ASET
Arizona Strategic Enterprise Technology

Arizona Health Information Exchange (HIE)
Unconnected Providers Program

ARIZONA HIE ENVIRONMENTAL SCAN
LONG TERM CARE

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During the fall of 2012, the Arizona Strategic Enterprise Technology (ASET) Office commissioned a series of interviews and an HIE environmental scan to better understand the adoption and use of health information technology, and health information exchange, in Arizona.

The HIE environmental scans of the three specific healthcare segments: Behavioral Health Care, Long Term Care, and Rural Health Care, covered activities associated with the federal government, at the national level, within Arizona, and within other states. The scans reviewed publicly available resources.

The interviews were conducted during August and September of 2012 with 32 individuals representing 19 organizations. These organizations were chosen to provide representative views of Behavioral, Long Term Care, and Rural providers and to elicit information concerning their adoption and use of health information technology and exchange in Arizona. An Arizona HIE environmental scan is included to provide perspective.

This report addresses the Long Term Care environment.

All of the reports can be downloaded from the ASET website at
http://hie.az.gov/it.htm

Arizona HIE Environmental Scan and Community Interviews
Arizona HIE Environmental Scan – Behavioral Health Care
Arizona HIE Environmental Scan – Long Term Care
Arizona HIE Environmental Scan – Rural Health Care

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Background

Arizona has a rich history of promoting health information technology (HIT) and health information exchange (HIE). In 2006, community leaders came together and developed the Arizona Health-e Connection Roadmap. The Roadmap identified the priorities for healthcare network services and created a business plan that focused on meeting the needs of health care providers, payers, patients, consumers, and employers.

In 2009, Congress passed the American Recovery and Reinvestment Act (ARRA). A key piece of this legislation was the Health Information Technology for Economic and Clinical Health (HITECH) Act. This Act established Meaningful Use (MU) of interoperable EHRs in the health care system as a critical national goal and it incentivized EHR adoption by providers.[1] Health information exchange (HIE) has emerged as a core capability required for both hospitals and providers to achieve MU, qualify for the incentive programs, and provide better care for patients.

Another key element of the HITECH Act was the State Health Information Exchange Cooperative Agreement Program (SHIECAP). This program assists states and territories to advance regional and state level HIE; while moving toward national interoperability of patient health information.[2]

In March 2010, the State of Arizona was awarded a $9.3M SHIECAP grant. The Grant is provided as a catalyst to develop the necessary infrastructure for Arizona's health information exchange capability. The Arizona Strategic Enterprise Technology (ASET) office is responsible for the programmatic implementation of this grant for the State of Arizona.[3]

In responding to the grant award, ASET formed an HIE Steering Committee to continue the momentum of the work done in 2006 which created Arizona's Health-e Connection Roadmap. The Committee continued to leverage community resources and relationships, establish priorities for the grant funds, and provide on-going review and feedback of the grant program.

In the fall of 2012, ASET launched the ***Unconnected Providers' Grant Program***[4] to support HIE planning and implementation for health care organizations. This grant program is aimed at stimulating the adoption of HIE by healthcare providers who currently have not planned or implemented an information exchange solution. It has a special focus on rural hospitals and providers, behavioral health providers, and long term care providers. To help prepare for this grant program, ASET commissioned an environmental scan of current health information exchange initiatives in Arizona and around the country and interviews with Arizona healthcare providers.

Introduction

Long Term and Post-Acute Care (LTPAC) organizations care for patients with some of the most complex and chronic needs. These patients frequently transition between their homes, acute, and long term care settings. Even though Long Term Care (LTC) patients represented only seven percent of the Medicaid population in 2009, LTC-related services accounted for nearly half of total Medicaid spending, according to a Kaiser Family Foundation report.[5] Patient-related health data to support these transitions of care is critical.

LTPAC providers generally do not have robust health information technology (HIT) capabilities to support exchanging health information with other providers during transitions of care. Further, LTPAC organizations are excluded from participation in the CMS incentive programs for Meaningful Use (MU). However, they are critical partners of hospitals and other providers.

The Office of the National Coordinator for HIT (ONC) recognizes the role that LTPAC plays in improving the quality of health care, improving the patient experience, and reducing the cost of healthcare. The LTPAC HIT Collaborative released their 2012-2014 Strategic Plan: "*A Roadmap for Health IT in Long Term and Post-Acute Care (LTPAC).*"[6] Following publication of the plan ONC convened a roundtable discussion of key industry participants to ensure that LTPAC needs are considered for future MU criteria, certifications for electronic heath records (EHRs), and the unique data requirements to support complex transitions of care. ONC awarded four innovation grants to States that are committed to solving these issues.

This document highlights specific LTPAC programs and the progress that is occurring across the country. Many of these programs could be leveraged for the benefit of residents of Arizona.

There will be a variety of solutions for health information exchange. Some are options for LTPAC to *receive* health information on their patients (example - portals), while others are options for LTPAC to *send* health information on their patients (example - DIRECT messaging). While the ideal option is bi-directional exchange of complete/relevant data, there is benefit to any exchange of currently available data as a first step.

The sentiment of many LTPAC providers is to "get started."

Summary of Findings

Potential Barriers and Benefits for LTPAC Participation in Health Information Exchange

Early efforts with health information exchange have centered on hospitals and physicians. The move to implement electronic medical records systems also originated in hospital and physician settings. The long term and post-acute care organizations have some electronic systems, however many of these were developed to facilitate billing and reporting – not to support clinical care. Even though LTPAC organizations were excluded from the meaningful use incentives, they are still critical in care coordination, healthcare outcomes, and the quality of life for patients.

While reviewing the literature on Federal and National level initiatives, conditions were identified and then categorized as either barriers or benefits to LTPAC organizations joining a Health Information Exchange (HIE). Some of those conditions are listed below.

Potential Barriers to HIE for LTPAC providers include:

- LTPAC providers not asked to participate in HIE
- Don't have the IT skills needed to connect to an HIE
- High turnover rates increase the training requirements
- Need new processes to transition workflow with hospitals and providers
- Need pharmacy involved
- Limited funds to invest
- Exclusion from federal HIT incentive funding
- Today, LTC is collecting measurements for mandatory reporting – minimum data sets (MDS). These are not targeted for transitions of care
- Have not quantified LTC benefit to hospitals and providers to achieve MU and keep costs down and improve outcomes. There is a need to document the benefits

Potential Benefits for LTPAC providers to be part of the HIE:

- Hospitals must reduce readmissions – opportunity for LTC participation
- Control total costs - LTC provides a lower cost environment than acute care settings for the chronic and co-morbid population
- Opportunity to help providers meet MU incentive requirements
- Better information for each transition of care or referral
- Ability to perform medication reconciliation for individuals who transition into care of another provider
- Provide advance directive status upon admission of patients 65 and older
- Opportunity to be the coordinator of care across settings
- Can represent the patient goals and environment (family, housing, education, nutrition, etc.)
- LTC providers use CRM tools and Case Management tools to manage personal care
- LTC providers have the relationships to promote consumer/family access to portals, etc.
- LTC can discuss and promote consumer/family monitoring devices

Opportunities to Leverage Other State Efforts

As Arizona launches its Unconnected Providers grant program to support HIE, there is an opportunity to take advantage of the experiences of other states. The section below highlights opportunities and actions that other states have taken, to encourage the adoption of HIE by Long Term and Post-Acute Care organizations.

HIE Planning: Organizational planning to determine the right short term (and perhaps longer term) method of exchanging health information. Develop an action plan to implement the chosen approach.

LTC Readiness: LTC associations could survey and prioritize the "readiness" (IT capabilities, willingness/attitude, volume of transfers, key patient transfer partners) of their member providers in Arizona (example states: Iowa, Indiana, Oregon, Minnesota, and California)

HIE Services: A grant could support HIE subscription fees for the first year (use of the HIE Portal). The grant could provide resources or funds to develop interfaces to connect to the HIE. (example states: Colorado, Maryland, Massachusetts, Oklahoma, and Pennsylvania)

Hardware: A grant could provide any required hardware for the LTC facility to link to the HIE. (example state: Oklahoma)

DIRECT Services: A grant could fund DIRECT subscription fees for the first year.

DIRECT – Patient Transfer Template: Oklahoma built a template to standardize existing transfer forms using the Massachusetts universal transfer form (UTF). (example states: Oklahoma and Massachusetts)

LTC Workflow: A grant could fund assistance improving the workflow/processes needed for health information – transitions of care. (Example state: Oklahoma)

Connections: A grant could support funding broadband access from practice locations.

LTC Specific Capabilities: Leverage the work of other states by developing an expansion of an HIE portal to include fields that could be reported on by LTCs associated with transitions of care; exporting an expanded continuity of care document (CCD) from the LTC Administrative minimum data set (MDS) system that could be transmitted via DIRECT to the HIE or the Hospital; and using an MDS to CCD conversion tool (example states: Massachusetts, Pennsylvania-GE Caradigm, and Oklahoma-Cerner)

HIE Enhancements: Leverage the development of a "DIRECT Hub" to be interfaced with the HIE to receive CCD via DIRECT (much like the project about to move into production at ADHS/Immunizations) – to allow providers who only have DIRECT capabilities to contribute to the HIE. (Example states: Oklahoma and Massachusetts)

Reach out to Arizona LTC Facilities whose organizations are connected to HIEs in other States: (examples: Kindred Healthcare [multi-state] - 7 locations in AZ, Gentiva Home Health [Colorado HIE] – 9 locations in AZ)

Environmental Scan: Federal and National

Federal Initiatives

Challenge Grants

ONC awarded a total of $16M in 10 new challenge grants in January 2012, of which, four were awarded to improve long-term and post-acute care transitions. Those awards went to: Colorado Regional Health Information Organization (CORHIO) $1.7M; Massachusetts Technology Park Corporation $1.7M; Maryland Department of Health & Mental Hygiene $1.7M; and Oklahoma Health Care Authority $1.7M. The purpose of these grants was to develop solutions that can be shared, reused, and leveraged by other states. The individual projects are highlighted in the States section later in this report.

LTPAC Standards

ONC workgroups are currently identifying and developing standards related to LTPAC priorities and will be a resource as Stage 3 EHR MU requirements are established. Highlights of the LTPAC contributions from the Standards & Interoperability Framework[i] Longitudinal Coordination of Care Work Group (S&I LCC WG) and three of the associated sub-workgroups (SWG) are:[7]

- Patient Assessment Summary (PAS) SWG: Identify a subset of the Minimum Data Set (MDS) and Outcome and Assessment Information Set (OASIS) data elements to be included in patient assessment summary documents. They will collaborate with HL7 to identify standards to support exchange.
- Longitudinal Care Planning (LCP) SWG: Define use cases, requirements, and data needs for shared care plans. Determine any gaps with Stage 2 EHR Certification Criteria and MU requirements.
- Transitions of Care (TOC) SWG: Using the Massachusetts Challenge Grant experience, examine what receiving care providers need to know for the transferring patient and determine if transfer documents can be sufficiently populated to meet those needs.

ONC Roundtable

ONC hosted a roundtable discussion of industry leaders to better understand the HIT needs of LTPAC providers. The roundtable was specifically focused on EHR and HIE technologies with two main objectives: help ensure LTPAC needs were well understood to influence the availability of products, and help LTPAC providers choose and adopt systems that support transitions of care. They published a summary report of the findings on July 20, 2012.[8]

[i] The S&I Framework was launched on January 7, 2012 by ONC. It is a collaborative community of participants from the public and private sectors who are focused on providing the tools, services, and guidance to facilitate the exchange of health information. http://wiki.sifframework.org/

Some of the key findings from the roundtable discussion were:

- Move from the provider-centered models to patient-centered models focused on the entire care team (including the patient, their family, and caregivers).
- For this population of patients, their "views and goals" are critical and should be considered in care plans – all providers should be on this same page.
- Technologies in addition to EHRs, such as case management systems, bring additional required data elements which should be utilized for patients with chronic and severe needs.
- Exchange strategies need to consider both sender and receiver data needs and modes (mail, fax, electronic).
- Specific recommendations for Stage 3 MU and future EHR Certifications include care plans, transitions of care (TOC), and federally mandated patient assessments (specifically skin breakdown and care of pressure ulcers).
- Consideration should be given to advance directives. Existing work in Medical Orders for Life-Sustaining Treatments (MOLST) could serve as the basis.
- An overall sentiment – "let's get started" with sharing the data we now have.

Report on LTPAC HIE Opportunities

In December of 2011, the "Opportunities for Engaging Long-Term and Post-Acute care Providers in Health Information Exchange Activities: Exchanging Interoperable Patient Assessment Information" report was published by the US Department of Health & Human Services Assistant Secretary for Planning and Evaluation (ASPE) – the results of a four-year study.[9] The opportunities discussed in the report use the federally required assessment instruments, the Minimum Data Set (MDS) and the Outcome and Assessment Information Set (OASIS), created and electronically exchanged by almost 100% of the nursing homes and home health agencies in the United States. The opportunities to accelerate LTPAC readiness for HIE identified in this report are:

- Leverage standardized assessment content to engage LTPAC providers in HIE.
- Prioritize the Health Information Technology for Economic and Clinical Health Act (HITECH) and Patient Protection and Affordable Care Act (ACA) requirements for exchange of clinical summary information.
- Build a sustainable technical infrastructure for content and exchange standards for patient assessment information.
- Expand beyond patient assessments for HIE with other providers.

Additional resources on federal initiatives are found in the "References" section of this document.[10,11, 12]

National Initiatives

The Long Term and Post-Acute Care HIT Collaborative

Since 2005, the Long Term and Post-Acute Care (LTPAC) HIT Collaborative has been very active in developing a health IT vision for the industry. They hold an annual Health IT Summit and publish a Road Map every two years. The fourth Road Map – The 2012-2014 LTPAC Health IT Road Map – was published July 9, 2012.[13] The Road Map is intended to stimulate grass root activities, investments, advocacy and collaboration among policy makers, researchers, vendors, providers, consumers, and other LTPAC health IT stakeholders.

The LTPAC sector is an essential component in the future of the nation's healthcare plan. LTPAC's unique person-centered competencies and mission could be leveraged to experiment and partner to influence the nation's health and wellness direction.

LTPAC providers need to innovate across three time spans:[14]

- Short term: Strengthen tactical relationships (trusted partner) with acute/primary providers and support their ability to meet MU
- Midterm: Engage in partnerships with Accountable Care Organizations (ACO)/Bundled payment initiatives, demonstrating their ability to deliver quality services, experiences and outcomes with accountability
- Long term: Leverage technologies to build on patient-centered care to enable and accelerate new business models that appeal to empowered consumers as they pursue their health and wellness goals

National Governor's Association (NGA)

Long-Term Care (LTC) is one of the most expensive portions of state health care spending and managing expenditures in this area of health care is regarded as increasingly important. Within the LTC community, there are major opportunities for quality improvement and cost containment through HIE efforts.

In May 2011, the National Governors Association Center for Best Practices[15] held a Long-Term Care and Health Information Exchange (HIE) workshop. This workshop was designed to offer state leadership teams the opportunity to discuss critical barriers and then support action planning that is designed to bring the state leadership teams together around mutual goals for health care system transformation. Representatives from five States (Colorado-CORHIO, Maryland-CRISP, Massachusetts-MeHI, Oklahoma-OHCA, and Pennsylvania-KeyHIE) and two LTPAC organizations (Kindred Healthcare and ACTS Retirement-Life Communities) described their considerable progress and the challenges faced when including LTPAC organizations in their health information exchanges.

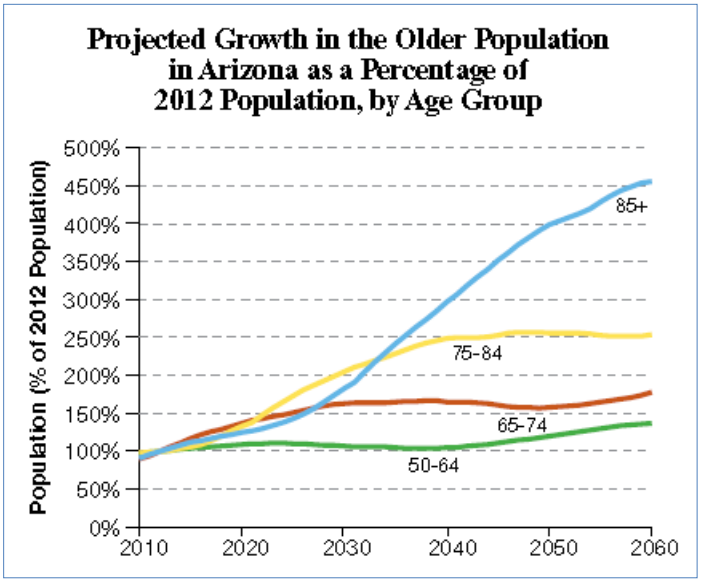
Additional resources on national initiatives are found in the "References" section of this document.[16, 17]

Environmental Scan: Arizona Long Term Care

The Arizona Long-Term Care System (ALTCS) is the first capitated, long-term care Medicaid program in the nation to operate statewide. It promotes an extensive home and community-based services program intended to lower long-term care costs by substituting home care for institutional care.[18]

ALTCS provides acute care, behavioral health services, long-term care, and case management to individuals who are elderly, physically disabled, or developmentally disabled and meet the criteria for institutionalization. ALTCS members account for less than 4% of the AHCCCS (Medicaid) population, however they account for approximately 26% of the costs.[19] The ALTCS program encourages delivery of care in alternative residential settings. A summary of the Arizona facilities is provided in the Appendix.

The AARP Public Policy Institute projects a significant growth in the older population in Arizona over the next 20 years. By 2030, the 65+, 75+, and 85+ populations will be over 150% of the same 2012 population groups.[20]



The long term care segment of the population is experiencing an increase in acuity and a greater number of transfers between care settings. This puts increasing pressure on these facilities to provide a Continuity of Care Record (CCR) – at a minimum. However, there are no aligned incentives between acute care and long term care settings to encourage the use of CCRs and electronic data transfer. Many long term care organizations have implemented their own electronic record-keeping, but there is no consistency across providers.[21] While there is significant health information exchange activity in Arizona, long term care providers are generally not key participants.

Arizona Accountable Care Organizations (ACOs), Health Information Exchanges (HIEs), and Telemedicine Initiatives

Arizona has a rich history of promoting HIT and HIE. As a result of prior state and community efforts, there are many initiatives – taking various forms – currently underway to share health information electronically. While there is HIE activity in the state of Arizona, there is little LTC HIE activity within Arizona. The example below describes a health system that incorporates long term care centers, home care, and hospice services.

A full report describing other ACO, HIE, and Telemedicine initiatives, ***Arizona HIE Environmental Scan and Community Interviews***, can be downloaded from http://hie.az.gov/it.htm.

Accountable Care Organizations

Banner Health Network

Banner Health was selected as one of 32 health delivery organizations to participate in the CMS Pioneer ACO Initiative. Banner Health has also joined forces with Aetna for health information exchange, patient data analytics, and mobile connectivity. Banner Health operates 23 acute-care hospitals, as well as long-term care centers, outpatient surgery centers, and an array of other services including family clinics, home care and hospice services and a nursing registry.[22] [23]

State Supported Public-Private Collaborative Initiatives

Arizona Health-e Connection Roadmap

In 2006 Arizona developed the Arizona Health-e Connection Roadmap[24]. This roadmap has provided the foundation for many of the HIE initiatives within the state. The roadmap described an overall approach for connecting Arizona healthcare providers and in many cases, focused specifically on the health information exchange that would be required among providers within a medical trading area (MTA) as well as across the state.

For long term care, the roadmap also called out the need for HIT products and functionality for disease management, chronic care management, and home healthcare reporting. Long Term Care continues to be represented on the Arizona Health-e Connection Board.

Interview Summary

During August and September of 2012, interviews were conducted to inform the State of Arizona and the Arizona Strategic Enterprise Technology (ASET) office about the issues and opportunities facing health care providers regarding health information exchange (HIE). Long Term Care providers were among those interviewed.

The interviews were structured to elicit information in three broad subject areas: Barriers to HIE; Drivers of HIE – those things that motivate participation; and Assistance needed to move forward with HIE. The interviews revealed a wide variety of comments in each subject area, which were grouped into categories within each specific area. Those categories that were mentioned most often are listed below:

Barriers to HIE

- Cost
- Insufficient Resources
- Lack of EMRs

Drivers of HIE Participation

- Better patient care
- Better relationships and hand-offs with other healthcare providers
- Required reporting

Assistance Needed for HIT/HIE

- Education / Outreach
- Expertise / Resources
- EMR Upgrades
- Interface development

All long term care providers interviewed were using HIT systems for eCharting, eMARs, and coding MDS. The majority were also using PointClickCare as their EMR system. These providers clearly understand the importance of their role in patient quality of life and quality of care – especially in terms of transitions into/out of hospital systems.

Even though the CMS MU program excluded their participation in the incentive payments, long term care providers are looking forward to participating in health information exchange (HIE) with their trading partners – specifically pharmacies, labs, and hospitals for admissions and discharges. Long term care providers are looking for assistance in navigating the technology and privacy/security requirements that would allow interoperability with these other healthcare providers. They believe that HIE will make interoperability with multiple hospitals more efficient.

The complete interview report, "***Arizona HIE Environmental Scan and Community Interviews***," including all interview summaries, findings, and recommendations, can be downloaded from the ASET website at http://hie.az.gov/it.htm.

Arizona Organizations Supporting Long Term Care Providers

Arizona Health Care Association (AHCA)[25]

Organized in 1953, the Arizona Health Care Association has grown into a strong and viable group of long term care providers dedicated to enhancing the quality of life for Arizona's elderly and disabled in residential settings. Today, membership encompasses the majority of licensed, operating nursing care facilities in the state, who together provide continuous nursing care and assisted living services to over 15,000 residents.

AHCA was founded to promote standards and ethics in the profession of long term health care, and to ensure quality care for nursing facility and assisted living residents. AHCA is a non-profit organization supported by membership dues, educational program fees and other services.

LeadingAge Arizona[26]

LeadingAge Arizona is a not-for-profit trade association representing more than 50 facilities dedicated to providing quality health care, housing, and services to over 12,000 elderly Arizona citizens. LeadingAge Arizona is the only association in Arizona representing the full continuum of long term care, housing, and services including: retirement communities, HUD subsidized senior housing, assisted living, and nursing facilities.

LeadingAge Arizona members share a deep sense of mission and a commitment to enhancing the lives of older adults and others with special needs; most are not-for-profit organizations with religious or fraternal affiliations. The association serves its members by providing leadership, education, advocacy, and opportunities for collaboration to help them achieve their mission. LeadingAge Arizona is affiliated with the American Association of Homes and Services for the Aging (AAHSA); a Washington D.C. based national membership organization of non-profit voluntary and governmental homes and service providers for the aging.

Environmental Scan: States

The following section describes initiatives in various states that provide examples of how LTPAC is being included in HIE activities.

California

California Healthcare Foundation LTC Survey[27]
April 2007 Study: Health Information Technology: Are Long Term Care Providers Ready?

The two main drivers of HIT adoption that were identified were progressive long term care leadership that understands HIT and thinks outside of the box, and long term care organizations affiliated with a hospital system that is making the investment in HIT.

Colorado

ONC Challenge Grant Awarded January 2011[28]
To improve long-term and post-acute care transitions.

Colorado Challenge Grant Goals:

- Facilitate adoption of HIE by the Long Term and Post-Acute Care (LTPAC) community
- Develop community protocol for information sharing across care transitions
- Measure the impact of HIE on quality of patient care and hospital readmissions

The Colorado program is called the LTPAC Transitions Program[29]

Program Goals:

- Identify 320 LTPAC providers in the four targeted communities (Colorado Springs, Boulder, Pueblo and San Luis Valley); achieve goal of 50% (160) participation in HIE by January 2014.
- Obtain support from LTPAC organization and local community health care partners.

Grant dollars will be used to cover the costs of the LTPAC one-time set up fee of $2000 for the HIE (Tier 1 and 2 providers), the cost of two-years Tier 1, one-year for Tier 2 of monthly subscription fees for use of CORHIO's HIE PatientCare360 portal (for those without EMR, DIRECT). The annual fees can range from $2,400 to $25,200 depending on the size (bed count) of the LTPAC. LTPCA providers will be required to attend community level care transitions meetings and complete several assessments and surveys over the course of the program.

The program approach includes:

- Executing a communications plan that includes press releases in each targeted community, highlighting the program in the monthly CORHIO newsletter, and community outreach including speaking engagements, targeted calls/contact to individuals.
- Leveraging Community Advisory Committees and local healthcare leaders in each of the communities (specifically engage the hospitals to reduce the likelihood of readmissions).
- Encouraging LTPAC provider applications (SNF, ACLF, LTAC, etc.) for grant assistance – identify facility's current process for receiving health information from community hospitals or other referral sources – (example- are these hospitals already a part of the HIE?).

Twelve LTPAC organizations have joined CORHIO as of April 2012.[30]

Additional resources on Colorado initiatives are found in the "References" section of this document.[31, 32]

Illinois

Chicago Metro HIE

The Chicago Metro HIE is expected to be the largest HIE in a US metropolitan area. Long Term care provider Kindred Healthcare is a founding member.[33] Larry Wolf, Kindred's Health IT Strategist is a frequent speaker about and advisor to health information exchange initiatives.[34] Kindred Healthcare has 15 market focus areas in the US, including Arizona with 7 locations.

Indiana

Indiana is committed to develop strategies for accelerating the inclusion of LTC providers within the existing HIE infrastructure and outlined a roadmap:[35]

- Develop an environmental scan survey that will be sent out to LTC providers to assess the readiness and capabilities of the LTC sector.
- Develop educational activities that include webinars, conferences, and other supporting material to help LTC providers understand HIE and the benefits of sharing health data.
- Investigate a "Research" exemption as part of the LTC Patient Bill of Rights. There is a need to be able to explore the quality and cost effectiveness that LTC providers can realize as part of HIE.
- Develop a statewide process for sharing Advance Directives. Standardized forms and a method to share this information will be key for improving transitions of care.

Golden Living, a major long term care provider, has signed to connect all 20 of its skilled nursing and assisted living centers in Indiana to the Indiana Network for Patient Care (INPC), one of the largest health information exchanges in the country.[36] Golden Living operates more than 300 Golden Living Centers in 21 states and assisted living services in 40 other locations.

Iowa

Iowa e-Health conducted a survey of 453 LTC providers in January 2011 to evaluate the use of HIT in Iowa's LTC facilities.[37] Highlights of the survey results were:

- 25% of the LTCs used an EHR
- Seven facilities were able to share some information electronically with other providers.
- The majority of the LTC providers had fully or somewhat integrated their EHRs with MDS reporting systems.
- Most of the LTC providers without EMRs were not planning to invest in the next two years (concerns were financial, staffing, data security).
- Over half of respondents were "Very Interested/Somewhat Interested" in participating in a HIE (concerns were initial cost of product/installation, liability/security, operational cost of EMR, client privacy).

Maryland

ONC Challenge Grant Awarded January 2011[38]
To improve long-term and post-acute care transitions.

Maryland Challenge Grant Goal:

Leverage Maryland's operational statewide HIE to electronically share critical pieces of clinical information including information on advance directives, in near real-time, as residents of the state's LTC facilities transition from one care setting to another.

Program Approach:

- Deploy new scalable technology among six LTC facilities (representing > 11,000 seniors) and five hospitals to include EHR integration of clinical data.
- Make clinical discharge data available to LTC facilities that have not adopted an EHR system, by using a portal developed by the HIE's core technology provider. Patients will be identified as LTC residents upon hospitalization. At discharge, summary data will be pushed to the LTC facility via the portal, fax or via a remote printer.
- Test the availability of electronic Advance Health Care Directives and Medical Orders for Life Sustaining Treatment (MOLST) forms.
- Enable advance directives to be electronic and accessible from a portal.
- Develop a database of MOLST forms.

Specific Maryland Program metrics (within the pilot population):

- Increase the number of transitions of care that are accompanied by an electronic summary of care vs. the baseline.
- Increase overall completeness of data included in the transition vs. the baseline.
- Show a measureable effect on hospital readmission rates vs. a control group.

Preliminary Findings:

- Each LTC used different technologies for EHR, pharmacy, lab, and radiology ordering systems. The work to implement feeds is custom.
- An important part of technology adoption is the impact on processes and workflows. These differ by organization and location.
- Even where LTC organizations have adopted technologies and have close partnerships with hospitals in their geography, transitions are still largely done on paper.

Grant dollars will be used to cover the costs for LTC access to the HIE Portal. LTC providers will be required to respond to feedback requests periodically over the period of the grant which ends in February 2014.[39] The University of Maryland will assist with

program evaluation – rigorously identifying specific drivers and barriers to successful uptake and use.[40]

Additional resources about Maryland initiatives are found in the "References" section of this document.[41]

Massachusetts

ONC Challenge Grant Awarded January 2011[42]
To improve long-term and post-acute care transitions.

Massachusetts Challenge Grant Goals:

- Enable all Long Term and Post-Acute Care (LTPAC) organizations, including nursing and rehab facilities, and home health agencies to participate in regional and statewide HIE (viewing CCD+ via fax, secure email or HIE portal and send CCD+ via online portal). The CCD+ is an extended version of the CCD that includes the Universal Transfer Form (UTF) information.[43]
- Improve the speed, efficiency, and satisfaction of processes to provide essential clinical data during transitions of care.
- Decrease avoidable emergency department visits, hospital admissions, and hospital readmissions.
- Reduce unnecessary tests and treatments.
- Reduce the total cost of care.
- Replicate this model in other communities.

The Massachusetts challenge grant program is named: Improving Massachusetts Post-Acute Care Transfers (IMPACT):

IMPACT Strategies:

- Complete the development and testing of both a paper and electronic version of the state's Universal Transfer Form (UTF) based on the CDA/CCD to consistently and efficiently communicate all of the clinical information necessary for continuity of care (CCD+ will include medication reconciliation, advance directives and functional status).
- Develop a tool that translates clinical information into consumer-friendly language that is meaningful and easy for patients and families to understand and for use in a personal health record (PHR) or printed on paper – because patients are essential to the communication and execution of treatment plans.
- Integrate these tools across the continuum of care in Worcester County.
- Measure outcomes.

Background - Massachusetts Facts:

- Encounter summaries and traditional transfer forms do not meet the needs of LTPAC receivers of patients.
- Extensions will be required to the Consolidated CDA (will be proposed by the ONC S&I LTPAC Care Transitions Sub-workgroup).
- Many LTPAC providers will not have EHRs for several years and have not been included as eligible providers for HITECH Act payments.
- Will need to print the information for ambulance drivers and then send in electronic format for the hospitals.

Massachusetts Program Approach:

- Develop reusable software to acquire/view/reconcile/edit/send these extended Consolidated CDA documents (CCD+) using DIRECT.
- Update and ballot – through a national consensus process – HL7's Consolidated CDA Implementation Guide to support these additional data elements – CCD+.
- Incorporate the DIRECT tools into the statewide network – target to go live December 2012 for 16 pilot sites.
- Develop a software tool that translates extended consolidated CDA documents into a language and format that is consumer-friendly. Plan to release an RFP in fall of 2012.
- Convene a Learning Collaborative of 60 clinicians and staff from the 16 pilot site organizations representing 30 different healthcare roles. The Collaborative includes: 2 IDNs, 1 FQHC, 1 Independent Group practice, 1 LT Acute Care, 1 Inpatient Rehab, 2 Home Health/Hospice, 8 Skilled Nursing/Extended Care. This collaborative is missioned to develop trust, understand value, build efficient workflows, and disseminate forms and processes to assure safe transitions.
- Collect baseline metrics.
- Final analysis will be available in the fall of 2013; interim lessons learned will be published beginning summer 2012.

Grant dollars will be used to fund development of the CCD+ generator and CCD+ viewer, a public HISP gateway interface to HIE, and a tool to translate the information to consumer-friendly language. The grant will also fund convening a Learning Collaborative and the results collection, analysis and reporting.

Additional resources about Massachusetts initiatives are found in the "References" section of this document.[44, 45]

Minnesota

The Minnesota HIE (MN HIE), the statewide secure electronic network and record locator service, is conducting a pilot with LTC organizations.[46]

- MN HIE announced in June 2010 that it was partnering with Aging Services of Minnesota, an association of more than 1,000 organizations providing a range of services to 100,000 seniors.
- MN HIE will conduct a pilot program with a dozen LTC facilities to enable providers to access more patient clinical information. The LTC facilities will use the HIE's portal.
- "Aging Services of Minnesota is continually looking for ways that technology can support the needs of our Minnesota seniors. MN HIE is a cost-effective way to introduce the exchange of clinical information to our members," stated Lori Meyer, Senior Vice President, Aging Services of Minnesota.

The Minnesota Department of Health and the Minnesota e-Health HIE partnered to conduct a Nursing Home Survey in 2011 to understand the adoption and use of EHRs and exchange of health information.[47] There were 316 nursing homes (83%) that responded to the survey. The respondents highlighted challenges of exchanging information with others where their exchange capabilities were unknown (ability of current systems to generate/send/receive messages/transactions in a standardized format). The nursing homes stated that they wanted to receive medical/physical history, clinical summary, lab results, current/active medication list, immunization history, radiology reports, and patient demographics.

Additional resources about Minnesota initiatives are found in the "References" section of this document.[48]

New York

New York is home to many HIEs and several initiatives for exchange of healthcare information with LTC facilities. Four initiatives are described below:

HEALTHeLINK[49] is the NY HIE that serves the Western portion of the State, including the greater Buffalo region. In June of 2010, HEALTHeLINK was awarded a $16.1M ONC Beacon Community Award to fight Diabetes. HEALTHeLINK is reaching out to LTPAC providers as part of its Beacon Community Award. A portion of the $16.1 million grant award is used to connect additional data sources, such as rural hospitals, home care agencies, and long term care facilities. This will expand the amount of data available to participating providers through the health information exchange. In June of

2012, Briody Health Care Facility became the first LTPAC setting to join the HIE, submitting admission, discharge and transfer notices for patients electronically.

Visiting Nurse Services of New York (VNSNY)[50, 51] is the largest not-for-profit home health provider in the nation. As of October 2011, they have a daily census of 30,000 patients in homecare, 750 in hospice, and 6,300 members in a Medicare Advantage Special Needs Plan. They serve New York City, Westchester, and Nassau Counties. VNSNY is a member of all five RHIOs in metro New York City. They were founding members of the two RHIOs that went live in November 2008 and another two that went live in June of 2010. VNSNY's patients see value in these exchanges and 90% have given their written consent for sharing their information. One of the primary use cases is for the emergency department. EDs can access the RHIO to get information on the patient. The RHIO also sends an electronic alert to VNSNY when one of their patients has been admitted. VNSNY receives real-time alerts of 1,100 ED registrations and 700 inpatient admissions each month.

Healthcare Information Exchange New York (HIXNY)[52] is a collaboration of health plans, hospitals, physician practices, and other entities in a 17 county area comprising the Capital Region and Northern New York. Long term care members include:

- The Eddy (Northeast Health)
- Ellis Center Long Term Care
- Fort Hudson Nursing Home
- Livingston Hills Nursing & Rehabilitation
- St. Peter's Nursing and Rehab Center
- St. Peter's Addiction Recovery Center

Rochester HIO[53] is a non-profit, community-run health information exchange organization. It was developed by and for doctors, hospital systems, health insurers, and privacy officers in the 13-county Greater Rochester area.

- In 2004, the New York Office of Aging created New York Connects and developed the framework to improve eldercare and enable the elderly to stay at home.
- In April of 2009, the Rochester RHIO began working with Peerplace Networks, a "health information exchange" for social service entities.
- In March of 2010, the Rochester RHIO enabled its participating physicians to see what eldercare services its patients in Monroe County were receiving via a Community Care Summary. The Physicians were amazed – they saw the other side of the patient story – a lot of elder care is not provided in the doctor's office, but through the "New York Connects Program." The system gave access to Community Care Summaries for 20,000 patients. Approximately 13.6% of the Monroe County patients were over 65.

Oklahoma

ONC Challenge Grant Awarded January 2011:[54, 55]
To improve long-term and post-acute care transitions.

Oklahoma Challenge Grant Goals:

- Selected pilot nursing homes (initially five) to access the regional HIE via an EMR-lite installed as a Clinical Documentation Tool (CDT). The LTC facilities would then access an established regional HIE connected to a single referring hospital (initially Norman Regional Health System).
- Reproduce and automate proven transitions of care interventions demonstrated in the "Interventions to Reduce Acute Care Transfers" (INTERACT) project.[56]
- Embed DIRECT messaging tools in the regional HIE to facilitate provider communication during patient transfers.
- Create governance for workflow design, clinical guidelines, data sharing, and establish local and national best practice to guide the project.
- Partner with staff in the LTC facilities on transition of care process improvement and align that process with their use of information technology and electronic documentation of patient care.
- Establish an electronic database of patient information to facilitate efficient patient transfers through enhancements to the regional HIE.
- Build a common template of documentation to include and update the CCD currently promoted by Oklahoma Health Information Exchange Trust (OHIET) that would be available for any transfer to or from of an LTC facility in this project's pilot region.
- Following the pilot project, parallel implementation of the standard dataset, workflow and process best practices.

Oklahoma program approach to the grant:

- Conduct 18 months of pilot followed by 18 months of shared best practice/workflows with other HIEs across the State.
- Implement both technology and a focus on improving the workflow/processes.
- Allow LTC access to HIE portals to view and enter data into the HIE.
- Implement LTC EHR-lite to allow effective capture of care plans and MDS documentation.
- Add INTERACT tools to improve existing documentation to allow for electronic surveillance of a patients' change in condition.
- Enable access to DIRECT messaging. Templates will be built within DIRECT to standardize existing transfer forms into the Massachusetts lightweight Universal Transfer Form – to send information to the HIE or other providers. OHIET will develop a required set of data elements for all patient transfers.

- Develop required care transition metrics to measure and report on the pilot project success.
- Provide a servlet query to the regional HIE in the acute care hospitals' EHR and CDT.
- Develop all custom best practice screen layouts as open source.
- Assess and assist LTC facilities and hospitals related to workflow issues.
- Evaluate staff satisfaction with the process before/after the new system.
- Contract with the REC and the Beacon organizations to provide implementation support for the LTCs as a subcontractor to OHIET.
- Using policy /legislation at the state level, achieve the sustainability of a procedure that successfully improves transitions of care and associated outcomes.
- Host education meetings on three occasions open to all eligible LTCs and HIOs in the state.

Grant dollars to fund the Oklahoma program will be used to:

- Provide any necessary hardware for LTC to link to HIE.
- Cover the cost to enroll in the HIE/HIO for the LTCs participating in the 18 month pilot and the extension to three years (these funds would help defer the additional evaluation, training and reporting time required during the pilot phase to develop best practices).
- Enable Cerner to develop the CCD template for transfer of information that can be generalized across HIOs.
- Optionally contract with additional EMR vendors to enhance their technology to capture the additional fields in the CCD for long term care transitions.
- Contract with staff from the Oklahoma Foundation for Medical Quality to assess the processes currently associated with movement of patients from one care setting to another.
- Fund the Principal Investigator, HIT Practice Advisor, Quality Improvement Specialist, Business Analyst Consultant, and Director of Analytics.

Oregon

The Oregon Office of Health Information Technology (OHIT) conducted a survey of the state's long term care community in August of 2011.[57] The purpose of the survey was to determine the extent of technology integration currently existing within Oregon's long term care community and identify challenges. Oregon's LTC community consists of 2,274 LTC facilities. The survey response rate was approximately 20%. Highlights of the survey results include:

- Most facilities use computers and the internet; less than 30% use EMRs.
- Of those without an EMR, less than 50% plan to implement one in the next five years.
- The majority of exchange in the LTC community is done via paper - even in facilities that have EMRs.
- Respondents were most interested in exchanging with labs and pharmacies, followed by hospitals.

Pennsylvania

Keystone HIE (KeyHIE)

Keystone Health Information Exchange (KeyHIE) is a leader in including long term and post-acute care providers as HIE active participants.[58] The Keystone Health Information Exchange was established in 2005. KeyHIE provides services to the Keystone Beacon Community, providing nursing homes and home care agencies with web access to hospital discharge summaries and reports. As of May 2011, KeyHIE members included 6 LTPAC organizations representing 47 LTPAC locations, including:[59]

- Golden Living
- Grandview Health Homes, Inc.
- Maria Joseph Continuing Care
- Presbyterian Senior Living
- SUN Home Health Services
- VNA Health System

Keystone Beacon develops MDS to CCD transformer. The Keystone Beacon developed a method to extract MDS data, convert to a CCD, and then import it into the HIE for access by others. This allows LTC providers and others without an EMR to also contribute patient information to an HIE.[60, 61, 62]

- In March of 2011, the Keystone Beacon worked with ONC and CMS to extract the electronic MDS (that every long-term-care facility is required to submit to CMS) into the national standard format for clinical documents (CCD). The same service is being designed to serve the patients of home health agencies that submit OASIS data to CMS
- Geisinger collaborated with GE Caradigm to create a software tool – MDS-to-CCD transformer. An implementation guide is now going through HL7 balloting to create a new standard for HL7 users. The specs have already been published, so they are available to vendors to create their own converters.

- In June of 2012, Emmanuel Center for Skilled Nursing and Rehabilitation in Danville, PA became the first LTC provider to send CCDs on a production basis to the KeyHIE. Hospital clinicians can view or download the CCDs to their electronic health records. Four more facilities are expected to go online by the end of 2012
- Geisinger plans to make an MDS-to-CCD transformer available to the 16,000 LTC facilities that submit MDS forms to CMS. They plan to release an RFP for a company to host the translator in the cloud.

Additional resources about Pennsylvania initiatives are found in the "References" section of this document.[63]

Rhode Island

Rhode Island's HIE issues a challenge: "Let's be the 1st in the nation to have 100% of its nursing homes enrolling in the State's HIE" [64] In March of 2011, the Rhode Island Quality Institute (RIQI) – the designated sole RHIO for Rhode Island, and Quality Partners of Rhode Island – the QIO, announced their initiative to get all Rhode Island nursing homes connected to the State HIE – CurrentCare. CurrentCare offers an integrated view of health information through an internet browser. Twenty nursing homes were already enrolled at that time. They report that residents and family members have been overwhelmingly supportive of CurrentCare.

Appendix

Long Term Care Providers in Arizona[65]

Long Term Care Hospitals

Health Clinic	Location	County
Cornerstone Hospital of Southeast AZ	Tucson	Pima
Kindred Hospital Arizona Phoenix	Phoenix	Maricopa
Kindred Hospital Arizona-Northwest Phoenix	Peoria	Maricopa
Kindred Hospital-Tucson	Tucson	Pima
Promise Hospital of Phoenix, Inc.	Phoenix	Maricopa
Select Specialty Hospital Phoenix	Phoenix	Maricopa
Select Specialty Hospital Arizona	Scottsdale	Maricopa
Select Specialty Hospital-Arizona-Phoenix (032005)	Phoenix	Maricopa
Trillium Specialty Hospital-East Valley	Mesa	Maricopa
Trillium Specialty Hospital-West Valley	Sun City	Maricopa

Rehabilitation Hospitals

Health Clinic	Location	County
Havasu Regional Medical Center Rehabilitation Program	Lake Havasu City	Mohave
Healthsouth East Valley Rehabilitation Hospital	Mesa	Maricopa
Healthsouth Scottsdale Rehabilitation Hospital	Scottsdale	Maricopa
Healthsouth Valley of the Sun Rehabilitation	Glendale	Maricopa
Healthsouth Rehabilitation Hospital of Southern Arizona	Tucson	Pima
Healthsouth Rehabilitation Institute of Tucson	Tucson	Pima
Mountain Valley Regional Rehabilitation Hospital	Prescott Valley	Yavapai
Yuma Rehabilitation Hospital	Yuma	Yuma

Long Term Care Providers (163)

Category	Number of Facilities
Intermediate Care Facility for the Mentally Retarded/Medicaid	12
Nursing Home/Pioneers' Home	1
Nursing Home/SNF Only	29
Nursing Home/SNF/NF Distinct Part	12
Nursing Homes/SNF/NF Dual Cert	107
Nursing Home/State Only	2

Home Health Agency (202)

Category	Number of Facilities
AZ HHA Only	65
Medicare	137

Hospice (131)

Category	Number of Facilities
Hospice – OUTOFSTATE	10
Medicare	121

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Appendix

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