ELECTRONIC HEALTH RECORD (EHR)

Clinical Decision Support, Interoperability

and Health Information Exchange:

Provider Case Studies 2014

LeadingAge™
center for *aging services technologies*
CAST

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Provider Case Studies 2014

A program of LeadingAge

2519 Connecticut Ave., NW
Washington, DC 20008-1520
Phone 202-508-9438
Fax 202-783-2255
Website: LeadingAge.org/CAST

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LeadingAge Center for Aging Services Technologies:

The LeadingAge Center for Aging Services Technologies (CAST) is focused on development, evaluation and adoption of emerging technologies that will transform the aging experience. As an international coalition of more than 400 technology companies, aging-services organizations, businesses, research universities and government representatives, CAST works under the auspices of LeadingAge, an association of 6,000 not-for-profit organizations dedicated to expanding the world of possibilities for aging.

For more information, please visit LeadingAge.org/CAST

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1 INTRODUCTION

The LeadingAge Center for Aging Services Technologies (CAST) is pleased to provide the following four case studies on electronic health records' (EHR) impacts and benefits of clinical decision support systems (CDSS), interoperability and health information exchange with other care providers and analytic tools. We hope they will demonstrate for providers the benefits of implementing an EHR.

The case studies are designed to help long-term and post-acute care (LTPAC) providers understand the benefits that EHR systems can offer to their care settings. They demonstrate how the use of advanced EHR functionalities available for LTPAC providers, like CDSS, health information exchange capabilities and analytic tools, can result in improved quality of care and better utilization of health care.

This set of case studies is a companion to the CAST whitepaper entitled [EHR for Long-Term and Post-Acute Care: A Primer on Planning and Vendor Selection 2014](#), which is an update of the whitepaper that CAST released in 2012 and updated in 2013. The whitepaper includes an [EHR Selection Matrix](#) that compares 32 EHR products available for different LTPAC settings with respect to functionalities, including expanded sections on CDSS, interoperability standards, interoperability certification, analytic tools and health information exchange, among others. EHR vendors who chose to participate in the self-review were offered an opportunity to nominate a provider to write a case study on its use of the vendor's EHR product.

1.1 Case Study Guidelines

CAST provided guidance as well as a template for the case studies to help case study contributors. The template included the following required sections:

- Case Study Category (case studies may cover more than one category)
  Impacts and Benefits of:
  - Clinical Decision Support Systems (CDSS) including those aimed at Reducing Inappropriate Hospital Admission and Acute Care Transfers (i.e. INTERACT, On-Time Quality Improvement, etc.)
  - Interoperability and Health Information Exchange with Other Care Providers either Directly or through a Health Information Exchange (HIE)
  - Analytic Tools (e.g., Population Health Management, MDS, OASIS and Quality Reports)

- Organization Name

- Organization Type (Home Health/Home Care, Hospice, Adult Day Care, Attending LTPAC Physician, Assisted Living, Acute Rehab Facilities, Long-term Acute Care Hospitals, Long-term Care Rehab Facilities, Skilled Nursing Facilities, Intermediate Care Facilities, ID/MR/DD Facilities, CCRCs, PACE)

- Organization Description

- Project Description

- Implementation Approach

- Outcomes (quality of care, staff efficiencies, workflow improvements, readmission rates, financial, etc.)

- Challenges and Pitfalls to Avoid

- Lessons Learned/Advice to Share with Others:

CAST received four completed case studies from nominated providers. We believe that LeadingAge members and other LTPAC providers will benefit from these case studies and learn from other providers who have already selected, implemented, and used EHRs, including advanced functionalities, and are experiencing their benefits.

2   Lessons Learned and Advice Drawn from the Case Studies

Several lessons can be learned and advice drawn from the case studies. Below is a summary of lessons learned and advice from these as well as previous CAST EHR case studies (See the 2013 and 2012 EHR Case Studies Report for more information):

Planning and Implementation

- **Remember that EHR Implementation is a Large Undertaking and not an Overnight Project:** It is very important to build a solid relationship with your vendor as they will be very important for support during your rollout.

- **Thorough Planning and Evaluation Process can Save a lot of Time:** Put effort in the beginning to help layout timelines, deadlines, assign tasks to team members and create steps to ensure involvement and accountability from a collaborative team.

- **Leverage Industry Benchmarks:** Before implementing an EHR system, compare all the quality measures from the CMS Certification and Survey Provider Enhanced Reports (CASPER) and select one as a critical area of focus for all facilities in the organization. This allows staff across the enterprise to coordinate efforts, understand current processes, identify improvement opportunities and enhance documentation while also adjusting as needed during EHR implementation and after going-live. When the organization reaches maximum improvement with the selected quality measure, it should select the next area for quality improvement.

- **Select a Champion to Lead Team:** Have a champion on your team to lead the implementation; an internal team point person eases the anxiety that comes with change. Additionally, having team members involved from different departments and various levels within the organization provides a multidisciplinary perspective to ensure adaptability by diverse departments and roles in the organization. By involving staff, you are also helping to promote team buy-in as they are part of the process and not having this thrust upon them.

- **Re-examine Workflows and Redesign Processes:** An EHR implementation is an opportunity to re-examine workflows and redesigning processes to maximize the benefits of the EHR. It presents an opportunity to consolidate forms and change process so that information is entered once and used in different processes and shared with other team members as needed to increase efficiencies.

- **Communication between Clinical and Technology Teams is Essential for Successful EHR Implementation:** Develop strong working relationships and shared communication between clinical and technology team members. It is important to get the team's input to ensure success in the launch of the EHR or health information exchange project.

- **Test Wi-Fi Coverage:** When implementing a web-based mobile solution it is essential to test the Wi-Fi coverage to ensure an efficient experience. At minimum, testing should be completed prior to selection a vendor.

Training

- **Utilize Manuals and Customized Training:** Remember to utilize your EHR vendor as they have manuals or customized training programs. Take advantage of these opportunities prior to going live with an EHR system to ensure a smooth launch and help staff prepare to jump in feeling comfortable using a new system.

- **Employ Blended Learning:** Incorporate a blended learning approach to accommodate not only different learning styles, but also varying staff schedules and availability. In addition, this hands-on style allows staff to physically explore the EHR system, learn the icons, ask questions and practice documentation entry and review.

Use of Advanced Features to Drive Quality

- **Use of EHR and its Advanced Functionalities is Key for High-Quality Health Care:** Technology is a key driver of high-quality health care. Accurate data, reporting and clinical decision support tools are no longer an option, but a requirement. Using EHR with these capabilities is absolutely essential to improving care quality, driving efficiencies, reducing hospital readmissions and strengthening partnerships and strategic positions with other care providers like hospitals, accountable care organizations (ACO) and physicians.

- **Take advantage of dashboards:** Create and leverage a dashboard to improve care delivery, operational efficiencies and financial performance across facilities. Train clinical and medical records staff to be more interactive with the live chart, using the dashboard to analyze and identify missing documentation or respond to real-time alerts as they occur rather than while reviewing a closed chart. At the same time, use the EHR's customizable alerts to create and monitor protocols for certain diagnoses.

- **Use and Exchange of Electronic Health Information is the Trend of the Future:** The movement to have residents' medical information in an electronic form and available for other health care providers involved in their care is the trend of the future. The care of the resident is no longer an isolated occurrence by each provider, but a continuum of care. Having more pertinent medical information available to the caregiver leads to more effective care and better outcomes. It is important to realize that this model of data sharing across providers is in its infancy.

- **Establish Clear Common Goals for Health Information Exchange:** Make sure you have a clear common understanding of the specific goals of your health information exchange with your partner(s): what data is needed by each party, in what format/code, standard, when, why, etc.

- **Start Simple:** Use existing electronic tools, such as an encounter notification system (ENS) and Direct secure messaging to keeps staff apprised of when residents are admitted or discharged from the hospitals, and to send/receive important discharge documents, updated medications lists, etc. These have proven to be very effective solutions as a communications medium, a platform to educate staff on the importance of health information exchange, and a means to engage in initial exchanges of basic health information with other provider.

- **Health Information Exchange Improves Quality of Care and Patient Safety during Care Transitions:** Pertinent information provided to clinicians during resident transfer can improve quality of care. Automated clinical decision support tools can improve the quality and safety components of managing and coordinating care for older and disabled patients with complex medical conditions, who are being treated with multiple medications. Improving medication management for the patient population served by LTPAC providers can improve their transition across the continuum of care, and result in reduced readmission to acute care facilities.

- **Providers Should Address Some Challenges to Health Information Exchange:** Varying degrees of technology adoption, compliance standards, staffing turnover, information needs, interoperability capacity and standards, and lack of standardized roles and processes are all components that pose challenges to the fluid implementation of fully informed transitions of care between hospitals and LTPAC settings.

- The case studies presented here represent bright examples of using advanced features and functionalities in EHRs, like quality reporting, CDSS and health information exchange, to improve the quality of care, efficiencies and transitions of care. Each case study demonstrates how using EHR features has impacted each organization, and in turn the care they provide. Building upon the experience of these organizations can help other providers write their own success stories and case studies.

3 IMPROVING CARE QUALITY, READMISSION AND MEDICATION ERROR RATES THROUGH IMPLEMENTATION OF AN EHR WITH CDS

3.1 Provider: Premier Health Care

Contributor: Robert Flowers, RN, EHR System Administrator

3.2 Vendor: SigmaCare

Case Study Category:

Impacts and Benefits of:

- Clinical Decision Support Systems (CDSS) including those aimed at Reducing Inappropriate Hospital Admission and Acute Care Transfers

- Interoperability and Health Information Exchange with Other Care Providers either Directly or through a Health Information Exchange (HIE)

Organization Type

Rehabilitation Services, Assisted Living, Long-term Nursing Care, Respite and Hospice Care.

Organization Description

For more than 40 years, Premier Health Care has combined expertise in geriatric care with a mission of compassion to become a top provider of long-term care. Premier Health Care is affiliated with Beaumont Health System and comprised of seven facilities with licensing for just over 1,000 beds; the six licensed facilities have implemented an electronic health record (EHR) system. The organization incorporates multiple levels of care, including rehabilitation services, assisted living, long-term nursing care, respite and hospice care. In addition to board-certified physicians trained in geriatrics and skilled rehabilitation therapists, Premier Health Care offers pharmacy services specializing in post-acute and short- and long-term care, and diagnostic services delivering direct and timely results to residents and their caregivers.

Project Description

Premier Health Care implemented a robust electronic health record (EHR) to facilitate accurate and consistent data capture and allow for real-time data review to:

- Improve resident care by focusing on the total health of the resident;

- Enhance quality with more accurate and timely data capture and metrics review; and

- Heighten efficiency by eliminating manual charting and reviewing processes and the associated resource expenses.

Implementation Approach

In 2009, Premier Health Care began discussing the need for an EHR to automate processes, improve efficiency through clinical decision support and reduce overtime expenses related to manual month-end chart review and changeover. After vetting several vendors, Premier Health Care chose SigmaCare, a comprehensive EHR system designed especially for long-term and post-acute care (LT-PAC) facilities that automates the complete clinical workflow. SigmaCare offered the additional benefit of a bi-directional interface with the pharmacy to provide timely feedback and alerts for medication orders, in addition to addressing issues like order legibility, the need for more concise orders and the resource-consuming month-end changeover.

After selecting the SigmaCare EHR, Premier Health Care took a phased approach to implementation; its first facility went live in 2011 and the last facility completed implementation in 2013. A five-person implementation team from the corporate office supported all six projects. Each member of the five-person team was dedicated to a specific element of go-live, such as managing system configuration, designing and implementing training efforts or monitoring the patient census to ensure newly-created records matched current resident records. This dedicated team also focused on the start-up tasks for implementation, including scheduling and facilitating training sessions and reviewing work-flows, both of which enabled staff to concentrate on care delivery rather than administrative tasks. At the same time, the implementation team was available to answer questions while charts were being built and help staff navigate the system during training and go-live.

Premier Health Care began its EHR training with a traditional classroom approach and transitioned to a blended eLearning style based on lessons learned from the six go-lives. The eLearning style allowed users to gain hands-on experience at their own pace and time. By spreading eLearning over eight weeks, the organization provided staff ample time and flexibility to learn and repeat modules as needed without incurring the scheduling challenges of a classroom training. Additionally, the blended learning approach helped non-computer savvy staff get more comfortable maneuvering in the EHR, which eliminated implementation delays caused by lack of user familiarity with the technology. To further aid learning, the EHR system administrator relocated his office to the EHR training lab for the duration of the eight weeks to be readily available to answer user questions and concerns.

As implementation progressed across the different facilities, the organization shifted from using mobile hand-held devices to wall kiosks to document certified nursing assistant (CNA) assignment data. The convenience of the kiosks enabled the EHR's advanced clinical decision support at the point of care while empowering real-time analytics to identify gaps in charting and care before the CNA ended his or her shift.

Outcomes

Premier Health Care experienced several positive outcomes as a result of EHR implementation, including improved care quality, clinical decision support and data collection and analysis.
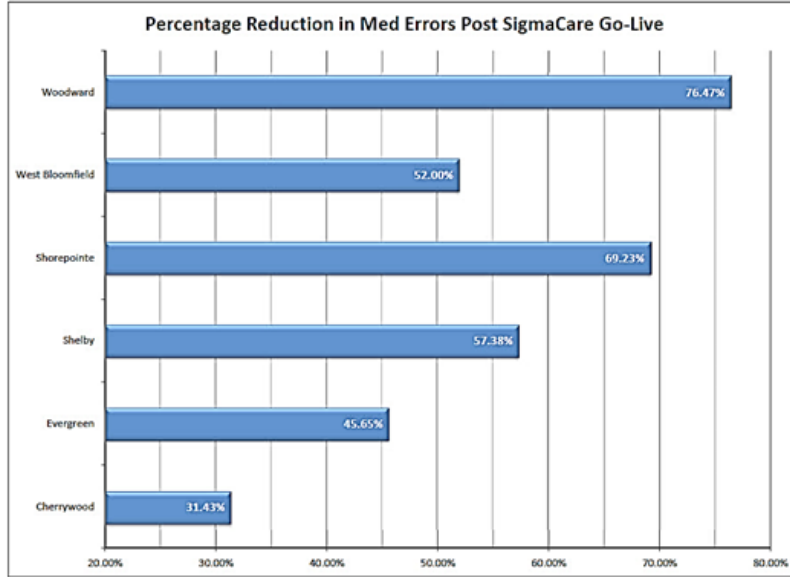
Improved Quality: The robust EHR system allowed Premier Health Care staff to review every assessment inside the MDS module against key quality measures and identify coding errors or missing information in real time—instead of waiting for data to be compiled from the previous six to nine months. This enabled staff to take immediate action to correct any deficiencies and engage in real-time quality reporting. As a result, all six facilities now rate in the 4-5 star range on quality measures versus the 2-3 star range prior to EHR implementation. This is depicted in the graph below which highlights Nursing Home Compare (NHC) "quality measure" star ratings before and after EHR implementation in each facility.
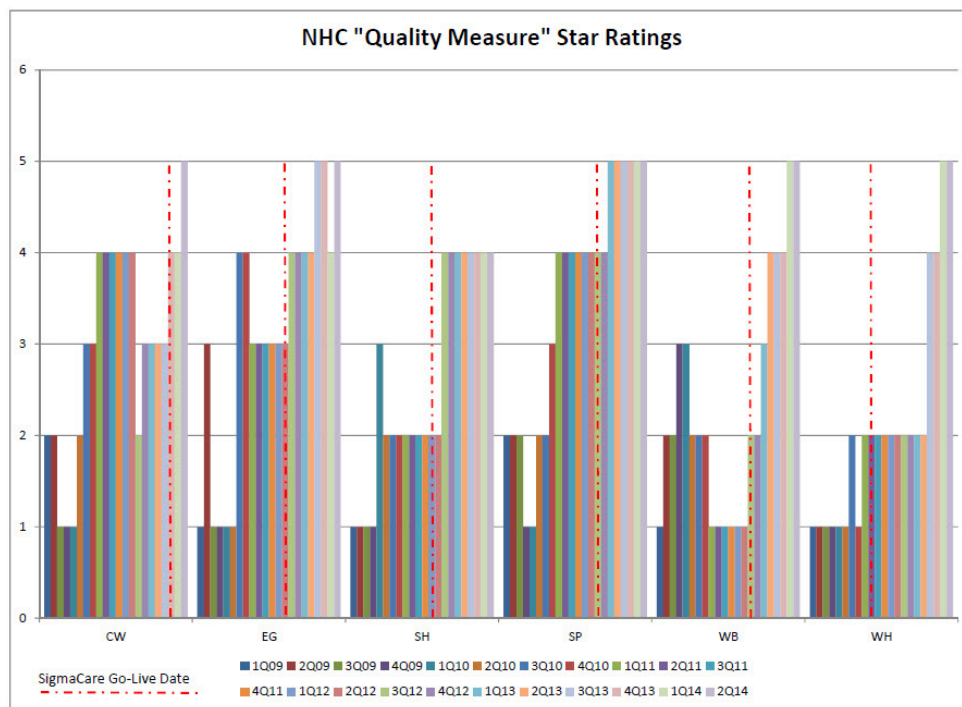

Better Clinical Decision Support: Additionally, through the EHR system, Premier Health Care was able to leverage better clinical decision support for improved care delivery. EHR data flow to a dashboard of key indicators driving appropriate care decisions, highlighting overdue items and indicating areas requiring special attention. In addition, the dashboard provided a tool for nurses to analyze the resident chart in real time, identifying areas of improvement such as incomplete documentation or unsigned progress notes.

As a result of leveraging the dashboard, Premier Health Care's thirty-day re-hospitalization rates have dropped from an average of 26 percent to 19 percent. The organization aims to ultimately reduce its re-hospitalization rate to 15 percent which is 2.5 percent lower than the 2013 national average[1]. Additionally, the organization also reduced medication errors by 55 percent, on average, across all facilities after go-live. The chart below shows the medication error reductions across each facility post-EHR implementation.

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[1] Newman, Elizabeth L. *McKnight's Long Term Care News.* "Readmission numbers drop." June 1, 2014.

Percentage Reduction in Med Errors Post SigmaCare Go-Live

Facility	Percentage
Woodward	76.47%
West Bloomfield	52.00%
Shorepointe	69.23%
Shelby	57.38%
Evergreen	45.65%
Cherrywood	31.43%

Improved Data Collection and Analysis: After EHR implementation, Premier Health Care has improved documentation workflow and virtually eliminated paper records. Moreover, nursing staff completed MDS files five to six days sooner than with the previous paper-based system, and both MDS and activities of daily living (ADL) scores have improved due to the speed and agility of reporting. The chart below shows the improved ADL scores post-EHR implementation for one resource utilization group across all six facilities.

RUG "C"

Legend: ■ 2011 Avg. ■ 2012 Avg. ■ 2013 Avg. ■ 2014 Avg.

(Facilities: CW, EG, SH, SPNC, WBL, WH)
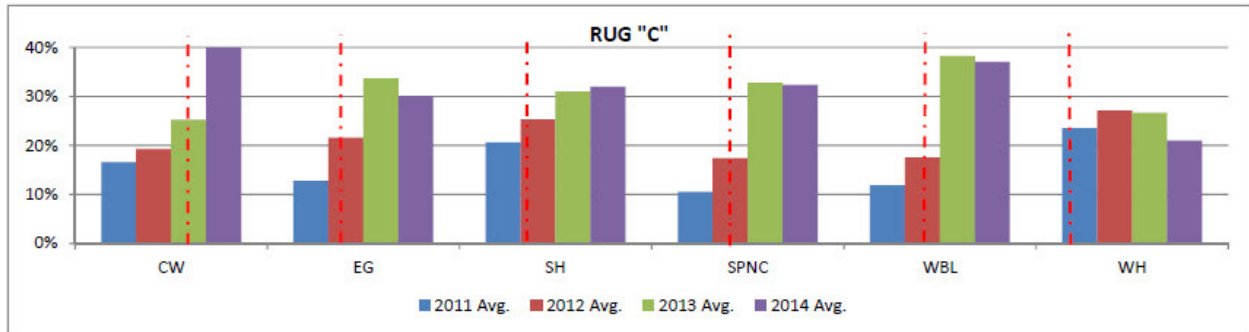
Live with SigmaCare
WHNC = 05/2011 ----
SNC = 03/20/2012 ----
EHLC = 05/01/2012 ----
SPNC = 08/22/2012 ----
WBNC = 09/26/2012 ----
CWNC = 10/29/2013 ----

Bed Count	
CWNC	180
EHLC	151
SNC	180
SPNC	200
WBNC	172
WHNC	190

Challenges and Pitfalls to Avoid

Premier Health Care encountered several challenges throughout the EHR implementation process, but the organization was able to leverage lessons learned from each facility's go-live to avoid potential pitfalls during subsequent implementations. Some of these challenges included:

- **Inadequate clinical support:** Premier Health Care found it required more clinical support staff for off shifts during EHR implementation to ensure each facility could maintain its existing case load while completing comprehensive EHR training. The organization determined that rotating clinical staff from building to building during later implementations alleviated the burden placed on those participating in EHR training.

- **Lack of vendor access to data:** Prior to EHR implementation at the first facility, Premier Health Care was unaware of the number of outside vendors and agencies that needed permissions for and access to EHR data. This resulted in additional time spent handling these requests for data access, as well as sometimes inefficient decision-making.

- **Policy review changes:** Updating policies during EHR implementation was a daunting task for Premier Health Care due to the sheer number of policies affected by the EHR and workflow. Beginning to pull policies prior to implementation was one way the organization was able to streamline the review process and complete it in a timely manner.

Lessons Learned/Advice to Share with Others

Premier Health Care experienced several lessons learned from the EHR implementation project, including the importance of blended learning, industry benchmarks and dashboards.

- **Employ blended learning:** Incorporate a blended learning approach to accommodate not only different learning styles, but also varying staff schedules and availability. In addition, this hands-on style allows staff to physically explore the EHR system, learn the icons, ask questions and practice documentation entry and review. Having a trainer physically located in the learning lab facilitates immediate problem resolution and helps track specific areas in which staff may need additional instruction or training for current and future implementations. Robust training also helps engage staff and physicians, leading to higher levels of user confidence and a smoother implementation.

- **Leverage industry benchmarks:** Before implementation starts, compare all the quality measures from the CMS Certification and Survey Provider Enhanced Reports (CASPER) and select one as a critical area of focus for all facilities in the organization. This allows staff across the enterprise to coordinate efforts, understand current processes, identify improvement opportunities and enhance documentation while also adjusting as needed during EHR go-live. When the organization reaches maximum improvement with the selected quality measure, it should select the next area for quality improvement.

- **Take advantage of dashboards:** Create and leverage a dashboard to improve care delivery, operational efficiencies and financial performance across facilities. Train clinical and medical records staff to be more interactive with the live chart, using the dashboard to analyze and identify missing documentation or respond to real-time alerts as they occur rather than while reviewing a closed chart. At the same time, use the EHR's customizable alerts to create and monitor protocols for certain diagnoses.

4 BENEDICTINE HEALTH SYSTEM, ALLINA AND MATRIXCARE: A STUDY IN SUCCESSFUL COLLABORATION

4.1 Provider: Benedictine Health Systems

Contributors: Bill Krantz, Director of Information Systems

4.2 Vendor: MatrixCare

Case Study Category:

Impacts and Benefits of:

Interoperability and Health Information Exchange with Other Care Providers either Directly or through a Health Information Exchange (HIE)

Organization Type

Independent housing, assisted living, skilled nursing, memory care, short-term rehab and outpatient rehabilitation

Organization Description

Benedictine Health System is one of the largest Catholic senior care organizations in the United States, with approximately 40 elder care communities in six Midwestern states, we believe our Bene-

dictine Core Values of Hospitality, Stewardship, Respect and Justice are not just posters on the wall; those values guide the work we do every day.

The Benedictine Health System participating organizations can be found in Minnesota, North Dakota, Missouri, Wisconsin, South Dakota and Illinois. We are a mission-based, non-profit health system headquartered in Duluth, Minnesota, sponsored by the Benedictine sisters of St. Scholastica Monastery in Duluth.

Project Description

Benedictine Health System (BHS) and Allina Hospitals are successfully exchanging Continuity of Care Documents (CCD) today and the development of this interoperability was funded with an eHealth Connectivity Grant from the Minnesota Department of Health.

Implementation Approach

MatrixCare and EpicCare (EHR used by Allina) exchange structured and typed data via Integrating the Healthcare Enterprise (IHE) standards with Cross Enterprise Document Sharing (XDS) and Patient Demographic Query (PDQ). This method utilizes a pull query of the CCD by the requesting organization from the organization hosting the information (e.g. hospital, or health information exchange (HIE) entity). The CCD is part of the Consolidated Clinical Document Architecture (C-CDA). The CCD information includes demographic information, allergies, medications (with diagnoses), problems/diagnoses, vital signs, advance directives, and payer info; when the informa-

tion is available within MatrixCare. The CCD is in all machine-readable Extensible Markup Language (XML) format, and all data can be consumed as discrete data elements and used to drive clinical decision support by the systems. However, it is currently received, stored and presented to user in a human-readable format, and data consumption into MatrixCare is a next step for the future. In addition, the data is generated on demand, reflecting the most current resident information available versus pulling data from an MDS file that is days or weeks old and does not include all of the data contained in a CCD.

Currently, the CCD is received as an attachment in MatrixCare and is associated with the resident's record. The next stage will begin consuming that information in order to trigger automatic data population of a face sheet for a new admission.

Outcomes

More effective transitions of care resulting in a better resident experience and high quality care through the ability to receive a CCD electronically and already attach it to a resident record. This level of health information exchange helps BHS remain competitive as we are required to integrate with acute care EHR systems in order to participate in Bundled Payment Initiatives. It also improves resident care as the essentials of the medical record are electronically exchanged during transitions of care. The solution, especially when CCD data consumption is implemented, would turn MatrixCare EHR into a true longitudinal record of care that can follow the resident/patient along the continuum of care. The solution reduces the need to recapture information that has already been documented in a previous setting. Streamlines automated dis-

charge from the hospital. The solution provides a nice concise document for facilities doing manual discharges. Inbound data is a wealth of information for the skilled nursing facility that they typically do not have access to.

Challenges and Pitfalls to Avoid

- The fact that interoperability is such a new concept means that there are many definitions, projects, theories, and goals being worked on by a variety of organizations with differing expected outcomes. Depending on who you talk to, their vision and what they communicate is based on their understanding, perceptions, who they have talked to, and what they are trying to achieve. Make sure you have a clear common understanding of the specific goals of your health information exchange with your partner(s): what data is needed by each party, in what format/ code, standard, when, why etc. Conclusions are drawn and decisions are made based on the information available which varies from organization to organization. Ask questions to make sure why a position is being taken and what is really being said is understood. Don't be afraid to suggest new ideas and theories and ask "why not?"

- The technical work entailed in health information exchange is easier than people/ processes/workflow changes. Getting people to understand new workflows and processes and why they should change their current work processes takes education, time and patience.

- There is increasing recognition that long-term and post-acute care (LTPAC) providers should be included in health information exchange

activities but limited resources are available to make that happen. LTPAC software vendors have to develop the capabilities to conform to Meaningful Use standards which can be challenging without funding from their customers or other sources. Given the continuing reimbursement cuts from Medicaid and Medicare, it is difficult for LTPAC providers to absorb software rate increases from their vendor to pay for this development.

Lessons Learned/Advice to Share with Others

- Don't believe everything you hear, try to validate everything. Documentation is very important in providing high quality care and in ensuring regulatory compliance with electronic data exchange.

- Be as transparent as possible regarding goals and thought processes. Encourage others to provide candid feedback. There are no real blueprints right now, just lots of theories and ideas based on different sets of information.

- Be willing to change your plans when you receive more or better information. You'll know a lot more at the end of the project than you did at the beginning.

- Think win-win. These projects are complicated and need to be structured in ways that are beneficial for all stakeholders.

5 Interoperability and Health Information Exchange (HIE): Providing Successful Resident Centric Focus within Long Term Care

5.1 Provider: Ingleside at King Farm

Contributor: Dusanka Delovska-Trajkova, Chief Information Officer

5.2 Vendor: AOD Software

Case Study Category:

Impacts and Benefits of:

- Interoperability and Health Information Exchange with Other Care Providers either Directly or through a Health Information Exchange (HIE)

Organization Type

CCRC

Organization Description

Ingleside at King Farm, an affiliate of Westminster Ingleside, is a not-for-profit continuing care retirement community (CCRC) central to the award-winning intergenerational King Farm development. Located in Rockville, Maryland, Ingleside opened their doors in 2009 and now serve over 400 seniors. Inside their walls, you will find a stress-free lifestyle with a variety of cultural arts, wellness activities and amenities to choose from, and some of the area's most spacious apartment homes.

Project Description

Interoperability is not just connecting with other systems but actually exchanging information in a meaningful way. The aims of this project are to allow Ingleside to exchange continuity of care documents (CCDs) with other care providers who need to meet the requirements for Meaningful Use Stage 2. This enables Ingleside to insert resident data from the hospital directly into its Answers™ EHR, an AOD Software solution, providing Ingleside staff with a complete picture of the care a resident has received while in the hospital. The resident's information seamlessly transfers to internal processes and workflows, and enables Ingleside to deliver the highest possible quality of care upon a resident's return from the hospital.

Implementation Approach

Perhaps interoperability's most important characteristic is that it helps hospitals and LTC facilities exchange information that can be used to reduce re-hospitalizations. When residents arrive from hospitals, Ingleside traditionally received information by phone or fax, which was not a very reliable or timely method.

Ingleside worked directly with AOD Software on connecting the Answers™ EHR with the Maryland Health Information Exchange (HIE) known as CRISP (Chesapeake Regional Information System for our Patients).Once Answers™ EHR was connected to the HIE we were able to push/ pull all medical documentation to/ from CRISP.

Now residents' information, including: radiology, laboratory, and other test result data at our fingertips, regardless of the IT system it originated in. As a result, Ingleside has been able to improve efficiency, which allows staff to focus more intently on resident care and improve their quality of life.

Interoperability assists us in providing better care for residents. With access to integrated resident data, staff are able to better concentrate on resident needs rather than administrative tasks.

Outcomes

Strengthened and improved provider inter-communication directly affects the care a resident receives. Multiple providers can collaborate simultaneously through the HIE to assess a residents condition and formulate an individualized care plan. By utilizing Answers™ EHR through the HIE it builds trust between providers and residents.

- Cost-efficient, electronic information sharing with hospitals, physicians and other care providers

- Streamlined access to your patients' medical history

- Reduced administrative and overhead costs

- Decreased costs for printing, faxing and mailing paper files

- Simplified, HIPAA-compliant patient information sharing with other care providers

- Improved quality and coordination of patient care

- Improved transitions from/to hospitals

- Reduced costs for fewer duplicate tests

- Fewer errors and delays in treatment

All of this allows us to better serve our residents and help prevent injury and readmissions.

Challenges and Pitfalls to Avoid

One of the challenges Ingleside faced was after the implementation CRISP stopped delivering lab and radiology reports. They could still access the data through a portal, but it was an inefficient and time-consuming process. Ingleside then engaged their EHR provider, AOD Software, and ZaneNet, a management service organization (MSO), to help build an interface between the software and the service providers. Interestingly, it was found that some service providers didn't want to integrate with the system, so Ingleside found other partners that would.

Always do your research and make sure all vendors involved will be able to supply you with the necessary information to be successful with the implementation. Speak in details with the vendors to mitigate any problems that could arise during implementation and have a strategic plan on how to counteract any issues that do arise.

Without the success in data integration that Ingleside was able to achieve, they wouldn't be nearly as effective as caregivers. LTC providers that don't

press the interoperability issue now will find themselves way behind the curve in the future.

Lessons Learned/Advice to Share with Others

It's important to use existing electronic tools such as an encounter notification system (ENS). Utilizing a notification system keeps LTC staff apprised of when residents are admitted or discharged from the hospital. Direct secure messaging is another technology that assists caregivers in safely and securely transferring residents' data in an encrypted format between trusted providers. These have proven to be very effective solutions for Ingleside, both as a communications medium and as a platform to educate our staff on the importance of health information exchange.

LTC providers are increasingly recognizing that investments in health information exchange are very important. Some organizations are delaying investments in Health IT because they still have concerns over privacy and security. However, solutions have progressed to the point where these fears can be set aside. Our advice to long term care providers is to research and bring on a trusted technology partner sooner rather than later. It will not only enhance a community's marketability, but will also help them provide exceptional care to their residents.

6 IMPROVING CLINICIAN EFFICIENCY AND PATIENT CARE MANAGEMENT FOR QUESTCARE MATRIX

6.1 Providers: Juliette Fowler Homes Inc. (a Questcare Matrix client facility)

Contributor: Grady Goodwin, M.D.

6.2 Vendor: Afoundria

Case Study Category:

Impacts and Benefits of:

- Clinical Decision Support Systems (CDSS) including those aimed at Reducing Inappropriate Hospital Admission and Acute Care Transfers

Organization Type

Skilled Nursing Facility

Organization Description

Questcare Matrix is dedicated to providing the highest quality post-acute care for their hospital partners, post-acute facilities, and patients. Quest-care Matrix provides unsurpassed post-acute care and fosters long-term relationships with their partner hospitals and post-acute facilities. They strive to reduce preventable readmissions and provide the highest level of post-acute oversight available in the market. In addition to providing a quality practice environment, they create the flexibility for their providers to enjoy the life they deserve.

Project Description

Outdated workflow and cumbersome charting made it difficult for Questcare Matrix clinicians to spend quality time with their patients at Juliette Fowler Homes Inc. Basic patient information such as past medical history, current conditions, and medications were collected manually along with documentation required to accurately bill each patient visit. All of this was compounded by inadequate facility infrastructure needed to support new technologies (i.e., access to Wi-Fi, printers, etc.)

Implementation Approach

Questcare Matrix selected Afoundria's Chart-PathÔmobile charting solution to address obstacles such as:

- Inability to access patient charts from any location.

- Fragmented and incomplete paper charts.

- Time associated with preparing an appropriate billable chart.

Obstacles like these prevented clinicians from having more time directly with their patients.

Initially, Afoundria coordinated a campus-wide evaluation of Juliette Fowler Homes' Wi-Fi

coverage and made recommendations to improve areas that were considerably deficient for mobile device use. Juliette Fowler Homes addressed these issues and Afoundria moved on to training Questcare Matrix clinicians on ChartPath.

After just a few hours of training and practice, the clinicians were charting with the ChartPath tool.

Outcomes

Using ChartPath, the clinicians can now use the touch, voice, or type inputs to facilitate the collection of patient information at the time of visit versus collecting the information by taking hand-written notes or voice recordings and then transcribing those notes into the patient chart at the end of their day. Hand-written notes or voice recordings were not optimal, as they required more administrative time and less patient care time.

In addition, the real-time prompts within ChartPath increased adherence to corporate standards of care and provided the documentation required by Centers for Medicare and Medicaid Services (CMS) for regulatory compliance. Not only is this important for displaying the record in a fashion that provides a holistic view of the patient, but it also ensures appropriate billing and reimbursement.

Finally, ChartPath provides the clinicians with clinical decision support in the full context of patient, pathology, provider, payer and price. This resulted in reduced time and energy the clinicians spend on technology and process and puts them back in charge of efficient patient care management which ultimately results in reduced readmissions and improved patient care.

Challenges and Pitfalls to Avoid

Wi-Fi coverage is essential to an efficient experience if using a web-based mobile solution. Testing your Wi-Fi coverage prior to implementation is critical to success.

Lessons Learned/Advice to Share with Others

Conducting workflow analysis and understanding the workflow/process struggles your clinicians face, along with an understanding of the technology and its capabilities, is a crucial first step to providing them with a solution that will result in improved efficiency and better patient care.