APPENDIX J. SITE VISIT SUMMARY: EASTERN MAINE HEALTH SYSTEM, EASTERN MAINE HOMECARE

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Executive Summary

Snapshot of Eastern Maine HomeCare

- Organization Type: Home care and hospice division of the EMHS.
- LTPAC Services: Home Health Care and Hospice with Telehealth.
- Size:
  - EMHS covers 2/3 of the geography of Maine.
  - 8,000 Employees.
  - 7 Hospitals.
  - Physician Practices.
  - Home Care & Hospice (EMHC).
    - 3 Agencies with 4 Offices.
    - 68,323 Visits.
    - 3,300 Patients Serviced.
  - 7 Nursing Facilities.
  - 1 CCRC.
  - Emergency Transportation (Ground & Air).
  - Pharmacy, DME, Medical Supply Vendors.
- Grant Funding:
  - Bangor Beacon Community Grant, Funded by ONC.
  - Patient-Centered Medical.
  - Home Demonstration Project.
  - Maine's Pioneer ACO.
- EHR (Home Care & Hospice):
  - McKesson Horizon Home Care and Phillips Telehealth.
- HIE Network:
  - HealthInfoNet serving Maine.

To understand health information exchange (HIE) for long-term and post-acute care (LTPAC) providers, a site visit was conducted at Eastern Maine HomeCare

(EMHC). EMHC is the home care and hospice division of the Eastern Maine Health System (EMHS). The health system is an integrated delivery network (IDN) with hospitals, ambulatory care practices, LTPAC providers (home health, hospice, nursing homes and assisted living) and ancillary services. The home care division includes three agencies and seven offices, serving both urban and rural areas covering two-thirds of Maine. EMHC also provides telehealth services to patients in the health system, and has been successful in reducing hospital admissions and emergency department (ED) visits.

EMHS is both an innovator and a leader in health care having received grants to test new models of care and payment, and industry awards and recognitions. Health information technology (HIT) has been a key factor in supporting their innovative practices and a strategy to manage health care for a population that covers a large urban and rural geography.

EMHS received an Office of the National Coordinator for Health Information Technology (ONC) Beacon Community Grant in 2010 to support improvements in the health of people with chronic conditions and reduce costs. The Bangor Beacon Community achieved these improvements through a care coordination program that was facilitated by HIT. LTPAC providers were an integral component of the grant particularly the use of home care services and telehealth technology. The grant provided an opportunity for EMHC to upgrade its electronic health record (EHR) platform to a single solution across all of their agencies and sites and increase the number of telehealth units available for use. To illustrate the effectiveness of the program, outcomes for patients on telehealth were tracked. In 2012 hospital and ED visits dropped from over 70% before telehealth to 8% while in the telehealth program. This drop in hospitalization and ED visits resulted in savings of over $2 million.

Maine has a statewide HIE called HealthInfoNet® (HIN). HIN was operational in 2009, but expanded its technology infrastructure in 2010 with the ONC Beacon Community Grant, ONC Regional Extension Center (REC) Grant and State HIE Cooperative Agreement Program funding. All of Maine's acute care hospitals are under contract to connect to the statewide HIE along with ambulatory providers, federally qualified health centers (FQHCs), mental health agencies, home health agencies (HHAs) and two nursing homes. HIN has select types of information available including medication history, allergies, lab and test results, vital signs, image reports, transcribed reports and a problem list. HIN also provides tracking for six admission/discharge/transfer (ADT) events and sends notifications to HIE participating organizations when they have a treatment relationship with the patient. EMHC utilizes HIN as part of the admission process to gather information on new patients and assist with the start of care assessment process. The agency also submits the patient's home care plan to HIN.

EMHS has been an incubator for testing new health care delivery and payment models participating in both Maine and Centers for Medicare and Medicaid Services (CMS) Patient-Centered Medical Home (PCMH) projects and launching one of 32

Pioneer Accountable Care Organizations (ACOs) in the United States. EMHS Pioneer ACO has 14,000 attributed Medicare participants. EMHC is an integral part of both programs working closely with patient care coordinators and community care teams (CCTs) to improve the health and outcomes for high-risk patients and reduce their costs. The use of telehealth for homebound patients has been an important tool for daily monitoring and interventions when clinical measures require attention. As noted above, the use of telehealth has resulted in dramatic reductions in hospital and ED visits for the 167 patients using the service in 2012.

EMHS maintains the technical infrastructure for the IDN including EMHC. The home care division has its own EHR application -- McKesson Horizon Homecare -- used by all of the home care and hospice agencies and sites. The hospitals and ambulatory sites use the Cerner Millennium EHR system. Cerner has a tool for known as PowerChart for multi-entity organizations. PowerChart pulls the most relevant patient information from the various entities together in one view and provides a link to HIN. EMHS physician practices use Centricity.

EMHC uses Phillips Healthcare Solutions for its telehealth program. Units in the home transmit data to a cloud-based clinical software application where it is recorded for monitoring, tracking and trending. Currently the telehealth data does not connect with the EMHC EHR, but an interface is under development.

Health information is exchanged in multiple ways (phone, fax, e-mail, customized portals, and HIN during clinical and administrative processes. HIE information flows occur in three categories: (1) transitions of care; (2) shared care; and (3) administrative processes. EMHC routinely exchanges information during preadmission assessment, at transfer and discharge, at start of care when assessing the patient and developing their plan of care (POC), with ongoing monitoring and maintenance of the patient's POC and recertification, and with status changes. EMHC developed a physician portal to their EHR to improve the exchange of information with physicians for reviewing and signing the patient's POC and orders.

A number of barriers and opportunities for improvements in HIE were identified over the course of the two-day site visit. The opportunities and/or barriers identified by EMHC representatives include:

Barriers

- Cost/reimbursement barriers to expand the telehealth program.

- Policy barriers for engagement of LTPAC in new delivery models related to homebound status for home care patients and three-day hospital stay for skilled nursing facility (SNF) Medicare beneficiaries.

Opportunities

- Use of a consolidated (community) patient-centered care and treatment plan to enhance care coordination.

- Opportunities for improvements in medication reconciliation process after hospital discharge.

EMHS is an innovative organization that is demonstrating how LTPAC providers and technology can and should be integrated into new care delivery and payment models. Their patient-centered approach to care coordination embraces the spectrum of providers and integration of community services to provide the high-quality care in the most cost-effective setting. Technology plays an important role in supporting their coordination of care infrastructure and is viewed as a critical tool for future enhancements in their delivery and payment models.

Background on Eastern Maine HomeCare and Eastern Maine Health Systems

EMHC[1] is the home care and hospice division of EMHS[2] based in Bangor, Maine. The mission of EMHS is to maintain and improve the health and well-being of the people of Maine through a well-organized network of local health care providers who together offer high-quality, cost-effective services to their communities.

Eastern Maine Health System

The EMHS is a non-profit organization comprised of:

- Acute care inpatient hospitals including a psychiatric hospital and tertiary trauma center.

- Physician practices.

- LTPAC providers including home care agencies and hospice providers, nursing facilities, a continued care retirement center, and assisted living facilities.

- Ancillary services including emergency transport companies (ground and air), pharmacy, durable medical equipment (DME) and medical supply vendors.

The largest hospital in the EMHS is Eastern Maine Medical Center (EMMC) -- a 411-bed medical center located in Bangor, Maine. EMMC's service area is comprised of approximately two-thirds of the state. The hospital is the hub referral hospital for 21

[1] See http://easternmainehomecare.org/.

[2] See http://www.emhs.org/.

hospitals in rural Maine. EMMC and its medical staff of nearly 400 providers and more than 3,000 clinical and support staff provide three-quarters of the primary care hospital services offered in the greater Bangor area, as well as specialty and intensive care services.

EMHS has embraced technology as a key factor in supporting both the health care delivery needs of a population that covers a very large, often rural geography and new innovative models of care they are implementing. As an organization they embrace a culture of technology and innovation having achieved the following industry recognition and key implementation milestones:[3]

- EMMC "Top 100 Most Wired Hospitals" Hospital and Health Networks Magazine;
- HIMSS Davies Award Recognition;
- EMHS CIO of the Year recognition by HIMSS;
- Telemedicine including ICU, ED, Radiology, Pediatrics, Psychiatry, Home Care Telehealth, electronic medical record (EMR) infrastructure at all sites of care (acute and community);
- System-wide Hospital EMR Infrastructure;
- PowerChart access to support care delivery across all providers; and
- Founding member of HIN, Maine's HIE.

EMHS provides and supports the information technology needs of EMHC.

Eastern Maine HomeCare

EMHC is an affiliate and the home care and hospice division of EMHS. In 2012, the EMHC covered nearly 1.37 million miles to make 68,323 home care, hospice, and telehealth visits to 3,300 patients.[4] Lisa Harvey-McPherson, RN, MBA, MPPM is the President and CEO of EMHC and Vice President of Continuum of Care for EMHS. During interviews, EMHS CEO Michelle Hood, noted the importance of having a Vice President in the health system dedicated to integrating the continuum of care into the health system's strategies.

EMHC is comprised of three agencies with four different sites in northern, eastern, and central Maine serving urban, suburban and rural areas (see Figure J-1). The division was created as hospital systems merged resulting in one home care agency in 2006. The agencies/sites include:

- Visiting Nurses of Aroostook
  - Caribou (home office for corporation); and
  - Houlton.

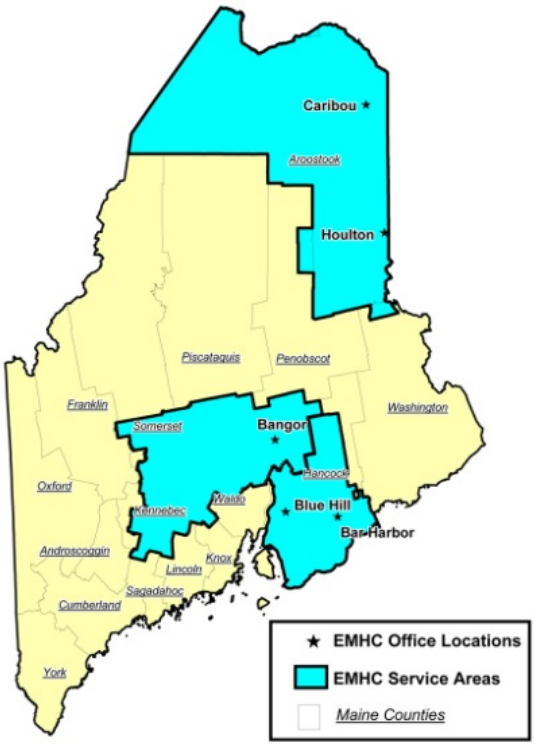
[3] Remington Technology Summit. "Integrating Technology the Platform for a Shared Savings Model." March 2013.

[4] See http://easternmainehomecare.org/.

- Hancock County HomeCare and Hospice
  - Ellsworth.

- Bangor Area Visiting Nurses
  - Bangor.

FIGURE J-1. EMHC Service Areas



The EMHC division has 230 staff and a multidisciplinary team professional team consisting of physicians, nurses, social workers, aids, care managers/coordinators, physical and occupation therapists and quality/performance improvement staff. They provide home care and hospice services primarily to older Medicare recipients for circulatory, respiratory, injuries, and cancer diagnoses. (Summarized in Table J-1.)

TABLE J-1. EMHC Summary -- Age, Diagnosis and Payers

	Average Age	Top Diagnoses	Medicare	Medicaid	Blue Cross	Other Private Insurance
Home Care	66% are 65 or older	Circulatory System Respiratory System Injuries	62%	9%	8%	21%
Hospice	81% are 65 or older	Neoplasms Circulatory System Signs & Symptoms	88%	4.5%	3%	4.3%

Telehealth

EMHC has delivered telehealth services for over 10 years and has integrated it into both home care and primary care with the Bangor Beacon Project. Due to the large geographic area covered by EMHC (approximately 6,000 square miles), telehealth has been an important technology in delivering care to individuals in both urban and rural areas. It is also an important strategy in the care delivery and payment projects that EMHS and the Bangor Beacon Community have deployed. To further understand the telehealth program at EMHC, this section discusses the costs, process and outcome measures tracked.

Telehealth Cost Considerations

The cost of implementing and expanding the telehealth program was identified by EMHC CFO as a challenge. The home care agency invests a significant amount in the equipment (for example, the general cost of an in-home telehealth unit is approximately $3,500). Currently the EMHC has 79 units with an average of 65 deployed in a patient's home at any one time.

In general the EMHC finance staff reported that the home health care reimbursement structure does not have a mechanism to pay for the expense of telehealth equipment which is a limitation for program expansion. This is exacerbated by the payer mix and rural cost structure for some of the EMHC agencies. For example, services provided to patients in Hancock County are reimbursed under the rural cost structure where the state reimburses the agency 50% of the cost of delivering services. As a result, EMHC has had to rely on grant funding and philanthropic support to purchase telehealth devices.

The Beacon Community tested the application of tele-psychiatry between nursing homes and a geriatric psychiatric nurse, but they could not sustain the program under the current reimbursement structure.[5] A final report on this project was under development at the time of the site visit.

There have been overall financial gains as a result of telehealth. EMHC has had an overall reduction in the cost of care per episode with telehealth. The visit utilization drops from 15-16 visits/episode to 13-14 visits/episode. To understand the impact, the cost difference between an in-home visit and telehealth encounter is $120.

Telehealth is also a strategy utilized in the Pioneer ACO, however, the cost-benefit ratio and overall financial impact was not addressed during the site visit. EMHS Pioneer ACO is working with EMHC to develop a congestive heart failure (CHF) telehealth program to serve patients who are not eligible for home health under Medicare because they are not homebound. The CHF telehealth program would make available telehealth equipment, daily telehealth monitoring and in-home nursing visits for medication

[5] CMS prohibits payment for telemedicine services in Metropolitan Statistical Areas (MSAs). Despite a shortage of geriatric psychiatry services Medicare will not fund the geriatric tele-psychiatry service.

adjustments. EMHC are pursuing this model because it had been effective in reducing ED use and hospital readmission rates during the Beacon project.

Technology

EMHC currently uses Phillips Healthcare Telehealth Solutions[6] as their telehealth vendor. With the Phillips system, EMHC collects clinical data, questionnaire responses, and risk screen results. EMHC previously used video telehealth monitoring, but found it was not as effective except for monitoring particularly with behavioral health issues. With video telehealth, the lack of clinical data (such as vital signs) to track and trend status and changes proved more useful.

The telehealth tools provided by Phillips include both in-home devices and a cloud-based software application:

- **TeleStation**. The base unit is placed in the patient's home to enable secure, two-way flow of information between the remote telehealth nurse (via the web-based clinical review software) and the patient.

- **Measurement Device**. In addition to the base station, the patient may use in-home monitoring wireless devices to collect clinical measure data. Data is sent to the base TeleStation.

- **Web-based Clinical Review Software**. The base station sends telehealth data to a cloud web-based software application where the patient's clinical measure data is stored. The home care agency/telehealth nurse accesses this program to review the patient data and determine clinical interventions.

The Phillips telehealth devices collects clinical measure data (described below in Telehealth Clinical Process) and can prompt the patient to submit responses to basic questions such as how they are feeling. The system also has the capability of providing education to the patient. The telehealth nurse evaluates the patient's clinical measure data daily in the Phillips web-based clinical software. The software displays current, past and trending data.

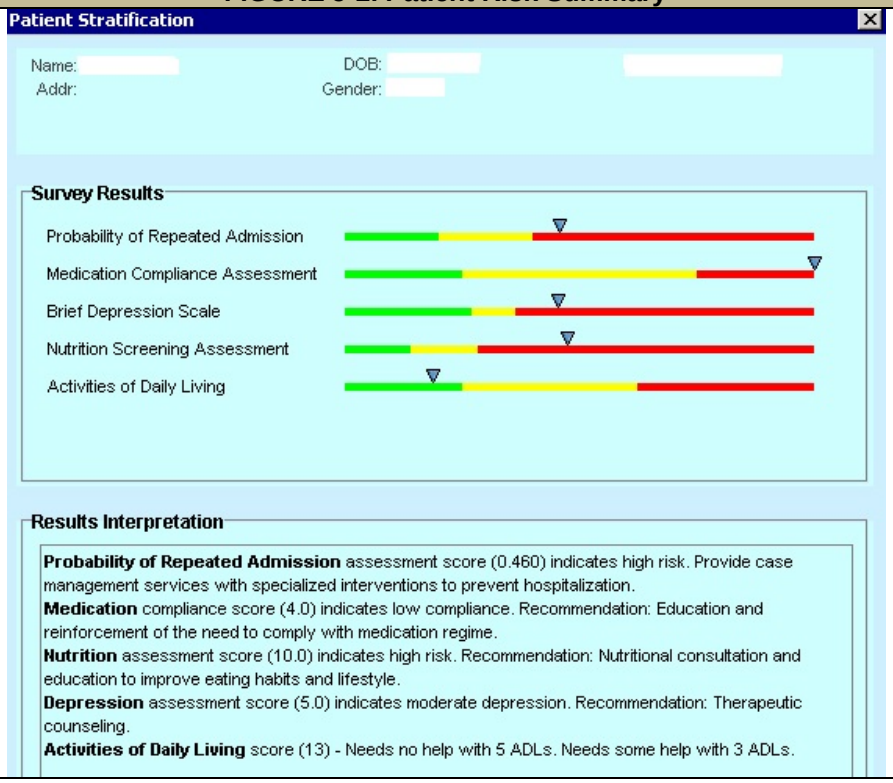
The telehealth software also provides validated patient surveys or screening tools to assess for risk and display current status (See Figure J-2 Patient Risk Summary). EMHC's telehealth system provides risk screenings, status, and evaluation tools are available for the following areas:

- Probability of Readmission;
- Medication Adherence;
- Depression Scoring;

[6] See http://www.healthcare.philips.com/main/products/telehealth/.

- Nutritional Screening; and
- Activities of Daily Living/Instrumental Activities of Daily Living.

FIGURE J-2. Patient Risk Summary



Clinical Data and Clinical Process

Patients selected for the telehealth program enter data each day into their device and respond to questions and prompts. The data reported by the patient can include any of the following clinical data depending on their condition:

- Blood pressure.
- Weight.
- Blood sugar.
- Pulse.
- O2 saturations.
- Patient responses to individualized questions such as their
  - Shortness of breath symptoms;
  - Dietary compliance; and
  - Endurance level.

The telehealth nurse reviews the patient data every day. Physician orders for telehealth identify the parameters for appropriate data ranges. When the patient's telehealth data is outside of the range, the system triggers a "red flag," and the telehealth nurse calls the patient and provides consultation over the phone to determine the next level intervention (such as a home visit or physician notification). Most of the issues can be handled by the telehealth nurse over the phone, who also communicates with the home care nurse, particularly when a concern requires followup and a nurse visit is scheduled.

Telehealth Outcomes

To understand the impact that telehealth has on EMHS programs, EMHC measures key performance indicators and outcomes related to the Beacon Community, Pioneer ACO and PCMH programs. EMHC collects the following data on telehealth patients to track outcomes.

- Patient identifier;
- Primary telemedicine diagnosis;
- Patient age;
- Secondary diagnosis;
- Payment source;
- Number of hospitalizations for telemedicine diagnosis in previous 6 months;
- Average cost of hospitalization;
- Prior ED visits for primary telemedicine diagnosis in previous 6 months;
- Average cost of ED visit;
- Number of hospitalizations for telemedicine diagnosis while on program;
- Home health/hospice in home nurse (RN) visit;
- Average cost of in-home nurse (RN) visit;
- Number of telemedicine encounters;
- Average cost of telemedicine encounter; and
- Health system cost savings.

TABLE J-2. Telehealth Patient Outcomes Results by Diagnosis in 2012

Diagnosis	# of Patients	Percentage Hospitalized 6 mo. Prior to Telemed*	Percentage Hospitalized While on Telemed**	Percentage ED Visits 6 mo. Prior to Telemed*	Percentage ED Visits While on Telemed**
CHF	57	86%	14%	84%	14%
COPD	36	83%	6%	83%	6%
Diabetes	15	53%	9%	53%	9%
Cardiac	54	56%	4%	56%	4%
Other	5	80%	0%	80%	0%

* Data obtained from patient interviews at time of admission to telehealth program. Patients admitted to hospital were admitted for their chronic diagnosis (CHF, COPD, etc.).
** Data represents actual hospitalizations/ED visits occurring during patient's length of stay on home health program for their telehealth diagnosis.

EMHS uses the telehealth data to calculate outcomes such as reduced hospitalizations and ED visits (Table J-2) as well as costs savings based on priority diagnoses (Table J-3). Overall EMHS has been able to quantify a significant impact on key performance indicators and costs for the 167 patients in the telehealth program in 2012, reducing hospitalization and ED visits be an average of 65% for target diagnoses resulting in an estimated $2.1 million in health care savings.

TABLE J-3. Estimated Health Care Cost Savings Results by Diagnosis		
Diagnosis	**No. of Pts**	**Savings**
CHF	57	$490,049
COPD	36	$373,365
Diabetes	15	$118,386
Cardiac	54	$992,267
Other	5	$84,482
NOTE: The estimated savings is net after accounting for the cost of telehealth visits and technology.		

Bangor Beacon Community

The Bangor Beacon Community was one of 17 Beacon Communities building and strengthening local HIT infrastructure and testing innovative approaches to make measurable improvements in health care and cost. The Beacon Community received a three year (April 2010 - March 2013), $12.75 million grant from the ONC. Using HIT as a foundation, Bangor Beacon improved the health of patients with chronic conditions including diabetes, chronic obstructive pulmonary disease (COPD), CHF, and asthma. HIT allowed the Bangor community of providers to connect health record information and care management to improve the quality of care and reduce unnecessary utilization. The Bangor Beacon community work is the foundation of the EMHS Pioneer ACO. Bangor Beacon Community's work focused on the following five priority areas:[7]

- Improving the health of people with chronic conditions such as diabetes, COPD, CHF, and asthma.
- Reducing costs associated with hospital admissions and ED visits by increasing the quality of care for high-risk patients.
- Improving population health through proper immunization and sharing of immunization data among providers.
- Reducing variation in the delivery of evidence-based medicine and improving care quality across the community.
- Bringing community leaders and organizations together to use health information effectively, improve efficiency, and improve care and quality.

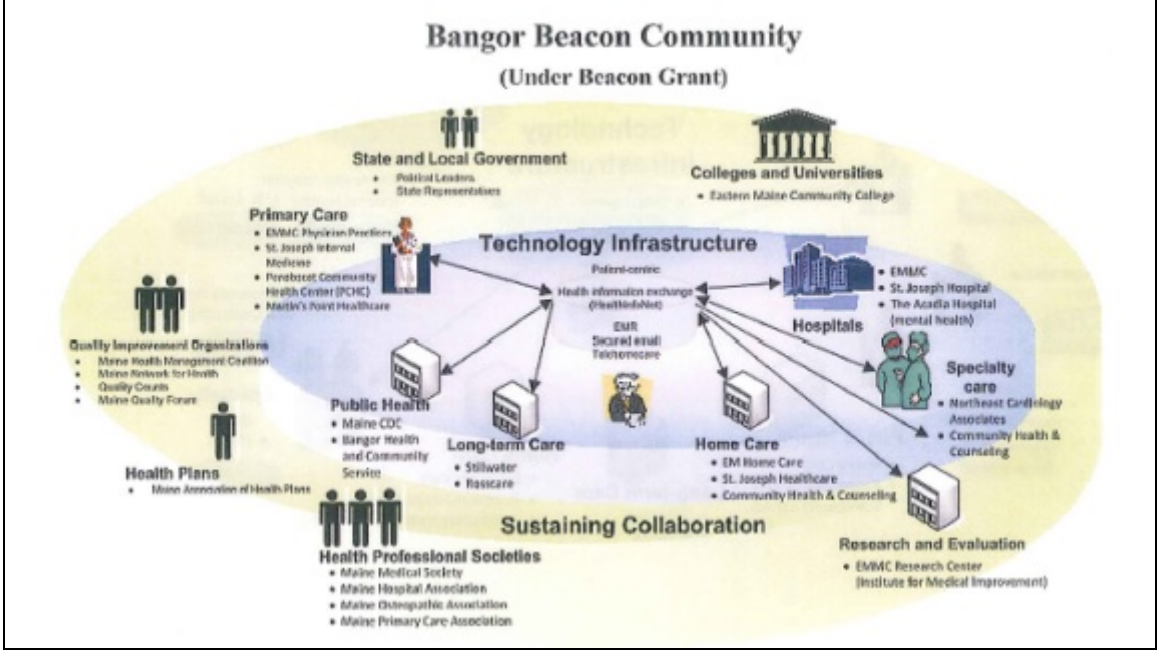
[7] See http://www.healthit.gov/policy-researchers-implementers/bangor-beacon-community.

The Bangor Beacon Community was comprised of 12 partners led by EMHS. The partners represent multiple types of health care providers. In addition to hospitals, physician practices, they also engaged LTPAC providers specifically the home care providers noted below and a SNF.

Bangor Beacon Participants (* = Home Care Providers)

- Acadia Hospital;
- Community Health and Counseling Services*;
- Eastern Maine Community College (EMCC);
- EMHS;
- EMHC*;
- EMMC;
- EMMC Clinical Research Center;
- HIN;
- Maine Primary Care Association;
- Penobscot Community Health Care;
- Ross Manor (rehabilitation and SNF);
- St. Joseph Healthcare*; and
- Stillwater Health Care (rehabilitation and SNF).

FIGURE J-3. Illustration of Bangor Beacon Community



The Bangor Beacon Community worked to improve the health of chronically ill people in the Bangor region by developing a sustainable care coordination model that was facilitated by HIT (Figure J-3) the Bangor Beacon Community). The Bangor Beacon Community strove not only to improve the health of chronically ill through improved care

coordination, but also to demonstrate reduce costs and improved population health.[8] Integration of LTPAC providers, home care, and telehealth was an essential component of the strategy to deliver high-quality health care in the most cost-effective setting.

HealthInfoNet® Health Information Exchange Network

As noted above, HIT and HIE provides an infrastructure for the Bangor Beacon Community (and Pioneer ACO) to meet its goals -- the ability to exchange information is instrumental for improving care coordination. At the heart of the technical infrastructure of the Bangor Beacon Community (Figure J-3) is the HIN.[9] HIN is an independent, non-profit organization that was established as the HIE for the State of Maine in 2006.

HIN has been operational exchanging clinical data since June 2009. In 2010, they received grant funding to expand the technology infrastructure including a state HIE Collaborative Grant, an ONC REC grant (HIN is the REC), and the Beacon Community grant. Today HIN is funded by many sources including charitable foundations, subscription fees from Maine health care providers, and the state and Federal Government.[10] EMHS was a founding member of HIN and also served as the beta site for the interoperability demonstration project. HIN is one of only a few HIEs in the country that was operational prior to 2010 before the passage of the *Health Information Technology for Economic and Clinical Health* (HITECH) Act.[11]

Overview of HealthInfoNet Providers and Health Information Exchanged

All 38 of Maine's acute care hospitals are under contract to connect to the HIE. HIN has 34 of the 38 hospitals connected, 376 ambulatory provider sites including primary and specialty care practices, FQHCs, mental health agencies, home health and two long-term care providers. Throughout 2013, HIN will work to establish connections with the four remaining hospitals and expand the types of data shared by hospitals that are already connected. It will also continue to connect new ambulatory sites.

HIN maintains medical information on more than 1.1 million patients or 76% of all of the residents in the State of Maine. Maine is an opt-out, consent model state meaning patient information is automatically included in the HIE unless the patient opts-out of participation in the exchange. During interviews, HIN Executive Director, Dev Culver, reported that 70% of the patients who participate in the statewide exchange have health information posted from one or more non-affiliated providers.

[8] 2012 Annual Report Bangor Beacon Community.

[9] See http://www.hinfonet.org/.

[10] See http://www.hinfonet.org/about-us.

[11] 2012 Annual Report Bangor Beacon Community.

HIN provides a consolidated view of specific types of health record information organized around the patient. The information available on HIN includes the following:

- ADT event tracking and notification;
- Patient Demographics (name, birth date, address, sex, phone number, social security number and insurance);
- Medication (prescriptions) and medication history (through SureScripts);
- Allergies;
- Lab and test results (including graphing of results);
- Vital signs (including graphing of results);
- Image reports;
- Transcribed reports (e.g., summary records); and
- Problem list (conditions, diagnosis and/or health problems from participating providers).

Certain classes of information are not included on the HIE including information from substance abuse or mental health providers and HIV diagnoses and results of HIV tests.

HIN supports public health by reporting certain illnesses (like Influenza and Lyme Disease) to public health experts at the Maine Center for Disease Control and Prevention (Maine CDC).[12]

Health Information Exchange Technology and Standards

HIN allows providers to identify with or link to a patient. Once they are linked HIN is able to push event and documentation notifications to the provider. There are currently six "notifiable" events and this list is expected to grow. There is a near real-time monitoring that can occur which has the potential to improve communication, efficiency and effectiveness particularly for care management.

HIN is also emerging as middleware allowing a provider or a user to specify information they would like to receive on a patient. HIN routes (or pushes) the information to a reconciliation cue at which point the receiver reviews and decides whether to incorporate the data/document into their EHR. Issues are emerging with this practice including the potential to overwhelm the user with too much information to review and reconcile.

Figure J-4 provides an illustration of HIN's technical architecture. Information is exchanged using a variety of standards including Health Level 7 (HL7) version 2.x for messaging and clinical document architecture (CDA) and continuity of care document (CCD) for document exchange. Table J-4 summarizes the information exchanged and HIT standard used by HIN and EMHS's ability to support the standards.

[12] About HealthInfoNet Better. Easier. Safer pamphlet.

FIGURE J-4. HealthInfoNet HIE Technical Architecture

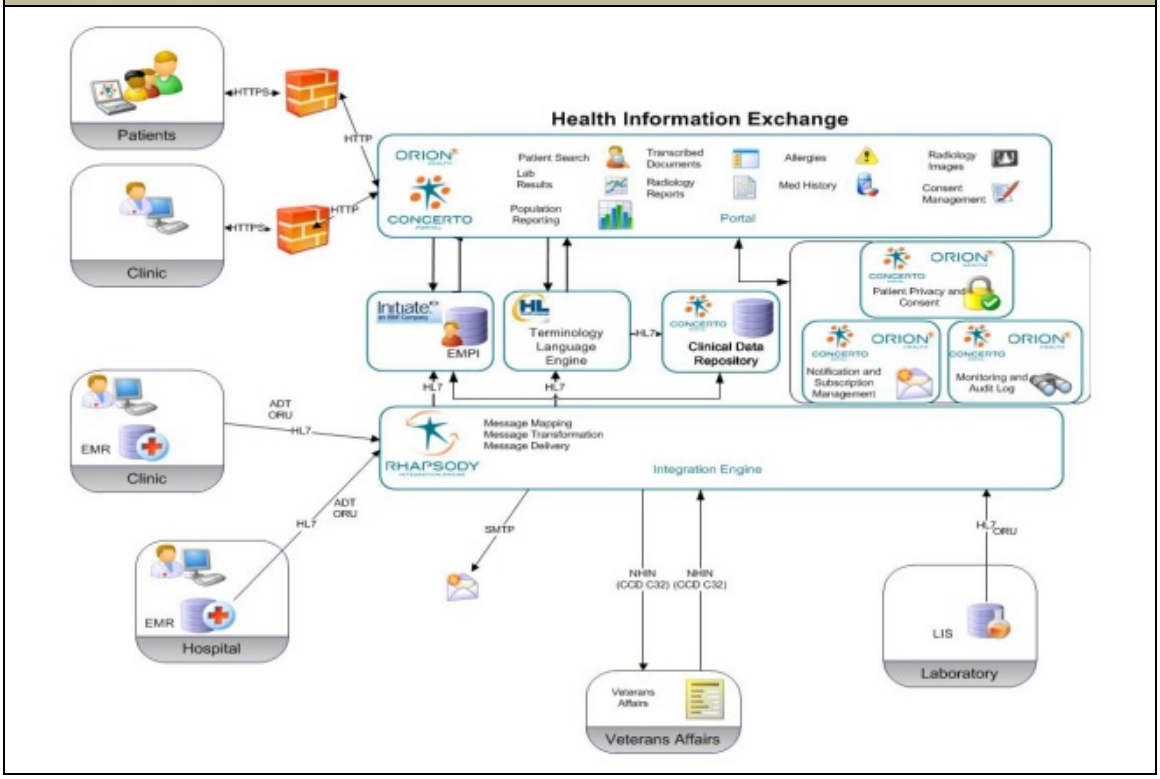


TABLE J-4. HIT Standards Used by HIN and EMHS Capabilites		
Information Type	**HIT Standard and HIN Use/Findings**	**EMHS Standards-Based Exchange Capability**
Messaging	HL7 Version 2.x.	Supporting ADT messages.
Labs	HL7 Version 2.7 (may receive in other HL7 versions, but converts to 2.7).	Supporting lab standards.
Documents	HL7 2.3x to 2.5x--HIN may receive document data. HL7 CDA--The content sent in the wrapper is good, but data in the document requires clean up because it is not standardized. HL7 CCD--HIN is experiencing problems with this standard. Every vendor has implemented it differently. HIN will take the CCD if they can parse out the data.	The home care POC & other documents are sent using HL7 a results message. The content of sent as a text blob. Application versions used by EMHS currently do not have the capability to support a CDA. Next version of EMHC EHR may include CCD, but it has not been installed at this time.
Medications	RxNorm or NDC codes. NCPDP used for communication standard.	Not applicable. As a user requests a look up of the medication history, HIN queries the medication database from SureScripts & the Maine Medicaid database for the latest information.

Data Received (Retrieved) by Eastern Maine HomeCare

EMHC approved users access HIN and view patient information through the community view in the Cerner PowerChart. The primary users at EMHC are the intake coordinators who handle the admission process to EMHC and hospice, nurse managers, and community coordinators (see PCMH). They access the following types of information:

- ADT information -- particularly to monitor transfers to the hospital for patients receiving services. Key triggers are:
  - Inpatient Admission/Admission; and
  - ED Admission/Discharge.

- Summary of care documents (e.g., hospital discharge summary).

- Vital signs.

- Laboratory tests and results.

- Medications.

Data Sent to HealthInfoNet by Eastern Maine HomeCare

HIN has a Home Care and Hospice Data View, which presents summary of care document information sent by the EMHC EHR. The summary of care document includes medication and laboratory data from the home care POC.

There are two other HHAs and two SNFs participating on HIN. They have access to HIN data and send ADT alerts and diagnoses for the problem list.

Additional Opportunities for EMHC to Provide Information to HIN

During interviews with HIN, opportunities for submitting other home care information were discussed including submitting the Outcome and Information Assessment Set (OASIS) and minimum data set (MDS) patient assessment summary. Information was provided on Keystone HIE pilot study in Danville, Pennsylvania and references available on the standards and interoperability (S&I) Framework Longitudinal Coordination of Care (LCC) wiki. Tools are available for a HIE organization and LTPAC provider to send the OASIS and MDS in the CMS format, have it transformed into a CCD and sent to HIN. Also discussed was a new opportunity to test the S&I Framework LCC initiative to exchange a home care POC using the HL7 Consolidated CDA standard.

User Access and Security

HIN creates and manages all user accounts for providers/caregivers who have access to the exchange. The exchange maintains five roles for use access that define the scope and nature of an individual user's access to patient identified clinical data. Employers, insurance companies, and the government cannot access patient information at this time.

After a user has been "authorized" by HIN, they are sent a secure login and required to change their password immediately. Passwords must be unique and can

only be reset by authorized personnel who can verify the user's identity.[13] HIN maintains audit reports to keep track of who views the records in the exchange.

At the time of the site visit, patients did not yet have online access to their health information on HIN. However, they may request a printed or CCD copy of their HIN record through their provider and/or request an audit from HIN on who has accessed their medical information through the exchange.

HIN Support for Care Management

HIN provides EMHS with the technical tools to coordinate care using HIE and secure e-mail messaging.

HIN has a care management portal view which provides pertinent data for the various care managers in the system (such as primary care managers, inpatient care managers, cardiology care managers, mental health care managers, home care nurse managers, and palliative care nurse managers). This portal view reduces the care manager's search time when accessing patient data and allows selected information to be viewed on one screen. Data elements incorporated into this portal view include:

- Patient demographics;
- Insurance coverage;
- Primary care provider information;
- Allergies;
- Medications (including prescription);
- Immunizations;
- Diagnoses;
- Encounter/Visit History;
- Diagnostic and imaging test results; and
- Vital sign records.

The availability of technical tools to support care management across different types of provider organizations and health systems is instrumental for EMHS to test and deploy new care and payment models in accountable care and medical homes.

Participation in New Care and Payment Models and Grants to Advance Care Coordination

Bangor Beacon Community has built an integrated organization to test new payment and care delivery models through grant and other funding. As a result, CMS selected EMHS, the lead agency for the Bangor Beacon Community, to be one of 32 Pioneer ACOs in the United States. Figure J-5 illustrates the building blocks for EMHS's

[13] See http://www.hinfonet.org/about-us/privacy-and-security.

progression from an integrated health system to an ACO. Having an IT infrastructure and focus on quality improvement were instrumental building blocks in the migration.

FIGURE J-5. Progression to an ACO

This section describes in more depth two care coordination and payment models -- the EMHS Pioneer ACO program and PCMH initiative -- and how home care and telehealth are engaged. It also discusses two other grant programs that have supported care transitions.

Eastern Maine Health System Pioneer Accountable Care Organization

EMHS was selected as one of 32 ACOs under the Center for Medicare and Medicaid Innovation Pioneer ACO initiative,[14] which started in January 2012. Under this five-year arrangement with CMS the EMHS ACO bills Medicare under existing fee-for-service (FFS) rules for their attributed patients during the first two years of the project and then transitions into capitated payment in year 3 of the pilot. The ACO shares Medicare savings in year 1 and then move to a shared savings/shared loss mode in year 2. In year 3 the Pioneer ACOs will chose a portion of the Medicare spend for per member per month payment, and continue with shared savings/losses for the remaining Medicare revenue. Throughout the pilot shared savings are based upon financial performance and 33 quality measures reported to CMS.

- **1st Performance Year**: Report 33 measures to receive up to 50% or 60% (depending on their model) of Medicare shavings.

- **2nd Performance Year**: Report eight measures and paid for performance on 25 measures.

[14] CMS Pioneer Accountable Care Organization (ACO) Model Program Frequently Asked Questions. See http://innovation.cms.gov/Files/x/Pioneer-ACO-Model-Frequently-Asked-Questions-doc.pdf.

- **3rd Performance Year**: Pay for performance on 32 measures and pay for reporting on one survey measure related to functional status.

The 33 quality measures used to assess performance have been endorsed by the National Quality Forum (NQF) and reported across all 32 Pioneer ACOs. Attachment J-1 provides a detailed list of measures, NQF measure ID, method of submission and reporting or performance requirement. The following list summarizes the primary domains that the 33 measures fall under:

- **Patient/Caregiver Experience** such as timely appointments, education, access to specialists. There are seven measures in this domain that are submitted via a survey.

- **Care Coordination/Patient Safety** such as medication reconciliation after discharge from an inpatient facility, hospital readmissions, falls screening. There are six measures in this domain that are submitted by EHR Incentive Program Reporting or a special web interface.

- **Preventive Health** such as influenza immunizations, pneumococcal vaccination, certain screenings. There are eight measures in this domain submitted through the GPRO web interface.

- **At-Risk Populations** (Diabetes, Hypertension, Ischemic Vascular Disease, Heart Failure, Coronary Artery Disease) such as specific clinical measures. There are 12 measures in this domain all submitted through the GPRO web interface.

The EMHS ACO has begun to look at home care pathways based on disease process and how to integrate community services and supports for non-homebound patients (such as the CHF telehealth program described above). They are also evaluating the value added contribution of the CCTs (related to PCMH), home care and hospice to the ACO. EMHC reports that for every dollar invested in home care during the first year of the pilot, they save $3 as an ACO.

EMHS utilizes a system called Arcadia to manage and report quality measurement data. The ACO quality measure data is pulled into the Arcadia system through direct interface from either the EHR or other import mechanism. All provider organizations that are part of the ACO are required to collect and report quality measure data. For those organizations that are not part of the EMHS technical infrastructure are required to report quality measures in a spreadsheet format for importing. Arcadia is also used for other quality reporting processes including Meaningful Use (MU) required reporting.

Patient-Centered Medical Home

In 2009, Maine established 22 PCMH projects state including the EMHS Primary Care Medical Home Demonstration Project. One year later in 2010 CMS issued a demonstration project -- Multi-Payer Advanced Primary Care (MAPCP) -- in which Maine was selected as one of eight states to have Medicare participate as a payer.

The PCMH's are reimbursed by three types of payers: Medicare, MaineCare (state Medicaid Program) and commercial insurers. Medicare pays $7/member/month for PCMH services and $3/member/month for CCT. Maine is projecting to achieve budget-neutrality by decreasing patient inpatient admissions by 6%-7%, decreasing ED visits by 5%, and decreasing specialty consultations and imaging by 5%.

In addition to PCMHs, MaineCare developed health homes that serve individuals with:

- Two or more chronic conditions.
- One chronic condition and who are at-risk for another.
- Serious mental illness (SMI) including:
  - Adults with SMI; and
  - Children with severe emotional disturbance (SED).

The care management infrastructure in the PCMH includes at a minimum a nurse patient care manager embedded in each primary care practice who works with high-risk/high cost patients in the four priority diagnoses established under the Beacon project: diabetes mellitus, chronic heart failure, COPD, and asthma. The primary care managers also target patients who are in risk corridor populations identified under the ACO program as well as high cost patients. If they cannot be effectively managed in the primary care practice, then a referral is made to the CCT to address the patient's need in the community.

Referrals for the PCMH care management come from a variety of sources including:

- Provider referrals;
- Hospital discharge referral;
- Predictive modeling reports from payers;
- Specialized queries and reports that target patients in the four priority diagnoses and look for clinical measures such as certain lab values; and
- Registry data.

The patient care managers work directly with individuals to develop a personalized POC. They collaborate with other relevant care coordination teams such as inpatient care managers, cardiology care managers, mental health care managers, home care

and home health service, and palliative care to manage risk, costs and transitions. The personalized POC includes individualized services, custom plans based on patient needs, co-management goals and self-management plans. The patient care managers also perform outreach to other services and providers such as community-based services and LTPAC providers. They share information through various tools such as Cerner's PowerChart, e-fax, etc.

PCMH care managers utilize the Centricity EHR system used by all EMHS primary care providers. The patient care managers utilize a number of standardized protocols and have other embedded tools and templates in the EHR. The care managers have developed a care management visit template for documenting in the EHR and have customized the templates based on the patient's condition.

The patient care managers tracking quality and performance improvement indicators for both primary care practices and for care managed patients in the areas of:

- Clinical outcomes;
- Preventive measure outcomes;
- Health care utilization; and
- Patient reported outcomes.

As noted above, EMHS PCMH may receive reimbursement for community-based care management. Phase II of their medical home program included the development of CCTs. The CCTs manage "super users" (high-risk/high cost patients) with frequent hospitalizations and/or ED visits. Overall health care savings are expected to be realized through reductions in these types of visits.

Eastern Maine HomeCare Patient-Centered Health Home Project -- Community Care Teams

CCTs are multidisciplinary, community-based care teams that provide support for the most complex, high-risk, high-need and/or high cost patients served by the PCMH Pilot Sites. The CCT assists patients overcome barriers to care, improve health compliance and outcomes, and reduce avoidable ED use and hospital admissions. The CCT managers are Licensed Clinical Social Workers, the teams include MSWs, RNs, and pharmacy students who work out of the EMHC office. They are actively engaged with community partners including the Area Agency on Aging, Local Healthy Maine Partnerships, and Bangor Public Health.

There are approximately 800 EMHS patients in this CCT program with a variety of challenges that impact their health outcomes and utilization such as mental health conditions, substance abuse, frequent ED use, medication compliance, or psychosocial concerns (e.g., senior housing issues, transportation issues). While dedicated to specific PCMHs, the CCT receives referrals from various sources including care managers at the PCMH, EMHC and hospital. They also identify potential patients be regularly analyzing data from the hospital EHR and HIN looking for individuals who have

been in the ED and had multiple ED visits, individuals with complex conditions (medical and/or behavioral health co-morbidities) and targeting based and payer.

The following list provides an example of the type of criteria used to identify potential patients for the program:

- Two or more ED visits for chief complaint that is readily identified as non-emergent;
- Transitions of care;
- History of medication non-compliance; and
- Two or more chronic illnesses or one chronic illness with a co-morbid behavioral health diagnosis.

CCTs use the document remotely to the primary care setting EHR. The CCTs develop an individualized treatment plan and are working on getting the plan on HIN. One of the challenges for the CCT is the lack of a centralized record -- they must log into multiple systems to conduct their work, which is time consuming. A project is in development to allow the CCT information to flow into HIN.

Transitional Care Project (No Longer Funded)

The Beacon grant helped in supporting a transitional care project providing telehealth for patients who were not homebound and did not qualify for home care. Currently there is no funding to sustain the transitional program for patients who do not qualify for home care. When patients do meet home health qualification (i.e., homebound, skilled need) then EMHC uses telehealth partnered with nursing care managers to support home care services, with the goal of reducing ED visits and rehospitalizations.

U.S. Department of Agriculture (USDA) Grant to Expand Telehealth

Hancock County HomeCare and Hospice received $50,000 in federal grant funds (USDA's Rural Utilities Service) to expand its telehealth program and with matching funds. The agency was able to purchase an additional 28 units.

Overview of Technology at Eastern Maine HomeCare

The Information Services (IS) department supports many of the strategic priorities and centralizes the management of the technical infrastructure for of the EMHS. The IS strategic plan is a piece of the overall EMHS strategic plan. Prior to 2005 the organizations that comprised the health system maintained their own technical infrastructure and applications. Since 2005, the IS department has begun to consolidate the infrastructure bringing together all of the EMHS hospitals onto the same EHR, PACS, billing, human resources, payroll, coding and abstracting applications. The top priorities for the IS department at the time of the interview were: implementing the MU

Program requirements, transitioning to ICD-10, addressing the infrastructure needs to support the ACO, and merge a new hospital and home care into the EMHS.

EMHS eligible providers have attested for MU Stage 1 and are aggressively working on Stage 2. Based on interview discussions, IS leaders are finding MU Stage 2 requirements much more complete than Stage 1 and fit into the organization's interoperability platform.

For budgetary reasons, EMHS was not able to move to a single EHR application for all of the HHAs in the division until the Beacon grant. The grant provided the extra funding to bring together all of the home care and hospice agencies onto a single set of applications (McKesson).

Eastern Maine HomeCare Technology Infrastructure

TABLE J-5. EMHC Software Applications

Application	Vendor	HIE Notes
Home Care	McKesson Horizon Homecare (http://www.mckesson.com/providers/home-care/agency-management/mckesson-homecare/)	See section below with modules used. Physician portal to McKesson EHR under development.
Telehealth	Phillips Healthcare Solutions (http://www.healthcare.philips.com/main/products/telehealth/)	Cloud-based system, currently does not interface with McKesson EHR or HIE; however, plans underway for EHR integration (both home care & primary care). Telehealth nurse can set up the primary care physician as a user in the Phillips system.
Health Information Exchange	HealthInfoNet (http://www.hinfonet.org/)	Physician POC sent from the McKesson EHR to HIN. Working on sending lab results.
Quality Monitoring & Risk Management	HomeCare Gold (http://www.homehealthgold.com/index.php)	Data scrubbing & analytics application. Interfaced with McKesson Horizon EHR.
Hospice Pharmacy	Hospice Pharmacia (https://www.hospicepharmacia.com/index.aspx)	Interfaces with McKesson EHR.
Staffing	McKesson Horizon Homecare (http://www.mckesson.com/providers/home-care/agency-management/mckesson-homecare/)	
Patient Accounting/ Billing/Financial System	HomeCare Accounting Solutions (http://has-software.com/)	

EMHC has multiple software applications supporting their operations. Table J-5 provides a summary of the applications that support the home care and hospice operations. The EMHC division does not use the same EHR application as the EMHS hospitals and physician practices. The hospitals use the Cerner EHR application and the physician practices use GE Centricity. Cerner also has an application known as

PowerChart (referenced earlier in the report). PowerChart supports organizations that have multiple entities by providing quick access and viewing of the most frequently used and/or clinically relevant information. The hospital provides access to its LTPAC partners to PowerChart to facilitate HIE at transition and during shared care.

Electronic Health Record Systems

Moving toward one EHR vendor has been a significant project for EMHC. As hospitals and home care agencies merged, each agency had their own EHR application. The Beacon Community Grant provided the financial resources to invest in a single EHR infrastructure across all home care and hospice sites. This allowed the organization to build interfaces to the hospital HIT systems, HIN and other service providers such as pharmacies and labs. The interfaces could be leveraged to connect other LTPAC organizations to EMHS and/or HIN.

As noted above, EMHC has McKesson Horizon Homecare EHR application and utilizes various clinical modules including:

- Inquiry/referral tracking;
- Face Sheet and Census;
- Comprehensive Assessment and OASIS;
- POC;
- Physician Orders including Medications;
- Interdisciplinary Notes;
- User Defined Assessments;
- Clinical Decision Support; and
- Physician Orders, Medication and Treatment Records.

Eastern Maine HomeCare's Work List for Electronic Health Record, Telehealth and Health Information Exchange

The EMHS's IS department in collaboration with EMHC have identified three priority projects currently under development. The following projects, once complete, will improve EMHC's interoperability and HIE capabilities:

- **Interface between Phillips Telehealth and McKesson Horizon EHR**: EMHC is working on an interface between Phillips telehealth and the McKesson EHR so staff can access the patient's clinical information from a single source rather than two separate systems. Currently having issues with the different segments of HL7 being transmitted between systems. Once the interface is complete, staff will have access to the telehealth data transmitted from the patient home in the EMHC EHR.

- **Physician Portal to McKesson Horizon HomeCare**: EMHC is completing a project to set up a physician portal so physicians, medical assistants, or care managers can log into the Home Care EHR. In May 2013, this project was in the

demonstration phase. Primary care clinicians will have access to telehealth data (including results and trending), other clinical data in the home care record, and perform functions like write and sign the home care POC as well as other orders.

- **Home Health Lab Data to HIE**: The IT department is working on an interface to send home health care lab results to HIN.

Data Analytics

EMHS utilizes a number of data analytics approaches to leverage their information in support of decision-making. Interviews with various staff and stakeholders illustrated how data analytics tools and query/report processes were used to pinpoint patients that required additional attention, identify risk, or measure improvement. This section highlights two areas where data analytics tools are used: (1) EMHC uses the tool Home Health Gold for quality assurance and performance improvement, and (2) HIN is leveraging its data to support population health in support of the ACO.

Home Health Gold

EMHC division utilizes a tool called Home Health Gold, which is a data scrubber, and analytics tool that is interfaced with the home health EHR. The Home Care Quality Assurance/Performance Assurance director uses the information to regularly assess clinical, operational and financial data.

Figure J-6 shows the Home Health Gold Dashboard. The tool can analyze, report, and trend various types of data including:

- OASIS outcomes (before being updated on the CMS Home Health Compare web site);
- Clinical and quality outcomes based on OASIS data;
- Utilization of therapy services;
- Case mix level;
- Hospitalization and ED rates;
- Risk factors;
- Inconsistency in documentation between the clinical record and OASIS; and
- Related financial data.

The Home Health Gold data can be viewed by home care/hospice site or in aggregate for the division. The analysis is reviewed and discussed weekly with the EMHC care management team. Monthly and quarterly reports are reviewed, changes monitored and data reported on a score card.

FIGURE J-6. Home Health Gold Dashboard

HealthInfoNet Population Analytics

HIN is moving toward population health management including support for the Northern New England ACO Collaborative (multi-state and multi-provider) and their need for analytics at a broader community/population level. HIN is focusing on data analytics to drive changes in care. For examples, HIN is analyzing data in such areas as:

- Services utilization -- e.g., ADT events allow HIN to track hospital/ED utilization and rehospitalization rates).
- Patterns of care -- advanced analytic techniques are used to find patterns and predict behavior.
- Comparisons -- compare doctors, their outcomes and ordering patterns to determine.
- Risk monitoring -- track patient risk scores and the impact of new clinical data on the score which could support emerging programs in patient risk score profiles.

The potential for leveraging the data of standardized assessments used by LTPAC providers to support population analytics was discussed during the site visit. For example, the OASIS and MDS have provided LTPAC organizations a wealth of data for analytics programs. LTPAC organizations large and small have been harvesting the data to assess quality, performance and risk. As HIN continues to move into big data

analytics for population health inclusion of the OASIS and MDS data and the patient assessment summary could provide a rich source of information.

Health Information Exchange at Eastern Maine HomeCare

The availability, use and exchange of information is crucial for an EMHC to begin care and coordinate care with other service providers. Information exchange occurs through multiple different methods -- via phone, photocopies, fax and e-mail as well as through access to the hospital EHR, customized portals and the HIE. This section describes HIE in two ways:

1. Home health care processes and workflows.

2. HIE information flows around hand-offs in case, shared care, and administrative processes.

Home Health Care Processes

EMHC staff described the clinical workflow processes for care and how information is used and exchanged. Table J-6 describes the process, information collected and/or exchanged and observations by staff.

TABLE J-6. Home Health Care Workflow Processes

Process	Information Collected and/or Exchanged	Notes
Referral/Intake	Collect clinical, demographic & payment information on potential admissions. Enter patient demographic into EMHS EHR to create a patient identifier which creates a record in Horizon Home Care for the patient. Perform an additional level of screening of patients to ensure appropriateness of care. Verify insurance coverage.	Hospital nurse managers work with the post-acute care liaisons on the hospital unit to determine discharge plans. When the decision to admit to EMHC is made, central intake collects information on a patient & communicates with the relevant agency/sites. They maintain patient information on Cerner PowerChart & on a shared network drive for the home care nurse manager to access during their assessment at the start of care.
Start of Care	Nurse or therapist assesses the patient & develops a POC. They admit the patient & call the physician from the patient's home. Meds are verified from the discharge summary & the attending called when there are discrepancies. If there is a certain type of medication interaction alert EMHC requires a call to the physician. The OASIS Start of Care & comprehensive assessment are completed.	The nurses & therapists have laptops & document at the point-of-care in the patient's home. The ACO is beginning a new pilot program where the pharmacist sends pharmacy students with the physical or speech therapist to assist with medication reconciliation when they are completing the start of care visit.

TABLE J-6 (*continued*)		
Process	**Information Collected and/or Exchanged**	**Notes**
Home Care Plan of Care (Certification & Recertifications)	The POC includes demographic, insurance, medications, diagnoses, physician orders & visit schedule, care plan goals, & specific assessments. The Comprehensive Assessment & OASIS Start of Care data flows into the Home Care POC (485). The POC is available for physician review & signature. Recertifications are completed based on the required schedule based on an update of a subset of information the comprehensive assessment.	EMHC has developed a physician portal to their McKesson EHR system. Physicians using the portal log in to access the health record documents & orders requiring their review & signature. The physician has the option to annotate, sign or reject. In the portal the physicians can view: – Medications – Diagnoses – Patient summary – Care plan – Flowsheets (e.g., vitals from telehealth visits) The system also collects care plan oversight data & tracks how much time the physician has spent per patient reviewing their orders & POC. The physician can print out this report & give it to their billing staff (it is not electronic). If the physician is not on the portal, EMHC prints out the POC & faxes it to the physician for signature.
Home Health Visits	Home health staff (nurses, therapists, aids) document at the patient's home using laptops and/or telephony. Aide documentation is completed via telephony. Nurses complete their documentation on their laptop including their clinical notes & plan for the next visit. The clinical notes reflect the nursing care plan.	Aides call in & an automated care plan is read to the aides who use buttons on their phone to identify if a task was complete or not. A telephony report is created for the record & the visit shows up as completed. If there are incidents or concerns, staff complete documentation at the agency not from the patient's home.
Order & Medication Changes	The physician is called for new order requests. The nurse/therapist enters the orders into the EHR. Physicians using the portal can sign in the EMHC EHR. Assistants print out the orders for non-portal physicians. The orders are printed out & faxed to the physician.	Orders not signed in the portal, but faxed & maintained in the paper-based medical record.
Lab, Radiology & Other Tests	Orders for labs are tracked & when required are drawn & brought to the lab. Lab results are currently in paper format & maintained in the paper-based medical record. Electronic lab results are available on HIN (the lab provider reports results directly to HIN).	Discussed the use of document imaging, but there is not a plan to use scanning to include the lab results in the electronic record.
Telehealth	Patients upload data daily to telehealth nurse in Caribou Maine. Data collected is based on patient condition & may include: – Blood Pressure – Weight – Blood Sugar – Pulse – O2 Saturation Responses to individualized questions, for example, shortness of breath, dietary compliance, endurance, etc.	Information is accessed on the Phillips cloud-based application. An interface is currently under development to make telehealth data available in the McKesson EHR.

TABLE J-6 (*continued*)		
Process	**Information Collected and/or Exchanged**	**Notes**
Multidisciplinary Care Plan	Currently EMHC has a care plan (separate from the POC (485)). Each discipline maintains a separate care plan based on the discipline & problem. The hospice care plan is multidisciplinary.	EMHC is starting a new multidisciplinary care plan based on the OMAHA system. The care plan will flow from the comprehensive assessment & OASIS to identify preliminary care plan problems, goals & interventions.
Discharge	A discharge POC is developed for the patient. A discharge order is obtained from the physician & a discharge summary completed if requested. EMHC may coordinate with community services as needed to assist with care transitions.	
Hospice-Specific Functions	An interface has been created with Hospice Pharmacia. Demographic & medication information is exchanged with Hospice Pharmacia.	Hospice Pharmacia is a national company that provides hospice medications & pharmacy management. They cover the cost for some meds.

Health Information Exchange Information Flow

Table J-7, Table J-8, and Table J-9 describe the information exchange activities for EMHC in three categories: (1) hand-offs in care; (2) shared care; and (3) other administrative exchange. The exchange scenarios are not limited to electronic exchange of information, but encompass any exchange workflow. The summary tables provide a synopsis of the HIE activities from the perspective of a HHA.

Health Information Exchange Related Measures

EMHC does not report or identify any specific HIE measures. They report the 33 required quality measures as a Pioneer ACO. These measures are detailed in Attachment J-1.

TABLE J-7. HIE by Care Coordination Function and Partners, Eastern Maine HomeCare						
Transitions of Care						
Care Coordination Function	**Across Members of the Care Team Within Affiliated Organization**	**Between Staff in an Organization and Other Non-Affiliated Care Providers Including Community Services**	**Between Staff in an Organization and Patient/Family Members**	**Type of Exchange**	**Data**	**Sender and Receiver**
Assessment/Referral						
Preadmission Assessment	Hospital care manager to post-acute care provider liaison for assessment & discharge planning			– Telephone – In-person – Participation in rounding – Hospital EHR	– Demographics – Problem list – Medication list – Progress Notes – H&P – Information available on HIN	Hospital care manager to post-acute care liaison & central intake
	Home Care intake gathers relevant information from multiple sources for use by EMHC			– Phone – Hospital – EHR – HIN	– Discharge summary – Operative report – Diagnosis – Consults – Recent labs	Hospital, physician office & home care intake
Referral for Community Services	Hospital care manager to community services when patient does not qualify for home health or SNF services			– Telephone	– Demographics – Problem list – Medication list – Progress Notes – H&P – Information available on HIN	Hospital care manager to community coordinator
Patient input on Community Services			Hospital Care Managers with Patient & Family to build the discharge POC.	– In-person interview	– Patient Goals – Choices offered – Choices accepted	Patient care manager & patient/family
Transition of Care (transfer or discharge)						
Transfer/Admission to LTPAC	Order for Home Care			– Verbal Order for Home Care & paper copy	– Physician's discharge order to home care	Hospital to EMHC Central Intake
Discharge Information from LTPAC Provider to Patient			Discharge POC developed by home care for patient.	– Paper	– Discharge POC & instructions	Home care to patient and/or caregiver
ADT Event Data to HIE Network		Home Care ADT feeds to HIN (2 way).		– ADT messages	– ADT message	Home care EHR to HIE

TABLE J-8. Shared Care Information Exchange Activities						
Shared Care						
Care Coordination Function	**Across Members of the Care Team Within Affiliated Organization**	**Between Staff in an Organization and Other Non-Affiliated Care Providers Including Community Services**	**Between Staff in an Organization and Patient/Family Members**	**Type of Exchange**	**Data**	**Sender and Receiver**
Assess Needs and Goals						
Initial Assessment & Development of Admission Plan	Nurse and/or therapist assesses patient & develops POC.			– HIN – PowerChart – Access – EMHC Local Network (W Drive) where intake staff save a patient's medical record documentation received during preadmission	– Discharge summary – Op report – Diagnosis – Consults, recent labs – History data from HIN	Central Intake & Nurse Manager and/or Therapist
Coordination with physician at Start of Care including Medication Reconciliation & Orders, Evaluation/ Certification & Plan of Care	Medication reconciliation upon admission to home health care with Primary Care Manager.			– Phone	– 485 POC – Medications & other order changes	Home care nurse & Patient Care Manager in PCMH
	Start of care, orders & plan coordinated with physician. (Nurse calls the physician from the patient's home)			– Phone	– 485 POC – Medications – Treatment orders – Discharge Summary	Home care nurse calls the attending physician
	Pilot Pharmacy Student for Medication Reconciliation: Start of care, orders & plan--when therapist completes the start of care in a patient's home, a pharmacy student assists with medication reconciliation				– Medication history information – Hospital discharge summary – HIN – PowerChart	Pharmacy Student & Therapist & Physician
	Physician reviews & signs 485 POC			– Home Care EHR Physician Portal – Fax	– Home Care POC	Home care to Physician

TABLE J-8 (*continued*)						
Shared Care						
Care Coordination Function	**Across Members of the Care Team Within Affiliated Organization**	**Between Staff in an Organization and Other Non-Affiliated Care Providers Including Community Services**	**Between Staff in an Organization and Patient/Family Members**	**Type of Exchange**	**Data**	**Sender and Receiver**
Data to HIE Network		Physician POC sent to HIN for inclusion on HIE.		– Electronic from home care EHR to HIN	– Home Care POC	Home care EHR to HIN
Create and Maintain Plan of Care						
Care Management/ Community Care Team Meetings	Coordinate care management functions with Patient Care Manager in the PCMH			– Telephone – PowerChart – HIN	– POC – Order Changes	Home Care Nurse Manager & PCMH Patient Care Manager
Monitor, Followup, and Respond to Change						
Transmission of telehealth data from patient			Patient submits telehealth data via devices for monitoring by EMHC telehealth nurse.	– Telehealth Devices – Web-based EHR	– Telehealth clinical measure data	Patient to telehealth home care nurse
Change in condition/ status update and/or order change request to attending physician	Physician order changes & signature on new orders			– Phone to obtain new order – Physician portal – Fax	– Order	Home care to Physician
Referral to Community Care Team	Referral to CCT if patient is not meeting goals & additional services are needed			– Phone	– Progress notes – POC	Home care nurse to manager to CCT care manager
	Participate in CCT meetings when patient is also in PCMH and/or utilizing services of CCT			– In-person	– Progress notes – New orders – Care plan	Home care to CCT
Coordination with physician for ongoing Orders, Evaluation/ Certification & Plan of Care	Physician recertification			– EHR Portal for physicians to log in, review & sign – Fax	– Home care POC – HIN	Home care to Physician

TABLE J-9. Other Information Exchange Activities						
Other Exchange Activities						
Care Coordination Function	**Across Members of the Care Team Within Affiliated Organization**	**Between Staff in an Organization and Other Non-Affiliated Care Providers Including Community Services**	**Between Staff in an Organization and Patient/Family Members**	**Type of Exchange**	**Data**	**Sender and Receiver**
Quality Measure						
Electronic submission of mandatory data sets which includes quality measures		Submission of OASIS data which includes CMS required quality measure data.		– Electronic	– OASIS data	Home care to CMS
		Submission of Hospice quality measures.		– Electronic	– Required Hospice quality measure data	Hospice to CMS
ACO Measures	Pioneer ACO Measures (EMHS)	Pioneer ACO Measures (EMHS ACO Partners).		– EHR and/or – Excel Spreadsheet	– 33 Pioneer ACO Measures	Home care to ACO data repository
Public Health						
	Unknown					
Payment						
Payer Medical Records Requests		Remittance, medical review, or RAC request for medical records.		– Billing system – Photocopies – Mail	– Relevant medical record documentation	HIM & Billing to Payer

Barriers and Opportunities for Improved Health Information Exchange Practices

Over the course of the two-day site visit, a number of issues were identified related to information exchange in support of care transitions and ongoing shared care. EMHC and EMHS staff interviewed offered the following insights on both barriers and opportunities for improvement in using HIE to improve communicating and coordinating care.

Barriers

- **Barriers to Expansion of Telehealth**. The use of telehealth has shown promise for improving patient care management, outcomes and cost, but EMHC identified challenges with the reimbursement structure coupled with high cost of the equipment create challenges for expanding the technologies use across a broader population with a large, rural geographic area.

- **Policy Barriers in New Delivery Models Related to LTPAC**. Staff at EMHC identified three policies that have limited their ability to implement innovative service delivery under their Pioneer ACO model. The policies are based on long-standing Medicare FFS coverage rules. These rules and their implications for service delivery and cost savings are described below:

  - One of the FFS rules requires that home health recipients be "homebound" in order to qualify for Medicare coverage of home health services. EMHC indicates that this rule will continue to be applied even when, beginning in 2014, the EMHS ACO will enter its third year as an Pioneer ACO program and e-paid: (i) for Medicare Part A covered services using a payment method that shares savings with Medicare for cost of Part A covered services; and (ii) a per member/per month capitated payment rate for Part B covered services.[15]

[15] For eligible beneficiaries who are enrolled in Part A and Part B, Part A finances post-institutional home health services furnished during a home health spell of illness for up to 100 visits during a spell of illness. Part A finances up to 100 visits furnished during a home health spell of illness if the following criteria are met: Beneficiaries are enrolled in Part A **and** Part B and qualify to receive the Medicare home health benefit; Beneficiaries must have at least a three consecutive day stay in a hospital or rural primary care hospital; and home health services must be initiated and the first covered home health visit must be rendered within 14 days of discharge from a three consecutive day stay in a hospital or rural primary care hospital or within 14 days of discharge from a SNF in which the individual was provided post-hospital extended care services. If the first home health visit is not initiated within 14 days of discharge, then home health services are financed under Part B. After an individual exhausts 100 visits of Part A post-institutional home health services, Part B finances the balance of the home health spell of illness. Basically, if an eligible beneficiary has Part A and Part B, Part B will cover and finance home health if the above criteria is not met. If an eligible beneficiary has Part A only -- all home health is covered and paid for under Part A. If an eligible beneficiary has Part B only -- all home health is covered and paid for under Part B. The requirements that beneficiaries need skilled services and be homebound applies to all eligible beneficiaries regardless of whether it is paid for under Part A or B.

- As previously described in this report, EMHC determined that delivery of telehealth health services to target population patients who are not homebound (e.g., CHF telehealth program) would reduce costs by reducing avoidable hospitalizations and ED visits. EMHC staff identified the continued application of the requirement that patients must be homebound to qualify for home health services even when services are delivered under its ACO program will limit their ability to deliver cost-effective, high-quality care.

- The second Medicare FFS coverage rule stems from the Medicare Part A program Medicare coverage for SNF beneficiaries. They must have had a qualifying three day prior hospital stay to qualify for Medicare Part A coverage. EMHC staff indicated that CMS has determined that beginning in 2014 it will waive the three-day prior hospitalization requirement for the Pioneer ACO attributed patients. EMHC reports that once this waiver goes into effect it anticipates that the EMHS ACO will increase its ability to deliver cost-effective quality care by eliminating unnecessary prior hospital stays or reducing the number days an individual stays in a hospital prior to SNF admission. EMHS is working with nursing homes in the Bangor region to prepare for direct admissions to SNF from the EMMC ED. The three-day stay barrier, will be removed when, as described above, the EMHS ACO enters its third year as an Pioneer ACO program and will be paid: (i) for Medicare Part A covered services using a payment method that shares savings with Medicare, and (ii) a capitated rate for Part B covered services.

- The Bangor Beacon geriatric tele-psychiatry project for nursing facilities also identified CMS regulatory barriers to providing services to nursing facilities in Penobscot County. CMS prohibits reimbursement for telemedicine services for patients residing in a MSA designated location. While the Beacon tele-psychiatry project successfully expanded access to geriatric psychiatry, the program was discontinued due to CMS payment prohibition. Nursing facility patients needing geriatric psychiatry consultation are now transported via ambulance to Acadia Hospital the EMHS affiliated psychiatry hospital.

Opportunities

- **Advancement of a Consolidated, Patient-Centered Care and Treatment Plan**. EMHS has a number of care managers and care management programs particularly for high-risk/high cost patients. Each establish individual treatment plans and frequently coordinate with other program managers. There could be significant value to a comprehensive patient-centered POC that is maintained on a community site (like HIN) when population care management and payment models are used (e.g., accountable care). The care coordinators are trying to get

the individualized treatment plans on HIN which could be a first step toward a patient-centered community care plan.

- **Focusing on Medication Reconciliation Challenges**. Reconciling medications on admission is a challenge for EMHC. It is a labor-intensive process for the home health nurse to determine what medications a person was on prior to hospitalization and what they should be on after their hospitalization. Engagement of the Primary Care Manager has been helpful, but only applies to limited cases when they are a participant in the PCMH. As HIN and EMHS evaluates processes for continued improvements in efficiency, medication reconciliation could be prioritized.

Conclusion

EMHS is an innovative organization providing industry leadership on how LTPAC providers and technology can be integrated into new care delivery and payment models. Their patient-centered approach to care coordination embraces the spectrum of providers and integration of community services. Technology plays an important role in coordination of care programs for priority populations who are high-risk/high cost. EMHC has been able to demonstrate improved outcomes and reduced costs through their telehealth program.

EMHS is advancing their HIT infrastructure in step with new health care innovation grant programs including the Beacon Community Grant, which along with the PCMH and Pioneer ACO have helped to spearhead additional support for the organization's technical infrastructure including expansion of the statewide HIE, deploying the PowerChart cross-enterprise patient EHR, and prioritizing interfaces between systems that improve access and efficiency of clinical users. EMHC exchanges health information in multiple ways with clinical partners during transition of care and when delivering home care services. There is still greater potential to expand the use of technology to increase electronic HIE, but it will take time to allow for systems and HIT standards to mature.

Attachment J-1. Eastern Maine Health System Pioneer Accountable Care Organization Quality Measures

Description of ACO Measures:
Excerpts and Table from CMS "Accountable Care Organization 2013 Program Analysis--Quality Performance Standards Narrative Measure Specifications" Report

On November 2, 2011, the CMS finalized new rules under the Patient Protection and Affordable Care Act (Affordable Care Act) to help doctors, hospitals, and other health care providers better coordinate care for Medicare patients through ACOs. ACOs

create incentives for health care providers to work together to treat an individual patient across care settings -- including doctor's offices, hospitals, and long-term care facilities. The Medicare Shared Savings Program (Shared Savings Program) will reward ACOs that lower their growth in health care costs while meeting performance standards on quality of care and putting patients first. Participation in an ACO is purely voluntary. (ACO Provider Fact sheet: http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/ACO_Summary_Factsheet_ICN907404.pdf.)

To participate in the Shared Savings Program, ACOs must meet all eligibility and program requirements, must serve at least 5,000 Medicare FFS patients and agree to participate in the program for at least 3 years. Providers and suppliers who are already participating in another shared savings program or demonstration under FFS Medicare, such as the Independence at Home Medical Practice pilot program, will not be eligible to participate in a Shared Savings Program ACO.

Medicare providers who participate in an ACO in the Shared Savings Program will continue to receive payment under Medicare FFS rules. That is, Medicare will continue to pay individual providers and suppliers for specific items and services as it currently does under the Medicare FFS payment systems. However, CMS will also develop a benchmark for each ACO against which ACO performance is measured to assess whether it qualifies to receive shared savings, or for ACO's that have elected to accept responsibility for losses, potentially be held accountable for losses. The benchmark is an estimate of what the total Medicare FFS Parts A and B expenditures for ACO beneficiaries would otherwise have been in the absence of the ACO, even if all of those services were not provided by providers in the ACO. The benchmark will take into account beneficiary characteristics and other factors that may affect the need for health care services. This benchmark will be updated for each performance year within the agreement period.

CMS is implementing both a one-sided model (sharing savings, but not losses, for the entire term of the first agreement) and a two-sided model (sharing both savings and losses for the entire term of the agreement), allowing the ACO to opt for one or the other model for their first agreement period. CMS believes this approach will have the advantage of providing an entry point for organizations with less experience with risk models, such as some physician-driven organizations or smaller ACOs, to gain experience with population management before transitioning to a shared losses model, while also providing an opportunity for more experienced ACOs that are ready to share in losses to enter a sharing arrangement that provides a greater share of savings, but with the responsibility of repaying Medicare a portion of any losses.

Under both models, if an ACO meets quality standards and achieves savings and also meets or exceeds a Minimum Savings Rate (MSR), the ACO will share in savings, based on the quality score of the ACO. ACOs will share in all savings, not just the amount of savings that exceeds the MSR, up to a performance payment limit. Similarly, ACOs with expenditures meeting or exceeding the Minimum Loss Rate (MLR) will share

in all losses, up to a loss sharing limit. To provide a greater incentive for ACOs to adopt the two-sided approach, the maximum sharing percentage based on quality performance is higher for the two-sided model. ACOs adopting this model will be eligible for a sharing rate of up to 60%, while ACOs in the one-sided model will be eligible for a sharing rate of up to 50%. Under both models, CMS will base the actual savings percentage for the individual ACO (up to the maximum for that model) on its performance score for the quality measures. As with shared savings, the amount of shared losses will be based in part on the ACO's quality performance score.

Medicare offers several ACO initiatives including:

- Medicare Shared Savings Program (https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/index.html?redirect=/sharedsavingsprogram/) -- a FFS program.

- Advance Payment Initiative (http://innovation.cms.gov/initiatives/Advance-Payment-ACO-Model/index.html) -- for certain eligible participants in the Shared Savings Program.

- Pioneer ACO Model (http://innovation.cms.gov/initiatives/Pioneer-ACO-Model/) -- population-based payment initiative for health care organizations and providers already experienced in coordinating care for patients across care settings

ACO Quality Measures

Under the CMS ACO initiatives, before an ACO can share in any savings created, it must demonstrate that it met the quality performance standard for that year. CMS will measure quality of care using nationally recognized measures in four key domains:

- Patient/caregiver experience (7 measures).

- Care coordination/patient safety (6 measures).

- Preventive health (8 measures).

- At-risk population:
  - Diabetes (1 measure and 1 composite consisting of five measures);
  - Hypertension (1 measure);
  - Ischemic Vascular Disease (2 measures);
  - Heart Failure (1 measure); and
  - Coronary Artery Disease (1 composite consisting of 2 measures).

The 33 quality measures are provided at-a-glance in Table J-10 below. For each measure, the table includes (1) the ACO measure number, (2) its domain of care, (3) the title of the measure, (4) its measure steward and NQF number (if applicable), (5) the

method of data submission, and (6) when the measure is subject to pay for reporting versus pay for performance. Note that for the diabetes-related measures, five of the six measures are grouped into one “all-or-nothing” composite performance rate. Similarly, the two coronary artery disease measures are also grouped into one “all-or-nothing” composite rate for reporting purpose. In addition, six of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) measures are scored together as one measure and one of the CAHPS measures is treated separately.

The ACO quality measures align with those used in other CMS quality programs, such as the Physician Quality Reporting System (PQRS) and the EHR Incentive Programs. The ACO quality measures also align with the National Quality Strategy and other U.S. Department of Health and Human Services priorities, such as the Million Hearts Initiative. In developing the final rule, CMS listened to industry concerns about focusing more on outcomes and considered a broad array of measures that would help to assess an ACO’s success in delivering high-quality health care at both the individual and population levels. CMS also sought to address comments that supported adopting fewer total measures that reflect processes and outcomes, and aligning the measures with those used in other quality reporting programs, such as the PQRS.

TABLE J-10. Measures for Use in Establishing Quality Performance Standards that ACOs Must Meet for Shared Savings							
ACO #	**Domain**	**Measure Title**	**NQF Measure #/ Measure Steward**	**Method of Data Submission**	**P4P Phase-in PY1**	**P4P Phase-in PY2**	**P4P Phase-in PY3**
AIM: Better Care for Individuals							
1.	Patient/Caregiver Experience	CAHPS: Getting Timely Care, Appointments, & Information	NQF #5, AHRQ	Survey	R	P	P
2.	Patient/Caregiver Experience	CAHPS: How Well Your Providers Communicate	NQF #5 AHRQ	Survey	R	P	P
3.	Patient/Caregiver Experience	CAHPS: Patients' Rating of Provider	NQF #5 AHRQ	Survey	R	P	P
4.	Patient/Caregiver Experience	CAHPS: Access to Specialists	NQF #5 AHRQ	Survey	R	P	P
5.	Patient/Caregiver Experience	CAHPS: Health Promotion & Education	NQF #5 AHRQ	Survey	R	P	P
6.	Patient/Caregiver Experience	CAHPS: SDM	NQF #5 AHRQ	Survey	R	P	P
7.	Patient/Caregiver Experience	CAHPS: Health Status/Functional Status	NQF #6 AHRQ	Survey	R	R	R
8.	Care Coordination/ Patient Safety	Risk Standardized All Condition Readmission	CMS; NQF #1789 (adapted)	Claims	R	R	P
9.	Care Coordination/ Patient Safety	Ambulatory-Sensitive Conditions Admissions: COPD or Asthma in Older Adults (ACO version 1.0)	NQF #275 AHRQ PQI #5	Claims	R	P	P
10.	Care Coordination/ Patient Safety	Ambulatory-Sensitive Conditions Admissions: Heart Failure (HF) (ACO version 1.0)	NQF #277 AHRQ PQI #8	Claims	R	P	P
11.	Care Coordination/ Patient Safety	Percent of Primary Care Physicians who Successfully Qualify for an EHR Program Incentive Payment	CMS	EHR Incentive Program Reporting	R	P	P
12.	Care Coordination/ Patient Safety	Medication Reconciliation	NQF #97 AMA-PCPI/NCQA	GPRO Web Interface	R	P	P
13.	Care Coordination/ Patient Safety	Falls: Screening for Future Fall Risk	NQF #101 NCQA	GPRO Web Interface	R	P	P
AIM: Better Health for Populations							
14.	Preventive Health	Influenza Immunization	NQF #41 AMA-PCPI	GPRO Web Interface	R	P	P
15.	Preventive Health	Pneumococcal Vaccination for Patients 65 Years & Older	NQF #43 NCQA	GPRO Web Interface	R	P	P
16.	Preventive Health	BMI Screening & Followup	NQF #421 CMS	GPRO Web Interface	R	P	P
17.	Preventive Health	Tobacco Use: Screening & Cessation Intervention	NQF #28 AMA-PCPI	GPRO Web Interface	R	P	P
18.	Preventive Health	Screening for Clinical Depression & Followup Plan	NQF #418 CMS	GPRO Web Interface	R	P	P
19.	Preventive Health	Colorectal Cancer Screening	NQF #34 NCQA	GPRO Web Interface	R	R	P

TABLE J-10 (*continued*)							
ACO #	**Domain**	**Measure Title**	**NQF Measure #/ Measure Steward**	**Method of Data Submission**	**P4P Phase-in PY1**	**P4P Phase-in PY2**	**P4P Phase-in PY3**
20.	Preventive Health	Breast Cancer Screening	NQF #31 NCQA	GPRO Web Interface	R	R	P
21.	Preventive Health	Screening for High Blood Pressure & Followup Documented	CMS	GPRO Web Interface	R	R	P
22.	At-Risk Population--Diabetes	Diabetes Composite (All-or-Nothing Scoring): Diabetes Mellitus: Hemoglobin A1c Control (8%)	NQF #729 MN Community Measurement	GPRO Web Interface	R	P	P
23.	At-Risk Population--Diabetes	Diabetes Composite (All-or-Nothing Scoring): Diabetes Mellitus: Low Density Lipoprotein Control	NQF #729 MN Community Measurement	GPRO Web Interface	R	P	P
24.	At-Risk Population--Diabetes	Diabetes Composite (All-or-Nothing Scoring): Diabetes Mellitus: High Blood Pressure Control	NQF #729 MN Community Measurement	GPRO Web Interface	R	P	P
25.	At-Risk Population--Diabetes	Diabetes Composite (All-or-Nothing Scoring): Tobacco Non-Use	NQF #729 MN Community Measurement	GPRO Web Interface	R	P	P
26.	At-Risk Population--Diabetes	Diabetes Composite (All-or-Nothing Scoring): Diabetes Mellitus: Daily Aspirin or Antiplatelet Medication Use for Patients with Diabetes & Ischemic Vascular Disease	NQF #729 MN Community Measurement	GPRO Web Interface	R	P	P
27.	At-Risk Population--Diabetes	Diabetes Mellitus: Hemoglobin A1c Poor Control	NQF #59 NCQA	GPRO Web Interface	R	P	P
28.	At-Risk Population--Hypertension	Hypertension (HTN): Controlling High Blood Pressure	NQF #18 NCQA	GPRO Web Interface	R	P	P
29.	At-Risk Population--Ischemic Vascular Disease	Ischemic Vascular Disease (IVD): Complete Lipid Panel & LDL Control (100mg/dL)	NQF #75 NCQA	GPRO Web Interface	R	P	P
30.	At-Risk Population--Ischemic Vascular Disease	Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic	NQF #68 NCQA	GPRO Web Interface	R	P	P
31.	At-Risk Population--Heart Failure	Heart Failure: Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	NQF #83 AMA-PCPI	GPRO Web Interface	R	R	P
32.	At-Risk Population--Coronary Artery Disease	Coronary Artery Disease (CAD) Composite (All-or-Nothing Scoring): Lipid Control	NQF #74 CMS (composite)/ AMA-PCPI (individual component)	GPRO Web Interface	R	R	P

TABLE J-10 (*continued*)							
ACO #	**Domain**	**Measure Title**	**NQF Measure #/ Measure Steward**	**Method of Data Submission**	**P4P Phase-in PY1**	**P4P Phase-in PY2**	**P4P Phase-in PY3**
33.	At-Risk Population--Coronary Artery Disease	Coronary Artery Disease (CAD) Composite (All-or-Nothing Scoring): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy--Diabetes or Left Ventricular Systolic Dysfunction (LVEF 40%)	NQF #66 CMS (composite)/ AMA-PCPI (individual component)	GPRO Web Interface	R	R	P

SOURCE: Accountable Care Organization 2013 Program Analysis -- Quality Performance Standards Narrative Measure Specifications, prepared for Quality Measurement and Health Assessment Group, Center for Clinical Standards and Quality, Centers for Medicare and Medicaid Services, by RTI International, Waltham, and Telligen West Des Moines, IA.
NOTE: ACO = accountable care organization; NQF = National Quality Forum; P4P = pay for performance; P = performance; R = reporting.

For more information see: http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/ACO-NarrativeMeasures-Specs.pdf.

LONG-TERM AND POST-ACUTE CARE PROVIDERS ENGAGED IN HEALTH INFORMATION EXCHANGE: Final Report

Files Available for This Report

MAIN REPORT

Executive Summary	http://aspe.hhs.gov/daltcp/reports/2013/HIEengagees.shtml
HTML	http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml
PDF	http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.pdf

APPENDIX A. SELECTED PROGRAMS AND INITIATIVES THAT SUPPORT CARE COORDINATION AND INFORMATION EXCHANGE FOR PERSONS RECEIVING LTPAC/LTSS

HTML	http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendA
PDF	http://aspe.hhs.gov/daltcp/reports/2013/HIEengageA.pdf

APPENDIX B. FRAMEWORK TO CHARACTERIZE HEALTH INFORMATION EXCHANGE TO SUPPORT CARE COORDINATION FOR PERSONS RECEIVING LTPAC/LTSS

HTML	http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendB
PDF	http://aspe.hhs.gov/daltcp/reports/2013/HIEengageB.pdf

APPENDIX C. ENVIRONMENTAL SCAN AND LITERATURE REVIEW SOURCES

HTML	http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendC
PDF	http://aspe.hhs.gov/daltcp/reports/2013/HIEengageC.pdf

APPENDIX D. PROMISING COMPONENTS AND INTERVENTIONS TO REDUCE READMISSIONS

HTML	http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendD
PDF	http://aspe.hhs.gov/daltcp/reports/2013/HIEengageD.pdf

APPENDIX E. SUMMARY OF LITERATURE ON HEALTH INFORMATION EXCHANGE OUTCOMES AND RELATED MEASURES

HTML	http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendE
PDF	http://aspe.hhs.gov/daltcp/reports/2013/HIEengageE.pdf

APPENDIX F. EXAMPLES OF COMMUNITY-BASED CARE TRANSITION PROGRAM WITH LTPAC/LTSS PARTICIPATION

HTML http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendF
PDF http://aspe.hhs.gov/daltcp/reports/2013/HIEengageF.pdf

APPENDIX G. HEALTH INFORMATION EXCHANGE INTERVENTIONS AND ACTIVITIES IDENTIFIED THAT SUPPORT CARE COORDINATION FOR PERSONS RECEIVING LTPAC/LTSS

HTML http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendG
PDF http://aspe.hhs.gov/daltcp/reports/2013/HIEengageG.pdf

APPENDIX H. SITE VISIT SUMMARY: RUSH UNIVERSITY MEDICAL CENTER, CARE TRANSITIONS PROGRAM, BRIDGE PROGRAM

HTML http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendH
PDF http://aspe.hhs.gov/daltcp/reports/2013/HIEengageH.pdf

APPENDIX I. SITE VISIT SUMMARY: BEACHWOOD HOMES

HTML http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendI
PDF http://aspe.hhs.gov/daltcp/reports/2013/HIEengageI.pdf

APPENDIX J. SITE VISIT SUMMARY: EASTERN MAINE HEALTH SYSTEM, EASTERN MAINE HOME CARE

HTML http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendJ
PDF http://aspe.hhs.gov/daltcp/reports/2013/HIEengageJ.pdf

APPENDIX K. SUMMARY OF INFORMATION ROUTINELY EXCHANGED BY THE THREE SITES VISITED, BY CARE COORDINATION FUNCTION

HTML http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendK
PDF http://aspe.hhs.gov/daltcp/reports/2013/HIEengageK.pdf

APPENDIX L. STANDARDS AVAILABLE TO SUPPORT HEALTH INFORMATION EXCHANGE OF LONG-TERM AND POST-ACUTE CARE DATA

HTML http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendL
PDF http://aspe.hhs.gov/daltcp/reports/2013/HIEengageL.pdf

APPENDIX M. GLOSSARY

HTML http://aspe.hhs.gov/daltcp/reports/2013/HIEengage.shtml#appendM
PDF http://aspe.hhs.gov/daltcp/reports/2013/HIEengageM.pdf