HiMSS *Analytics*

HIMSS Analytics Stage 7 Case Study

TriHealth Inc.

Profile

TriHealth consists of two acute-care hospitals with 750 adult-staffed beds, two short stay surgical hospitals, two free standing outpatient surgery centers, 60 outpatient service locations and over 150 physician practice locations. In addition, TriHealth employs over 550 physicians, has over 1800 provider on the medical staff, and 11,000 employees. TriHealth is committed to patient centered clinical quality and safety through the use of advanced clinical information systems. TriHealth achieved HIMSS Analytics EMR Adoption Model^{sm} Stage 7 for 131 physician practices and all 4 hospital locations on July 16, 2014

The Challenge

In 1995 Bethesda North and Good Samaritan hospitals joined in a partnership with the Cincinnati community to form what is now known as TriHealth, Inc. The focus of the TriHealth partnership is to provide a solid foundation of integrated care across the continuum of a patient's health needs within the greater Cincinnati area. In an effort to provide excellent patient care, TriHealth implemented automated health information through MEDITECH and various ancillary systems which were on the leading edge among its peers.

TriHealth recognized the need for a more integrated system, which requires system-wide use of a comprehensive patient health record that follows the patient from the ambulatory clinic setting, through any type of hospitalization (surgery, emergency or inpatient admission), and back to the ambulatory clinic settings. The TriHealth strategic goal was to provide a comprehensive record whereby clinicians and providers throughout the care process could access the electronic health record (EHR) to obtain a total picture of relevant patient information. It was clear that the clinical and financial systems in place prior to the EHR implementation would not provide the depth and breadth of what TriHealth was determined to achieve.

Implementation Overview

The TriHealth Information Systems Steering Committee (ISSC) developed the TriHealth IT Plan in an effort to meet business, safety and quality goals from an information system infrastructure and functionality standpoint. It was concluded that the existing core systems were insufficient to allow us to truly function as an integrated health system. An application system selection process was launched, and Epic was selected for clinical, financial and supporting applications.

The scope and timing of the initiative fell into three phases:

- Add Revenue Cycle applications to our TriHealth employed practices that were already live with EpicCare Ambulatory - April 1, 2012
- Add the enterprise suite of products to Good Samaritan Hospital - June 1, 2012
- Add the enterprise suite of products to Bethesda North Hospital - July 1, 2012.

Scope of applications for the hospital implementations include:

• ASAP: Emergency Department	• **Radiant: Radiology Information System**	• **Prelude: Inpatient Registration**
• OpTime with Anesthesia: Operating Room Management & PeriOp Charting	• Beacon: Oncology	• Prelude: Ambulatory Registration
• Stork:	• Fetal Surveillance	• Health Information Management: Chart Deficiency and Release of Information
• Welcome Kiosk (limited deployment)	• Bedtime: Bed Management and Transport Tracking	• Resolute Professional Billing and Claims
• Cadence: Enterprise Scheduling	• Resolute Hospital Billing and Claims	• Willow: Inpatient Pharmacy
• EpicCare Inpatient	• Practice Management	

Additional integration was needed with the following: Passport, Interqual, Quadex, Epoint, Hyland/OnBase, RPACS/CPACS, Tracemaster EKGs, CareFusion PFTs, Pyxis, McKesson, SwissLog, Capsule Device Integration and Healthbridge.

Resulting Value / ROI

- Transcription was reduced by 67%, resulting in a total cost savings of $2.1M. This is due to the implementation of discrete documentation with EpicCare Inpatient Note Writer and Note Templates, as well as the high adoption/use of Dragon and Powerscribe. We had 5 FTE's in Medical Records/Transcription retire without being replaced, and 10 FTEs were eliminated.
- Device integration for hemodynamic monitoring, anesthesia, ventilators and dialysis machines has improved the efficiency of the nursing staff and allowed for more accurate documentation related to key variables sent to Epic through device integration.
- Quality care has improved. Clinical decision support through Best Practice Alerts and alerts embedded in order sets has helped TriHealth reduce blood transfusion by 12%, reduce ICU length of stay by 1.3 days and reduce cost of care for these patients by $12,600. By implementing clinical programs and clinical decision support across the enterprise, we were able to leverage existing documentation to alert care providers related to changes in patient status, risk for adverse events and health maintenance tasks.
- With the implementation of clinical decision support in provider workflows for key locations in provider workflows, TriHealth has performed in the top percentile nationwide in core measures.
- With standardized documentation and scoring tools across the hospital and physician practices for high-risk readmission patients, TriHealth has reduced 30-day readmission rates by 16% for high risk patients, increased referrals for discharge services by 120%, increased home care referrals by 36% and reduced overall readmissions for all patient populations by 2%.
- The use of MyChart across the hospital and ambulatory practices has increased patient engagement with a total of 80,000 active patients and 151,000 messages sent to providers.

- Chronic disease management programs within EpicCare Ambulatory have allowed TriHealth to standardize disease protocols and build them into Health Maintenance. As a result, TriHealth continues to lead the Greater Cincinnati community by more than 10% with regard to patient compliance. Additionally, integration of these protocols into MyChart has allowed TriHealth to continue to lead the Greater Cincinnati community by more than 10% with regard to patient compliance with these programs.

Lessons Learned

- Invest in development of IT staff so they are prepared to immediately begin taking support calls at go live. Epic project plans necessitate IT staff to focus on week-by-week tasks and individual assignments. This makes support challenging when staff need to quickly transition from build to support. Making sure staff understand security, printing and how to resolve common issues is important, as is the need for clear documentation of all workflows. Identifying physician champions for all specialties and giving them the authority to make decisions for the section is critical. While having workgroups helps to make decisions more quickly, having individuals who can make decisions specific to their specialties is needed for review/approval of clinical content.
- Ambulatory- and hospital-based teams need to understand decisions and impacts to workflows across the enterprise. Changes to master files, profiles and system definitions impact all areas. Having processes to communicate changes is key to avoid different clinical teams having unintended adverse effects on each other.
- Super-user training programs are critical to the success of the go live. Having dedicated staff in each department who have a higher level of training and can support their peers is needed for a successful implementation across a health system.
- Training should be tailored more to "a day in the life" of a care giver instead of being built around task driven scenarios. We found that clinical staff struggled with applying what they learned to the live system, particularly related to surgical areas.