable quality improvement goals to demonstrate the ability of

health IT to transform their local health care systems. These communities are expected to share important lessons and best practices with one another and with other communities and states. The Beacon Community program has three primary aims[1]:

- Demonstrate how health IT-enabled quality, cost and population health improvements are possible in diverse parts of the country.
- Support lasting innovation networks in communities through which a wide range of stakeholders can collaborate, design and implement new technology-enabled ideas that improve health and health care, now and in the future.
- Trade lessons, implementation insights and best practices with each other and with other communities.

Beacon communities are pursuing a variety of goals and interventions that address their unique health care gaps and challenges. Several programs focus on using health IT to improve health outcomes for patients with chronic disease such as diabetes, asthma and cardiovascular disease. According to a 2011 *Health Affairs* article, while Beacon communities have diverse goals, experiences and geographic settings, they share six interdependent program features that "serve as the foundation for their work." These features include:

- **Clear Definition of Community.** Beacon Communities identify their target population

differently, but they all have a clear definition. Some are based on physician networks in region, and others reflect existing resources such as an information exchange that serves a specific population or region.

- **Strong Governance System.** Bridging the expertise and resources of multiple stakeholders brings with it challenges and opportunities. Beacon Communities share strong governance structures, typically involving patients, physicians, hospitals, employers, insurers and health plans. Communities typically organize steering committees or advisory councils to provide direction and assure rapid decision-making.
- **Specific Health Care Objectives.** Beacon Communities identified cost, quality and health improvement objectives. These objectives drive each community's strategy and determine how they will use resources. Objectives typically focus on the following: reducing preventable hospitalizations and emergency department visits, avoiding complications related to diabetes, improving prevention and management of cardiovascular conditions, and preventing complications for children with asthma.
- **Performance Measures and Feedback Systems.** Communities are required to connect each objective to specific performance measures, which can be measured and tracked. Since the ultimate aim of the Beacon Community program is to improve patients' health and care quality, communities are integrating these measures into their quality improvement systems to continually modify and improve care processes.
- **Interventions to Achieve Objectives.** ONC encouraged communities to test and measure multiple interventions at the same time. Examples include mobile technology (e.g., text messaging) that helps patients stay healthy, telehealth services to connect and inform providers and patients, and care transition programs that facilitate follow-up care following hospital discharge.
- **Strategies to Learn from Interventions.** Communities develop a strategy for implementing select interventions. Beginning in early 2011, most communities implemented interventions in a targeted population within the broader community, with the aim of testing and refining interventions for communitywide dissemination.

In addition to sharing experiences among Beacon Communities, the program shares best practices and inform other local and state efforts. Beacon Communities should yield practical insights about health IT and identify work needed to promote and sustain health care performance.[4] Therefore, ONC has developed case summaries and short videos and organized leadership roundtables, regional meetings

[4] Maxson et al. Beacon Communities Aim To Use Health Information Technology To Transform The Delivery Of Care. *Health Affairs*. September 2010; 29(9): 1671-1677. http://content.healthaffairs.org/content/29/9/1671.abstract Accessed January 12, 2012.

and webinars to share Beacon experiences with communities with similar goals. According to Beacon Community program Director Aaron McKethan, "Our aim is to promote open and ongoing learning about how health IT can support needed changes in health care practice that can address some of the important shortcomings in health system performance nationally[1]."

STATE AND TERRITORIAL HEALTH OFFICIAL ROLE IN BEACON COMMUNITIES

Getting involved in state and local health care delivery and IT initiatives offers an important win-win opportunity for public health. State and territorial health agencies ensure that that Beacon Community program and other health-IT initiatives integrate public health tools and approaches. For example, adoption of electronic health records is an important milestone for Beacon providers; however, in addition to helping providers monitor the health of their individual patients, state and territorial health agencies can ensure that technology supports population health goals, including the collective monitoring of practice-level and communitywide health outcomes.

In addition to adding value to health care delivery and IT reforms by providing public health expertise and resources, these initiatives enable health officials to perform the core public functions of assessment, policy development and assurance and essential health services. [Insert graphic of Core Public Health Functions and Essential Services]

Assessment. Health IT enables health care providers and officials to monitor health status, collect and analyze data and disseminate information on the community's health. The Beacon Community program supports the assessment function by enhancing capacity to gather information and quality metrics, identify gaps, implement process improvements and disseminate best practice information.

Policy Development. State health officials have an important role in formulating standards and guidelines that promote the effective and secure exchange of electronic health records and health information. They collaborate with health plans, providers and other stakeholders to develop and evaluate primary care delivery models, such as the Primary Care Medical Home, that enhance access to high quality services. In addition, patient engagement strategies, such as text messaging campaigns, provide important opportunities for health officials and other stakeholders to inform and empower people about health issues.

Assurance. Health officials ensure that health information is used appropriately and that primary care delivery models and health IT strategies meet goals for effectiveness, accessibility and quality. For example, Beacon efforts to improve screening, treatment and chronic disease management for the local population aligns with public health goals of evaluating and improving the effectiveness, accessibility and quality of personal and population-based health services. Health care transformation projects, such as the Beacon initiative, provide important opportunities to perform several essential public health services, including:

- Link people to needed personal health services and assume the provision of health care when otherwise unavailable.
- Evaluate and improve the effectiveness, accessibility and quality of personal and population-based health services.
- Assure a competent public health and personal health care workforce.

State health officials have varying—and often evolving--roles with Beacon communities. These include participation on Beacon Community steering committees and work groups, oversight of grantee organizations and active participation in the implementation of Beacon initiatives.

- The **Rhode Island** Department of Health has had an evolving role with the state's health IT and health care delivery reforms, including partnering with the Rhode Island Quality Institute to develop and implement the state's health information exchange to its current role of participating in Beacon steering committee and work groups to regulating the exchange.
- The Utah Department of Health participates in the Beacon program by developing a population-based approach to preventing and managing diabetes among adults.

State health officials have similar roles in states that do not have Beacon Communities. As states adopt and implement meaningful use of electronic health records, health officials can help ensure the transition achieves important public health goals and outcomes. Most important, they will be able to apply public health resources and tools to ensure that health IT strategies serve the ultimate goal of improved health of the population.

SOUTHEAST MICHIGAN BEACON COMMUNITY: A *SCALABLE FOUNDATION*

Michigan residents, particularly those in the Detroit area, have been hard hit by the effects of diabetes. Moreover, Michigan ranked seventh among states in the percentage of its population with diabetes.[5]

Statewide, diabetes affects about 10 percent of the population, or 1 million Michigan residents, resulting in a ripple effect of preventable hospital admissions and emergency room visits, rising health care costs and declining health measures. The estimated cost of treating and managing diabetes in Michigan is more than $8 million annually.[6] In the Detroit metropolitan area alone, nearly 13 percent of adults—or 93,000 people—have diabetes, and it is the primary cause of admission or complicating factor for 25 to 30 percent of area hospital admissions.[7]

To reverse this troubling trend, a coalition of Detroit stakeholders applied for Beacon status in early 2010—one of a series of strategies aimed at improving health care quality and outcomes. Their aim: to use health IT to "enable patient-centered care and novel clinical intervention strategies that promote improved diabetes care and self-management."[8] By implementing technology in tandem with clinical process changes and innovations, the Southeast Michigan Beacon Community (SEMBC) ultimately seeks to lower health care costs, increase quality of

[5] U.S. Department of Health and Human Services, ONC. "New Mobile App Will Use Texting for Diabetes Management. http://www.healthit.gov/buzz-blog/beacon-community-program/mobile-app-texting-diabetes-management/.June 2011. Accessed Jan. 3, 2012.

[6] U.S. Department of Health and Human Services, ONC. "Southeastern Michigan Beacon Community." http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_0_7981_3323_21240_43/http%3B/wci-pubcontent/publish/onc/public_communities/_content/files/final_se_michigan_beacon_summary_07_25_11.pdf Accessed Jan. 3, 2012

[7] Southeast Michigan Beacon Community. "Wiring Michigan" presentation, May 2011. http://ihcs.msu.edu/HIT/Presentations/SE_Michigan_Beacon.pdf. Accessed Jan. 3, 2012.

[8] Southeast Michigan Beacon Community. "SEMBC Overview," http://www.sembc.org/pdf/SEMBC%20%201-Pager_8_01_11_FINAL_Updated.pdf. August 2011. Accessed Jan. 12, 2012.

care and most important, and improve the region's health. The process and technology innovations are expected to provide a roadmap for addressing other diseases in the future. According to a project overview, "Our pilot efforts are a scalable foundation that can be duplicated and used for the care and management of other disease types in the future.[10]"

GOALS AND INTERVENTIONS

In 2010, SEMBC was selected as one of 17 communities to participate in the Beacon Community federal initiative. The Southeast Michigan effort focuses resources and strategies in an area highly affected by diabetes, including the cities of Detroit, Dearborn, Dearborn Heights, Hamtramck and Highland Park. The project aims to "make long-term, sustainable improvements in the quality and efficiency of diabetes care through leveraging existing and new technologies across health settings and providing practical support to help [providers] make the best use of electronic health data."[9]

To that end, the SEMBC developed targeted and ambitious clinical goals to improve care and reduce emergency room use and health disparities among patients with diabetes. Those goals include:

1. A 5 percent increase in the proportion of patients with diabetes who receive standard recommended testing and examinations.
2. A 5 percent reduction in the proportion of non-urgent emergency department utilization among patients with diabetes.
3. A 5 percent reduction in the proportion of patients with diabetes who experience disparities in quality of care and population health measure disparities related to gender, insurer or race.

> ***State and Local Public Health Roles with the SEMBC***
>
> - *Promoting patient engagement and self-management*
> - *Mobilizing and participating in partnerships to solve health problems*
> - *Assuring a competent workforce, training Patient Health Navigators*

The SEMBC is implementing a series of clinical practice and patient interventions to achieve these goals, including mobile health technology, enhanced care coordination and use of patient health navigators, physician reporting and feedback and clinical decision support.

Patient Engagement and Mobile Health.
The project focuses on changing patient behaviors through enhanced patient engagement and mobile strategies that inform patients about recommended guidelines and reminders about diet, nutrition and medical care. In June 2011, SEMBC was selected to work with ONC and the American Diabetes Association to develop mobile health technology for diabetic patients. The initiative integrates text messaging technology to help people assess their diabetes risk

[9] U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Beacon Community Program. http://healthit.hhs.gov/portal/server.pt/community/beacon_frequently_asked_questions/1423/home/16950. Accessed January 12, 2012.

factors and provide them with health information and access to local health and wellness resources.[10]

SEMBC, led by the Southeastern Michigan Health Association, is working with the Michigan Department of Community Health to promote and coordinate similar patient engagement strategies. The department is developing an application-based tool (i.e., an "app" that cell phone users can install) to help diabetic patients manage their health. SEMBC is working with the department to promote and coordinate these patient engagement strategies.

Care Coordination and Patient Navigators. Primary care physicians can participate in the Beacon Patient Health Navigator program. Patient health navigators offer participating clinics and their patients several benefits: an additional point of contact in the patient's support network, a link to community resources, ongoing reinforcement of the patient's treatment plans and direct and immediate feedback and communication with the patient. With comprehensive access to patients' health history and data, patient health navigators are expected to achieve many goals, including increased patient self-management and patient engagement and compliance with their treatment plans.

As of October 2011, five navigators assisted 120 patients with diabetes. Each patient navigator manages a caseload of 40-50 patients, whom they assist for a three-month period. Initially, patient navigators were assigned heavier caseloads based on the assumption that many patient interactions could occur by telephone; however, they had to reduce caseloads when they learned that in-person consultations were often needed. Patient navigators have similar training and background as community health workers. A health official from the local health department customized community health worker training for patient navigators and integrated diabetes and Beacon Community-specific content into the training.

Unlike the traditional process of hiring individuals who then participate in on-the-job training, Beacon Project Director Terrisca Des Jardins explained that training was open to qualified individuals, who were offered stipends and an opportunity to apply for a position. In addition to filling five patient navigator slots for the Beacon Community program, Des Jardins said that other trainees were hired as patient navigators for other public health programs.

In addition, the SEMBC also coordinates care through partnerships with hospital emergency departments. These partnerships are designed to help identify, treat and coordinate care of patients with diabetes.

Physician Data Reporting and Performance Feedback. SEMBC has established a network of physicians who participate in process change and data exchange. With a current network of 163 primary care physicians in 48 practice settings, including FQHCs and private practices, the Beacon Community Program shares data and integrates refinements and quality improvements on an ongoing basis.

Clinical Decision Support. According to the Agency for Healthcare Research and Quality, computer-based clinical decision support systems provide health care providers with clinical knowledge to improve patient care and patient safety. They provide "knowledge and person-specific information, intelligently filtered or presented at appropriate times, to enhance health and health care." Providers with access to these tools receive targeted alerts and reminders, clinical guidelines, patient data reports and clinical workflow tools.

[10]U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. New Mobile App Will Use Texting for Diabetes Management. http://www.healthit.gov/buzz-blog/beacon-community-program/mobile-app-texting-diabetes-management/. Accessed January 12, 2012.

These tools improve health care quality.[11] With complex conditions like diabetes, providers benefit from automated decision support tools and reminder systems that help them integrate evidence-based guidelines about patient care into practice.

STAKEHOLDERS AND FUNDING

The Southeastern Michigan Health Association (SEMHA) is the lead agency of the Southeast Michigan Beacon Community efforts. SEMHA is a consortium of local public health officers governed by a board of local health department directors. It maintains a strong public health identity as well as close ties to local and state health officials.

The Beacon Community's governance structure includes wide representation from health plans and systems, state and local public health officials, employers and a medical school. With leadership from the executive board and SEMHA's board and Center for Population Health, Des Jardins, oversees and supports various work groups that focus on health IT, clinical transformation, evaluation and measurement and mobile health. The SEMBC employs eight full-time staff members.

In addition to the key stakeholders, the Beacon Community Program also benefits from an extensive group of other partners, including private practices, FQHCs and health systems and hospitals. Currently, 48 practice settings, including 22 FQHCs and 26 private practices serving 29,000 patients, participate in the Beacon community.

SEMBC received $16,224,370 from the ONC, the largest amount awarded to any Beacon Community. In addition to ONC funds, SEMBC also received a $3 million contract for an electronic medical record initiative from the Social Security Administration, awarded to the Southeast Michigan Health Information Exchange in 2010.

STATE HEALTH AGENCY ROLE

Two state health agency staff members, including a staff member from the Medicaid program and the state health IT director serve on the Beacon Community Program Executive Board. According to the Beacon Community Director, there is eagerness to work together to promote the mobile health campaign and other initiatives. In addition to state health officials, SEMHA's membership of local health department officials provides many opportunities to deploy local health staff and resources for Beacon activities. A local health department representative participates on the Beacon Executive Board. Additionally, the Detroit Health Department is conducting training for the Patient Health Navigator program.

CHALLENGES AND OPPORTUNITIES

Achieving the SEMBC goals and objectives within the three-year project timeframe, and bridging the work and expertise of so many stakeholders, demands strong project management. Underlying the entire project is the formidable challenge of addressing the population's growing needs for high-quality, coordinated health care services. With the high concentration of diabetes, the need is great.

Another challenge is managing the change process, from a system in which data resided primarily with its owner (the provider, hospital or patient) to a system that facilitates data sharing and exchange of standardized data and information among multiple stakeholders. Moving away from traditional silos is a daunting task. The SEMBC is addressing these

[11] Agency for Healthcare Research and Quality. Clinical Decision Support Initiative. http://healthit.ahrq.gov/portal/server.pt/community/ahrqfunded_projects/654/clinical_decision_support_initiative/13665. September 2011. Updated November 2011. Accessed Jan. 12, 2012.

challenges by "working across multiple stakeholders and establishing exchange functionality, population management and point of care tools." Finally, sustaining the project's momentum and initiatives after the grant period ends is a critical challenge. The Scalability, Sustainability and Research Work Group—which SEMHA is currently recruiting—will tackle this important issue.

ADDITIONAL RESOURCES ON SOUTHEAST MICHIGAN BEACON COMMUNITY

Southeast Michigan Beacon Community Website
http://www.sembc.org/

Southeast Michigan Beacon Community Overview
http://www.sembc.org/pdf/SEMBC%20%201-Pager_8_01_11_FINAL_Updated.pdf

Southeastern Michigan Beacon Community Overview (ONC HIT)
http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_0_7981_3323_21240_43/http%3B/wci-pubcontent/publish/onc/public_communities/_content/files/final_se_michigan_beacon_summary_07_25_11.pdf

Michigan Department of Community Health
http://www.michigan.gov/mdch/

Southeast Michigan Beacon Community Presentation
http://ihcs.msu.edu/HIT/Presentations/SE_Michigan_Beacon.pdf

RHODE ISLAND BEACON COMMUNITY: UTILIZING HEALTH INFORMATION TECHNOLOGY TO ENABLE PATIENT-CENTERED MEDICAL HOMES

Like many states, increasing prevalence of chronic disease and tobacco use in Rhode Island is taking a toll on the state's health.

- According to the Rhode Island Department of Health, between 2003 and 2008, the percentage of residents with diabetes increased by one-third.[12] In 2008, more than 7 percent of adults—or 62,000 residents—were diagnosed with diabetes, and another 30,000 adults were undiagnosed. Direct health care costs associated with treating diagnosed adults with diabetes amounted to $722 million annually.
- According to the Centers for Disease Control and Prevention, 17 percent of adults and 15 percent of high school students were smokers in 2007.
- According to a 2006 analysis of Rhode Island's Behavioral Risk Survey, 9 percent of adults, or 80,000 people, had major depression.[13] Depression is linked to health risk factors, such as smoking and physical inactivity, and chronic diseases, such as diabetes, asthma and cancer. Thirteen percent of individuals with major

[12] Rhode Island Department of Health. The Burden of Diabetes in Rhode Island. http://www.health.ri.gov/publications/burdendocuments/2010Diabetes.pdf. Published 2010. Accessed Jan. 12, 2012.

[13] Jiang Y, Hesser JE. A comparison of depression and mental distress indicators, Rhode Island behavioral risk factor surveillance system. *Prev Chronic Dis.* 2011; 8(2): A37. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3073430/. Accessed Jan. 12, 2012.

depression had diabetes, 25 percent had asthma and one-third of residents were obese.

In addition to rising numbers of chronically ill, Rhode Island also experiences over-utilization of emergency department visits and hospital admissions—some of which could be prevented through access to primary care and improved disease prevention and management. According to the ONC, "… Rhode Island, like most states, faces a high burden of costly hospital admissions and emergency department (ED) visits that result from chronic disease that could be potentially mitigated and reduced through better prevention and primary care—driven through coordination."[14]

DEFINING TERMS: BEACON-RELATED INITIATIVES AND STAKEHOLDERS

Rhode Island has several ongoing health-IT and practice redesign strategies under way. For more information on the major initiatives and organizations, see appendix A.

To turn the tide, Rhode Island has pursued myriad health care delivery and health IT interventions to improve the state's health and reduce health care costs. Among them is a shift to patient-centered medical homes (PCMH)—a care delivery approach in which the patient's primary care provider coordinates care among the patient's various health care professionals. Under the PCMH model, patients have improved access to information and high-quality, coordinated care. Rhode Island has more physicians per capita that participate in a nationally recognized PCMH than any other state.[15]

To facilitate effective communication and decision-making between the patient and their various caregivers, PCMHs rely on health IT to provide clinicians with evidence-based decision support tools, access to patient health records and automated systems for delivering high-quality care. In 2005, the Rhode Island Department of Health received a grant from the Agency for Healthcare Research and Quality (AHRQ) to develop a statewide health information exchange. The department partnered with the Rhode Island Quality Improvement Institute (RIQI)—now the lead agency for Rhode Island's Beacon Community—to develop a health information exchange system called current*care* to facilitate this flow of information. This secure network enables participating providers to access and share patient health information and collaborates to deliver integrated and evidence-based care.

Because of its progress with adopting PCMHs and electronic health records, Rhode Island was well-positioned to qualify for, and benefit from the federal Beacon Community program. According to ONC, "The state's Beacon Community program, spearheaded by the Rhode Island Quality Institute (RIQI), is building upon its existing strengths in developing PCMHs by enriching them with greater health IT (health IT) to support registered, clinical decision support tools, and health care quality reporting to drive improvements." Through the Beacon Community program, RIQI is developing systems to "measure and report processes and outcomes that drive improved quality, reduce health care costs, and improve health outcomes."

[14] U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Rhode Island Beacon Community. http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_0_7988_3330_21247_43/http%3B/wci-pubcontent/publish/onc/public_communities/_content/files/rhode_island_beacon_summary.pdf. Accessed Jan. 12, 2012.

[15] Patient Centered Medical Home Rhode Island. http://www.pcmhri.org/. Accessed Jan. 12, 2012.

GOALS, OBJECTIVES AND INTERVENTIONS

The Rhode Island Beacon Community's overarching aim—and the driving force behind its objectives and interventions—is to "improve the quality, safety, and value of health care in the state, leading to better overall health."[16] To maximize outcomes, the Beacon community focuses its resources on physician practices and community health centers that had already adopted the PCMH model and electronic health records.

As shown in figure X, the Rhode Island Beacon Community is pursuing several specific objectives, including improved quality of care for patients with diabetes, fewer preventable hospital admissions and ER visits, and reduced impacts associated with tobacco use and undiagnosed and untreated depression.

Rhode Island Beacon Community Objectives

1. Enhance the quality of care provided to patients with diabetes by encouraging adherence to evidence-based guidelines and the patient-centered medical home model.
2. Reduce preventable hospital and emergency department use.
3. Reduce the impact of tobacco use on the state's population.
4. Reduce the impact of undiagnosed, untreated depression through increased screening.

Source: ONC Overview

[16] U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Rhode Island Beacon Community. http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov__rhode_island_beacon_community/3330

RIQI utilizes the PCMH model, combined with health IT to achieve these objectives. By October 2011, RIQI and its partners had implemented several important strategies to achieve the Beacon program goals and objectives.

*Primary care practice assessments and workflow redesign***.** Computerized clinical decision support provides real-time information and alerts to doctors about the health of their patients with diabetes. This information is available at the point-of-care, so physicians can utilize the information and data when they are interacting with their patient. RIQI is working with select physician practice sites to assess and redesign clinical practices to improve quality of care and health outcomes.

Coordinating care between hospital and primary care providers. The Care Transitions Intervention (CTI) project offers one-on-one coaching for patients who are discharged from the hospital.

Based on the Safe Transitions program, CTI helps patients understand and manage the high risks during their transition from hospital to home by providing tools and information that focuses on the following:

- Medication self-management
- Use of a personal health record
- Follow-up with the patient's primary care provider
- Awareness of red flags for a worsening condition

Coaches work with Nurse Care Managers at select Beacon practices to identify patients who have been discharged from the hospital, assess their risks for re-admission and coordinate follow-up care in the primary care setting. The pilot currently involves two Beacon practices—Hillside Family Medicine and Coastal Medical—with plans for expansion in late 2011.

Facilitate Communication Between Providers. The current*care* HIE system notifies participating primary

care providers about their patient's admission or discharge from the hospital. These notifications are designed to improve follow-up with patients in the physician's office, reducing the likelihood of future emergency room visits. In addition, direct provider-to-provider messaging and data exchange improves communication among health care providers in clinics and community health centers, specialists and other providers. According to ONC, "This real-time and seamless transfer of patient data is helping to ensure better chronic disease management the reduction of duplicative or unnecessary procedures."

Quality Reporting. A quality reporting and registry project is an important component of Rhode Island's Beacon work. This system will enable RIQI and other stakeholders to assess Beacon project quality metrics, including practice and physician-level benchmarks. For example, to meet the goal of improved quality of care for patients with diabetes, the Beacon project collects three quality measures from participating practices: blood glucose control, blood pressure control and Lipid control.

Currently, RIQI is working with physician practices to define metrics and ensure common procedures for gathering and reporting them. With several PCMH initiatives under way, RIQI is harmonizing the metrics used by practices involved in Rhode Island's various PCMH initiatives, including the Rhode Island Chronic Care Collaborative, the Blue Cross Blue Shield of Rhode Island Patient-Centered Medical Home Initiative and the Beacon Program. RIQI offers technical assistance to participating clinical practices to ensure consistent documentation and reporting methods within and across all of the Beacon sites. In addition to standardizing the process, RIQI is developing standards for reporting quality measures back to physicians to disseminate best practices and facilitate process improvements.

State Public Health Roles with the Rhode Island Beacon Community

- Collaborating with stakeholders to develop and implement the HIE, currentcare.
- Regulating the HIE to assure appropriate use and secure exchange of health information and effective use of HIE to monitor health status, evaluate interventions and link people to services.
- Promoting the PCMH model and participating the Chronic Care Sustainability Initiative
- Require health insurers to submit claims to all-payer claims database to measure and track quality metrics
- Require continuity of care forms for patients moving from one setting to another. Take steps to move toward electronic capture and transmission of forms.
- Require physicians to report on *health IT usage in health IT survey. Analyze and report physician health IT utilization.*

STAKEHOLDERS AND FUNDING

RIQI, a nonprofit organization dedicated to improving the quality, safety and value of health care, received and administers the Beacon Community grant, in tandem with several other interconnected health IT and health care delivery initiatives. In 2010, the ONC awarded $15.9 million to the Rhode Island Beacon Community for a three year project ending in 2013. In

September 2011, several Rhode Island community health centers participating in the Beacon Community program received additional Health Resources and Services Administration (HRSA) funds to adopt health IT, improve quality of care and health outcomes and lower health care costs. Five health centers in the Rhode Island Beacon Community received funding of $100,000 from HRSA for each health center.

RIQI leads the multiyear project and oversees and facilitates a diverse group of Beacon Community stakeholders. The Beacon Community is comprised of numerous public, private and nonprofit stakeholders, including hospitals, community health centers and other healthcare providers, associations, public health officials, health plans, universities and consumers.

It encompasses 225 health care providers working in 28 medical practices throughout the state. These include community health centers and private clinics.[17]

STATE HEALTH AGENCY ROLE

The state health department has a long-standing history and track record of collaborating to improve coordination of care. It has collaborated on several health information partnerships in the past, including development of the state's immunization registry, child health information systems and linking pediatricians to children's health and immunization records. The department also led the Chronic Care Collaborative, an initiative involving community health centers in practice redesign, and many of these practices are now part of the Beacon Community.

The department continues its partnership with the Beacon Community program by participating in the steering committee and working on various initiatives (see figure x). The department worked closely with RIQI to develop and administer current*care*, the state's health information exchange. The department also promotes the PCMH model as well as other primary care reforms.

In addition to working on Beacon projects, the Department's regulatory role—requiring insurers to submit claims and physicians to report on health IT usage—contributes to health IT goals by gathering information, identifying gaps and informing interventions.

CHALLENGES AND OPPORTUNITIES

The Rhode Island Beacon Community is addressing multiple challenges simultaneously—often by delivering technical assistance and support to participating physician practices and health centers.

Increasing Enrollment to Maximize Outcomes
Enrollment in current*care* is voluntary, and individuals must "opt-in" to the system by filling out a consent form. The voluntary nature limits the ability of providers to exchange information about patients who have not enrolled in current*care*. For example, primary care providers can only be notified of their patient's hospital discharge if they are enrolled. Similarly, direct messaging between providers about a patient's medical condition can only occur if the patient has enrolled and both doctors have a secure account. To boost enrollment, RIQI is providing technical support and additional payment for enrolling patients in current*care*.

Managing and Communicating Moving Targets. The relative complexity of the Rhode Island Beacon Community effort—which builds upon other projects and involves multiple stakeholders—can be difficult to convey. Beacon interventions involve several moving parts. The Beacon activities intersect with other

[17] Rhode Island Quality Institute. Rhode Island Beacon Practices. http://www.riqi.org/matriarch/MultiPiecePage.asp_Q_PageID_E_134_A_PageName_E_RIBeaconCommunities . Accessed January 12, 2012.

strategies and systems, such as the PCMH practice work and HIE, in different ways at different times. This dynamic approach facilitates synergies among stakeholders but also creates the potential for confusion about current activities, funding sources and stakeholder roles and responsibilities.

Ensuring Common Metrics and Effective Reporting. Transitioning from individual quality measures to standardized metrics across all Beacon practices requires training and coaching. Providers need to develop consistent methods for collecting and entering quality measures, and these must be followed by all practices in the community. RIQI is building consistency through its quality reporting database work.

Sustaining Health IT Initiatives. Finally, sustaining Beacon Community momentum, after the grant ends, requires sustained funding sources. Rhode Island's comprehensive health care strategies—integrating health IT into PCMH—rely on various funding sources, some of which expire by 2013. As a result, sustaining the momentum and replicating Beacon Community interventions and impacts relies on continued funding for the current*care* and other practice transformation initiatives. In response to this challenge, Beacon stakeholders are examining long-term strategies for supporting these efforts.

Despite these challenges, Rhode Island's coordinated health IT strategy appears to be paying off. According to a 2011 survey of physician health IT use, the number of Rhode Island physicians using electronic health records and electronic prescribing increased by 12 percent since 2009.[18] According to Interim Director of Health Dr. Michael Fine, "Increased use of electronic health records lays a strong foundation for creating the ability to practice population-based primary care. This is one more way that primary care providers can partner with HEALTH (Rhode Island Department of Health) to improve the health of all Rhode Islanders."

Additional Resources on Rhode Island Beacon Community

Rhode Island Quality Institute
http://www.riqi.org/matriarch/default.asp

Rhode Island Beacon Community Program
http://www.riqi.org/matriarch/MultiPiecePage.asp_Q_PageID_E_133_A_PageName_E_ServicesBeacon

Rhode Island Department of Health
http://www.health.ri.gov/

Rhode Island Health Information Exchange
http://www.health.ri.gov/projects/healthinformationexchange/index.php

NCQA Patient-Centered Medical Home Standards
http://www.pcmhri.org/files/uploads/PCMH%202011%20Overview.pdf

Rhode Island in an Era of Accountable Care: Statewide PCMH Learning Collaborative Engaging Practices in Transformation and Sharing Best Practices
http://www.pcmhri.org/files/uploads/Rhode%20Island%20in%20an%20Era%20of%20Accountable%20Care.pdf

[18]Rhode Island Department of Health. Physician Use of Health Information Technology (HIT) on the Rise. http://www.ri.gov/press/view/13902. May 2011. Accessed Jan. 12, 2012.

RECOMMENDATIONS AND NEXT STEPS

As Beacon Communities move forward with their implementation, states and communities can benefit from their experiences and lessons learned. Already, they offer several options that state and territorial health agencies may want to consider for improving primary care.

PROMOTE HEALTH IT ADOPTION IN COMMUNITY HEALTH CENTERS

Health centers represent the medical home for millions of Americans. Health centers provide high-quality and cost-effective care. State health officials can take the lead of the Rhode Island and Southeast Michigan Beacon Community and work with their health centers to ensure that they are enriching their primary care practices with clinical decision support tools, information exchange between a patient's providers and monitoring of center and community-wide quality measures.

PROMOTE MEDICAL HOMES TO IMPROVE QUALITY OF CARE

Patients with a long-term medical home are more likely to receive needed medical guidance to help them prevent and manage chronic diseases.

PROMOTE PATIENT ENGAGEMENT IN MANAGING HEALTH

The Beacon communities in Rhode Island and Southeast Michigan demonstrate the importance of equipping patients with direct access to a patient health navigator or coach to help them manage their health and minimize risk following discharge from hospitals. These strategies can improve the quality of care and reduce costs by preventing hospital admissions and emergency room visits. Mobile health technologies, such as text messaging for diabetic patients, are another strategy for engaging patients and helping them manage their health.

LEVERAGE FEDERAL AND STATE HEALTH IT AND PRACTICE REDESIGN INITIATIVES

Beacon Communities integrate their Beacon work into a comprehensive and strategic array of HEALTH IT and health care delivery strategies and funding streams. States are encouraged to leverage existing initiatives and funding streams to achieve the greatest impact. These include funds available for meaningful use, health information exchanges, regional extension centers, workforce development and other inter-related strategies.

IDENTIFY LINKAGES BETWEEN PUBLIC HEALTH AND HEALTH IT STRATEGIES

State health agencies can identify how current chronic disease, maternal and child health and other initiatives can inform and add value to health IT strategies. The Utah Diabetes Prevention and Control Program developed a population-based approach to preventing and managing diabetes among adults. This not only benefits the Beacon Community, but it also provides an important resource for all providers who may be integrating health IT into their primary care practices.

RESOURCES

Office of the National Coordinator for Health Information Technology
http://healtit.hhs.gov/portal/server.pt/community/healthit_hhs.gov_hitech_and_funding_opportunities/1310

NCQA Patient-Centered Medical Home 2011
http://www.ncqa.org/LinkClick.aspx?fileticket=ycS4coFOGnw%3d&tabid=631

Meaningful Use Overview
https://www.cms.gov/ehrincentiveprograms/30_Meaningful_Use.asp

Hines S. *STate Action on Avoidable Rehospitalizations (STAAR): A Tool for State Policy Makers.* The Lewin Group. http://www.ihi.org/offerings/Initiatives/STAAR/Documents/STAAR%20Tool%20for%20State%20Policy.pdf

Jenny Minot, Academy Health. *Reducing Hospital Readmissions*. http://www.academyhealth.org/files/publications/Reducing_Hospital_Readmissions.pdf

APPENDIX A: DEFINITIONS OF RHODE ISLAND INITIATIVES AND STAKEHOLDERS

Current*care*. In 2005, the Rhode Island Department of Health was awarded a demonstration contract from the Agency for Healthcare Research and Quality (AHRQ) to develop a statewide health information exchange. The system, known as current*care*, was developed through a partnership between the Department of Health and the Rhode Island Quality Institute. Current*care* is a secure, electronic network that gives medical professionals access to patients' health information. Consumer participation is voluntary, and they are required to enroll in order to be included in the system. In 2011, 140,000 patients were enrolled in current*care*.

The Rhode Island Health Information Act of 2008 established a Health Information Exchange Advisory Commission, which is responsible for providing input and policy recommendations to the director of the department of health on ensuring privacy of health information in current*care*.

For more Information:

- Rhode Island Quality Institute current*care* Webpage http://www.riqi.org/matriarch/MultiPiecePage.asp_Q_PageID_E_94_A_PageName_E_HIELearn
- Health Information Exchange Advisory Group Commission http://www.health.ri.gov/partners/advisorycommissions/healthinformationexchange/

The Direct Project. ONC sponsored the Direct Project, a secure, standards-based way for providers to email health information directly to other providers. Direct provides a standard technical infrastructure and legal framework for health care providers who have an account.

In February 2011, ONC announced that providers and public health agencies began exchanging information using specifications from the Direct Project. RIQI administers the Direct Project in Rhode Island with two goals: improving patient care by facilitating communication between primary care providers and specialists, and by feeding clinical information from electronic health records to current*care*. This is expected to improve quality by ensuring that providers have access to complete and up-to-date medical records.[19]

For more Information, visit the Direct Project at http://directproject.org/content.php?key=overview

Healthcentric Advisors (Formerly Quality Partners of Rhode Island) Incorporated in 1995 as the state's Medicare Quality Improvement Organization, Healthcentric Advisors, formerly known as Quality Partners of Rhode Island, is a non-profit consulting firm that provides public and private clients with "innovative and evidence-based consultation,

[19]U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. ONC Announces Launch of Direct Project Pilots. February. Available at: http://www.hhs.gov/news/press/2011pres/01/20110202a.html. Feb. 2, 2011

education, tools and resources that measure and improve the quality, safety and value of person-centered health care." Quality Partners collaborate with public agencies, health care providers, insurers, educational institutions and foundations. In a contract with the Rhode Island Department of Health, Quality Partners administers QuitWorks, a tobacco cessation program that combines counseling with a health IT referral management system. Physicians can refer patients to QuitWorks through their electronic health record. In addition to connecting patients with counselors, the system provides status reports to the physician through the electronic health record.

For more Information:

- Rhode Island Department of Health QuitWorks http://quitworksri.org/
- Healthcentric Advisors http://healthcentricadvisors.org/healthcentricadvisors-newsroom/123-partnering-with-rhode-island-department-of-health-on-tobacco-cessation.html

Regional Extension Center. The Regional Extension Center, one of 62 nationwide, was formed as part of a federal grant aimed to assist Rhode Island-based health care providers in adopting, implementing and optimizing electronic health records to achieve Meaningful Use objectives. The United States Office of the National Coordinator (ONC) dispersed these funds through the creation of 62 Regional Extension Centers to help health care providers in their geographic areas adopt electronic health records and qualify for the financial incentives that come with achieving Meaningful Use.

The Rhode Island Regional Extension Center helps providers link to the current*care*, the state's health information exchange. It was the first of all the Regional Extension Centers to develop a program to help providers adopt and implement direct messaging technology (defined above).

For more Information, visit RIQI at http://www.riqi.org/matriarch/default.asp

RHODE ISLAND CHRONIC CARE SUSTAINABILITY INITIATIVE (CSI-RI)

The Rhode Island Chronic Care Sustainability Initiative (CSI-RI) is a communitywide collaborative effort convened in 2006 by the Office of the Health Insurance Commissioner to develop a sustainable model of primary care to improve the care of chronic disease and lead to better overall health outcomes for Rhode Islanders.

CSI-RI includes several medical practice sites, including community health centers, throughout the state. A list of participating practices is available at http://www.pcmhri.org/csi-ris-medical-home-practices. In addition to Rhode Island's CSI initiative, other PCMH initiatives include the Rhode Island led by the Department of Health and the Blue Cross Blue Shield of Rhode Island Patient-Centered Medical Home Initiative and the Beacon Program\.

Given the Beacon Community's focus on PCMH practices, the Beacon Community and CSI-RI initiatives are closely aligned in goals, interventions and stakeholders. They share a steering committee, which includes the Rhode Island Department of Health, Quality Partners of Rhode Island, Rhode Island Quality Institute, select physician practices, community health centers, health plans and others.

For more Information:

Source: http://www.pcmhri.org/ http://www.pcmhri.org/csi-and-beacon-steering-committee

RHODE ISLAND QUALITY INSTITUTE (RIQI)

Established in 2001, RIQI was formed to "significantly improve the quality, safety and value of health care in

Rhode Island." RIQI is a nonprofit collaboration of leaders in the Rhode Island community, including hospital chief executive officers; health insurers; businesses; and leaders of consumer groups, academia and government.

Among RIQI's portfolio of services and programs are the Beacon Community, Regional Extension Center and current*care*, the state's health information exchange.

For more Information, visit RIQI at http://www.riqi.org

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