Improving Transitions of Care in LTPAC: An Update from the Theme 2 Challenge Grant Awardees

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The Theme 2 LTPAC Challenge Grant Awardees

March 21, 2013

Overview

In February, 2011, The Office of the National Coordinator for Health Information Technology (ONC) awarded ten Challenge Grants intended "to encourage breakthrough innovations for health information exchange (HIE) that can be leveraged widely to support nationwide health information exchange and interoperability."[1] Four State HIE Cooperative Agreement Program grantees (Colorado, Maryland, Massachusetts, and Oklahoma) were each awarded approximately $1.7 million to improve long-term and post-acute care (LTPAC) transitions.

Collaboratively, the grantees have identified strategies and approaches that can be widely adopted by communities seeking to improve transitions of care to and from LTPAC providers:

- Common processes and appropriate connection points for clinical information transfer between hospitals and LTPAC providers
- Recommendations for hospital and LTPAC provider data needs
- Strategies to promote the use of standards based technology to create, transmit and view clinical documents of relevance to LTPAC
- Approaches to engage LTPAC providers where they are today across the health IT adoption spectrum (from high adoption to no adoption)

In addition, the grantees have encountered challenges that will need to be addressed by any community seeking to address this issue:

- Uneven adoption of non-certified electronic health records makes connections between acute and post acute care providers challenging and labor intensive
- High staff turnover rates create implementation and ongoing operational challenges

Common Lessons:

Each of the Challenge Grants has attempted to define, and when possible, address barriers to data exchange to and from LTPAC during transitions of care. A number of common themes have emerged.

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[1] http://www.healthit.gov/providers-professionals/health-information-exchange-challenge-grant-program

(a) Heterogeneous Technology Adoption

The Challenge Grantees have found heterogeneous technology adoption rates and levels across LTPAC settings. There is widespread adoption of electronic systems to create and transmit federally required assessments for payment and quality reporting with more variable adoption of other electronic systems.

To address these conditions the grantees have actively worked to meet providers where they are today in the health IT adoption spectrum. The grantees are working to integrate health IT-enabled facilities into health information organziations including providing data feeds to the exchange and enabling secure messaging. For low or no technology adopted facilities grantees are experimenting with various approaches including implementing web based portals to enable secure messaging with trading partners, providing simple tools for clinical documentation to facilitate the electronic capture of LTPAC data that can then be shared at transitions and providing access to web based portals to query hospital information.

Grantee Case Study:

Oklahoma worked diligently to ensure that all five nursing homes participating in their project had the infrastructure in place to exchange electronic information—even to the extent of needing to install T1 lines across the five nursing homes. They went through an extensive process with the facilities to select the best solution for staff to interact with the clinical documentation tool (computer terminals, mobile station, wall mounted kiosks etc) and based on conversations and workflow analysis decided upon wall mounted kiosks. One key driver behind this decision was a desire to have a wired connection to the internet. The implementation team had experience with failures of wireless systems in hospital settings and the lack of onsite support in the nursing homes prompted the team to select a hard wired kiosk based device for access to the application.

Massachusetts is meeting LTPAC providers where they are by providing LAND ("Local" Adaptor for Network Distribution) and SEE (Surrogate EHR Environment). LAND allows organizations with fully implemented electronic records capable of generating the newly specified transition of care and care plan data elements, to create, transmit and receive these new document types. SEE, intended for organizations without the ability to create these documents, allows providers to view, edit, and send these documents to the receiving facility via Direct message transmission from a web browser.

Colorado and Maryland are working with some highly adopted LTPAC facilities to directly integrate their EHRs into the existing state exchange.

In facilities with electronic health record (EHR) systems, grantees have found health information exchange connectivity is generally not an integral component of the products. Connecting these EHRs to the exchange often required one-off solutions. As new payment and delivery models are being implemented incentives are changing and the imperative for LTPAC connectivity is increasing and a number of leading vendors are actively working to increase their exchange and interoperability capabilities, however this progress is generally slow and uneven. Since 2011 the number of LTPAC vendors seeking Certification Commission for Health Information Technology certification for LTPAC and ONC modular certification has increased. The Center for Aging Services Technologies is now tracking certification on their EHR vendor selection analysis grid for LTPAC providers.

(b) Standards

Massachusetts has done extensive work through their project to identify the relevant data needs of LTPAC providers and support the development of a standardized way to capture these data elements. To start, Massachusetts completed a multidisciplinary survey of "receivers"[2] across the continuum of care in an effort to understand their data needs. IMPACT used the Massachusetts Universal Transform Form and evaluated the practicality and clinical relevance of expanded datasets as specified by the receivers of that data. Overall, 169 unique transitions of care were identified and analyzed, from this work. Through review they narrowed this down into five Transition of Care data sets that could meet the needs of nearly all the types of transitions. You can view the Transitions of Care full data set here. The data sets were then tested via a paper and or technology based care transition process with the participating pilot sites. Over 90% of receivers reported that the specified data was provided during a transition and a similar number of senders reported success in populating this more robust transition of care document.

Massachusetts is now developing an implementation guide for expressing the five transition data sets as CDA documents. These will be used in both the LAND and SEE implementations. Massachusetts is actively collaborating with the Standards and Interoperability Framework's Longitudinal Coordination of Care Workgroup.

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[2] Receiver types surveyed included: integrated delivery networks, a Federally Qualified Health Center, a large independent multispecialty group practice, a long-term acute care facility, an inpatient rehabilitation facility, home health and hospice agencies, and skilled nursing and extended care facilities.

(c) Workflow and Clinical Process

Today transition of care information exchange predominately occurs on paper or via fax in LTPAC facilities. The Challenge Grantees have been actively working with their pilot sites to map out new workflow and clinical process that use electronic solutions to send and receive the needed transitions of care information.

LTPAC facilities have unique processes for collecting and distributing clinical documents. This is based on their internal process for clinical review of prospective clients. Factors such as acuity, service needs, and staffing levels usually means that an administrator and a nursing leader along with the medical director, who is typically not on site, may all need access to information. Challenge Grantees have focused on using information to improve clinical workflow and decision-making.

In Colorado, referrals from hospitals to LTPAC providers are being routinely augmented by data collected within the HIE. This additional source of data allows the receiving organization to approve admissions more quickly, and to triage resources more effectively. This allows Home Health Agencies to meet their "start of care" timing requirements more effectively. In addition, LTPAC providers, including Home Health Agencies and Nursing Facilities, have found that data from multiple episodes of care and multiple institutions allows them to identify patients who have particularly high resource utilization patterns and medical complexity. By getting a more complete clinical picture of the patients, providers are able to ensure that an appropriate level of service and strategies to prevent readmissions are introduced promptly.

In Oklahoma, HIE is changing the way urgent evaluations of patients are informed. In the past, patients with a change in condition in a nursing facility were managed by nurses with telephonic support by an off-site attending medical provider. If the problem resulted in a need for a transfer to an emergency department (ED), the patient would be accompanied by whatever paper documentation could be created and handed to the emergency medical technicians for delivery to the ED. Patients from nursing facilities who appeared in ED's with limited documentation and cryptic symptoms were often admitted to the hospital.

To address this, Oklahoma is utilizing DIRECT to send a secure message to the hospital with change in condition documentation when a patient is transferred to an ED. Providing important clinical information earlier in the care episode assures that the medical provider is engaged reliably and with more complete data, thereby allowing the provider to contribute to the care of the patient and potentially avoid the need for ED utilization. If the need does arise, however, the HIE now allows a set of clinical documents detailing the symptoms and events leading up to the transfer to be available to the receiving facility. It also provides the capacity to communicate assessments performed in the ED to both the nursing facility and the attending

medical provider, creating the opportunity to safely transition the patient back to the sending facility when appropriate.

(d) Staffing and User Access

Many different types of staff are being given access to the health information technology tools in LTPAC facilities including administrator, clinical liaison, nurse, call center staff, director of nursing, directors of admission, director of social service, intake coordinator, admission coordinator and IT directors. In Colorado, for instance, they are finding success with providing access to 2-3 core users: the intake coordinator, admission coordinator, IT director or director of nursing. These core users play a pivotal role in sharing information with other staff as needed. Oklahoma gives access to a core team that usually is comprised of the administrator, director of nursing, assistant director of nursing, compliance leader and senior charge nurse. In contrast, Massachusetts nursing facilities plan to use case managers or nursing coordinators to assemble data to be sent at transitions and in home health they will rely on call center staff.

When Colorado started their work with LTPAC facilities they utilized multiple project managers and implementation managers to onboard the facilities. After testing this approach for a time and finding that LTPAC facilities had unique onboarding needs, Colorado decided to hire a single staff person to work with LTPAC facilities. This allowed the individual to become an expert on the training, scheduling and implementation needs of LTPAC facilities.

The high staff turnover rates in some LTPAC facilities have created challenges engaging facilities and training staff on the use of health information technology interventions. Colorado has addressed this by training multiple staff in each facility. Oklahoma was very intentional in its engagement strategies to work with very small user groups in well-defined phases.

> *"Software implementation in healthcare always has a number of moving parts with integrated workflows and complex reasoning which often the organization struggles to define. Despite the most rigorous process analysis of the organization, many workflows and processes are unknown until they are actually forced to change. It was understood that the LTC facilities would be facing a dramatic process change and from an organizational leadership standpoint they were not equipped to address. The key benefit of doing our program in phases was that it gave a chance to conduct process evaluation early without overwhelming our team and more importantly the facilities. This process made it a lot easier to respond back to feedback and make any necessary adjustments to improve our program."*
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> *Matt Cairns, Project Manager, Oklahoma Challenge Grant.*

(e) Value Proposition

Given the low engagement to date of LTPAC providers in health information exchange the evidence for return on investment in terms of improved clinical care, greater efficiency or reduced readmissions is limited. The availability of electronic systems at some sites have allowed receivers to view and download clinical documents through portals or virtual private network (VPN) tunnels. These documents include those required to evaluate referred patients for admission, as well as summaries required for inclusion in the facility medical record as a Medicare condition of participation. Examples include dictated discharge notes, and documents and data required to complete Federally-required assessments such as the OASIS instrument for home care.

Early Grantee experiences include:

- Increased interest from LTPAC providers in participating in the electronic exchange of health information due to changing incentives from the hospital readmission penalties and payment and care delivery reforms.
- Reduced staff time to acquire information needed to populate Federally required assessments.
- Reuse of clinical data captured electronically (e.g. from OASIS, MDS or INTERACT forms) has resulted in workflow efficiencies compared to prior paper processes.
- For providers that haven't adopted an EHR, the ability to send and receive the information electronically vs. fax has been very favorable due to reducing the cost of fax supplies and the staff time to pull faxes.
- More complete data reduces the burden on patients and families associated with reporting basic information to clinical staff.

The Challenge Grantees have reported various stories[3] that demonstrate the value of health information exchange for LTPAC providers.

- Improved, more accurate and timely medication reconciliation.
- Home care agencies coordinating anticoagulation for patients now have instant access to the full panel of results for patients thereby reducing errors and gaps in treatment associated with delays in results reporting.
- Common problems such as missed wound care treatments or therapy visits for frail and vulnerable patients have been avoided.

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[3] http://www.corhio.org/news/corhio-e-newsletter/patient-care-coordination-improves-after-home-health-providers-connect-to-hie-(1).aspx

Grantee Project Summaries

(a) Colorado:

Colorado Regional Health Information Organization (CORHIO) is working with LTPAC organizations, including home health, hospice, skilled nursing, assisted living and long-term acute care hospitals to improve care transitions to and from acute care settings through HIE.

The goals of the program are to facilitate adoption of CORHIO's HIE product by the LTPAC community, develop a community protocol for information sharing across care transitions, ensure all LTPAC providers have the capacity to share health information with patients upon request and measure the impact of HIE on quality of patient care and rates of hospital readmissions.

In four diverse Colorado communities (Boulder County, Colorado Springs, Pueblo/Canon City and the San Luis Valley), CORHIO is working with LTPAC organizations to demonstrate the value of participating with the rest of the local and statewide health care community in improving information sharing and care coordination through HIE. This community approach to provide care, strengthened by fostering collaborative relationships between key providers, including the 29 hospitals connected to CORHIO, the 600+ physician practices, labs and behavioral health facilities, has encouraged the adoption of HIE. CORHIO identified 300 LTPAC providers in the targeted communities, with a goal of 80 participating in HIE by January 2014. As of March, CORHIO has signed participation agreements that cover 78 LTPAC facilities of which 37 were live. CORHIO is actively reaching out to additional LTPAC providers and utilizing Challenge Grant funding to help encourage their participation in community-based HIE and in the LTPAC Transitions program.

For more information see http://statehieresources.org/wp-content/uploads/2012/05/CORHIO-Challenge-Grant-Summary-Report-April-2012.pdf

(b) Maryland:

Maryland is leveraging the 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 LTPAC facilities transition from one care setting to another. The project has three components. The first is to onboard six LTPAC facilities with high health IT adoption to the statewide HIE, Chesapeake Regional Information System for Our Patients (CRISP). Care transitions among these facilities and five geographically proximate hospitals, which are also live on CRISP, are then being observed to evaluate the impact of the HIE. The technology components of the project include integration of the LTPAC facilities' EHR demographic (admit-discharge-transfer, or ADT) and clinical data.

The second component of the pilot project is focused on making clinical discharge data available to LTPAC facilities that have not adopted an EHR system, using a secure Web-based portal. At the end of the hospitalization for a patient who has been identified as a LTPAC facility resident, discharge summary data is published to the HIE, where it may be searched for and viewed by the home LTPAC facility.

The third component of the pilot project calls for Maryland to plan and test the availability of an electronic registry of Medical Orders for Life Sustaining Treatment (MOLST) forms. The Maryland team convened a multi-stakeholder workgroup which included representatives from the LTPAC community in addition to hospitals, technologists, and state policymakers. The workgroup developed recommendations to not only share advance directives using the statewide HIE but also to create an electronic registry of MOLST forms.

The progress to date in Maryland suggests that some reconceptualization of the work effort is required to make efficient use of the remaining funding and to achieve the components in the scope of work. In particular, the progress in implementing the EHR integration component has been mixed, with challenges to reengineering existing workflows, development of interfaces with EHR vendors and timing challenges due to participants switching EHR systems. To maximize progress the Maryland team is reallocating some of the remaining funding from the integration component to other LTPACs that will utilize CRISP's HIE services to improve care transitions.

For more information see http://statehieresources.org/wp-content/uploads/2012/06/MD-theme-2-Challenge-Grantee-Summary-2012-04-02.pdf

(c) Massachusetts:

The Improving Massachusetts Post-Acute Care Transfers (IMPACT) project is developing an innovative and replicable model that will improve care transitions to and from post-acute care settings. Over the past year, the project has focused on extending existing health IT standards to better meet the data needs of LTPAC providers and creating health IT tools that will enable both EHR adopted and un-adopted LTPAC facilities to participate in standards based exchange.

The IMPACT project has six objectives: (1) Enable all LTPAC organizations, including nursing and rehab facilities, and home health agencies to participate in regional and statewide HIE; (2) Improve the speed, efficiency, and satisfaction of processes to provide essential clinical data during transitions of care; (3) Decrease avoidable ED visits, hospital admissions, and hospital readmissions; (4) Reduce unnecessary tests and treatments; (5) Reduce the total cost of care; and (6) Replicate this model in other communities.

To achieve these six objectives, the project has adopted the following five strategies: (1) Finish definition and testing of data elements required for LTPAC transitions of care, based on Massachusetts Department of Public Health's multi-stakeholder-developed paper universal transfer form (UTF). This work was expanded to meet the needs of behavioral health, community based service providers, EDs, in-patient floors, out-patient treatment and test areas as well as all LTPAC providers; (2) Update and ballot through a national consensus process, HL7's Consolidated CDA Implementation Guide to support these data elements; (3) Develop reusable software applications to acquire/view/reconcile/edit/send these extended Consolidated CDA documents using Direct (LAND & SEE); (4) Integrate these tools across the continuum of care in Worcester County; and (5) Measure outcomes.

For more information see http://statehieresources.org/wp-content/uploads/2012/05/MA-Theme-2-Challenge-Grantee-Summary.pdf

(d) Oklahoma:

Oklahoma is working with five nursing homes, a referring hospital and an established regional health information exchange to implement key interventions to improve transitions. They are focused on improving information transfer in the patient's transition to and from nursing homes and an emergency department. The nursing homes have implemented a clinical documentation tool that includes the collection of change in condition documentation. At the time of a transition a "need to know message", based on a nursing document referred to as "SBAR" (Situation/Background/Assessment/Recommendation), will be sent via Direct from the nursing home to the hospital. This will provide the immediate information the ED needs. Once completed a universal transfer document will follow providing a more complete account of the patient. The hospital will also be able to query the regional HIE for information on the patient. A similar information flow will be able to follow the patient back to the nursing home upon discharge from the hospital.

Oklahoma expects that sharing more information during encounters in the ED could result in reduced acute hospital admissions and more thorough evaluations resulting in safe return to the LTPAC setting with expanded care plans based on the ED evaluation. In addition to the implementation of the technology to support electronic exchange of patient-specific information, Oklahoma is focusing on improving the workflow and processes associated with care transitions to ensure effective use of information to improve patient care.

For more information see http://statehieresources.org/wp-content/uploads/2012/06/Challenge-Grantee-Summary-Oklahoma_V4-2.pdf

Conclusion

Differences in clinical processes, skillsets, staffing turnover, degrees of technology adoption, information needs, interoperability capacity and standards, and a lack of standardized roles and processes all pose unique challenges to the successful effectuation of fully informed transitions of care between hospitals and LTPAC settings. The Challenge Grantees are actively identifying solutions to the challenges facing LTPAC providers in participating in health information exchange. They have identified the information needs of LTPAC providers, critical connection points for sending and receiving information, use cases for exchange and opportunities for standardization of content for clinical summaries and other documents of clinical utility.

Engaging LTPAC providers in HIE will be important to achieving care improvement goals and reducing hospital readmissions. Secure messaging holds significant potential for engaging LTPAC providers in exchange, improving the privacy of clinical communication in LTPAC and streamlining the distribution of documents.

This mid-point check in with the LTPAC Challenge Grantees provides a number of valuable insights from their early implementation efforts. In 2013, the Challenge Grantees will have fully implemented their solutions and will provide the community insights and metrics related to which health information exchange related interventions make the biggest difference for patient outcomes in LTPAC settings.

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Appendix 1: Challenge Grant Awardees

State/SDE Recipient	State HIE Cooperative Agreement Award	2011 HIE Challenge Grant Supplement Amount	Challenge Theme
North Carolina Department of State Treasurer	$12,950,860.00	$1,708,693.00	1
Colorado Regional Health Information Organization	**$9,175,777.00**	**$1,718,783.00**	**2**
Massachusetts Technology Park Corporation	**$10,599,719.00**	**$1,717,610.00**	**2**
Maryland Department of Health & Mental Hygiene	**$9,313,924.00**	**$1,683,171.00**	**2**
Oklahoma Health Care Authority	**$8,883,741.00**	**$1,719,086.00**	**2**
Georgia Department of Community Health	$13,003,003.00	$1,686,989.00	3
Indiana Health Information Technology, Inc.	$10,300,000.00	$1,267,970.00	3
Indiana Health Information Technology, Inc.	$10,300,000.00	$1,718,439.00	4
Massachusetts Technology Park Corporation	$10,599,719.00	$1,675,019.00	5
HealthShare Montana	$5,767,926.00	$1,400,802.00	5