HIMSS Analytics

HIMSS Analytics Stage 7 Case Study

UT Southwestern Medical Center

Profile

UT Southwestern Medical Center is one of the premier academic medical centers in the nation, integrating biomedical research with exceptional clinical care and education. The institution's faculty includes many distinguished members, including six who have been awarded Nobel Prizes since 1985. Approximately 2,360 full-time, 291 part-time, and 1,335 volunteer faculty are responsible for groundbreaking medical advances and committed to translating science-driven research quickly to new clinical treatments. UT Southwestern physicians provide medical care in over 60 specialties to about 92,000 hospitalized patients and oversee approximately 2.1 million outpatient visits a year. UT Southwestern serves the most complex patient population in the Dallas Fort Worth Metroplex and excels in quaternary and tertiary care through an integrated delivery network of two hospitals and a 1700 multi-specialty physician group. **HIMSS Analytics EMR Adoption Model[sm] Stage 7 award received for both Ambulatory and Inpatient: October 2014**

- 612 Patient Beds
- 50 Outpatient and Specialty Clinics
- Operating funds including research $2.24 billion.

The Challenge

In 2002, UT Southwestern recognized the importance of providing world class clinical care on its own campus to the community that it served, alongside the world class research and teaching that existed. UT Southwestern made significant investments to achieve this goal through the purchase of hospitals, construction and expansion of ambulatory buildings, and the expansion of the faculty to provide comprehensive clinical services. UT Southwestern's vision for clinical excellence was founded on the idea that interdisciplinary care teams led by leading faculty should easily traverse the inpatient and outpatient settings to provide the highest quality, patient-centered care. Our campus had long witnessed the challenges to patients and care teams when there are poor handoffs between care settings, lack of access to a comprehensive view of the patient, and inconsistent communication between members of the care team. In addition, UT Southwestern was committed to driving standardized, evidence-based care pathways for our patients and developing the analytics necessary to measure and ensure their ongoing effectiveness. In order to achieve this clinical vision, UT Southwestern developed a comprehensive IT strategy centered around two major strategic investments: a single, comprehensive, electronic medical record system that would serve both inpatient and outpatient settings and a single, aligned, analytics infrastructure that would provide data for performance management and improvement. We continued with that goal over 12 years, progressively implementing Epic modules as they became available, and even partnering with Epic as an alpha or beta site for some modules, in order to accomplish our goal.

Implementation Overview

EHR Solution: Epic
Multi-Year Phased Approach for Epic Implementation

- Started implementation with Epic Ambulatory, HIM, Registration and Scheduling from 2002-2006
- After hospital acquisition, continued with Inter-op, Pharmacy and Inpatient CPOE from 2006-2008
- Continued Implementation with Inpatient CPOE, Professional Billing and Oncology from 2008-2011
- Continued with additional Specialty Modules, ADT and Hospital Billing from 2011-2013

"Our IT architecture is designed on the principle that patients and clinicians must be able to move seamlessly between inpatient and outpatient environments. This enables superior clinical outcomes and patient experiences." Suresh Gunasekaran-CIO

Resulting Value / ROI

- Seamless, integrated master patient record between inpatient and outpatient settings
- Attested for Stage I & II for Meaningful Use incentive programs for both Eligible Providers and Eligible Hospitals in earliest possible years
- Patient Quality Programs (PQRS, DSRIP and Patient Centered Medical Home)—able to successfully participate in each
- Timeliness of data
    - Automated billing where possible
        - Over 90% of nursing charges are tied to documentation flowsheets
        - 100% operating room charges are tied to surgical case documentation
        - 100% Emergency room facility fee calculations are tied to documentation
    - Decreased billing turnaround times and charge entry lag
    - Enabled immediate availability of clinically relevant patient data throughout the continuum of care—inpatient, ambulatory, ED, OR.
    - Clinical data available remotely via mobile device access, both by providers and by patients
- Efficiencies
    - Write information once, use many times
    - Internal references/closing loop
    - Streamlined release of information
    - Reduced charge days for ED patients by 80%
    - Reduced charge audits for ED patients by 85%
    - Recaptured an average of $220 per ED patient
    - Charges tied to documentation virtually eliminated Anesthesia charge chart audits and reduced Anesthesia charging delays by 6%

- Increase in reimbursements
    - Physician charge capture as result of clinical documentation, with ability to monitor for missing charges and timeliness of charge entry. ICD10-compliant physician charge capture achieved 22 months prior to CMS requirement
    - More accurate level-of-service calculations supported by documentation
    - Improved hospital charge capture
- Patient safety
    - Legible patient information
    - Shared information such as medications, allergies, and problems, for all caregivers in all care settings
    - Discrete data available for clinical decision support
    - Secure electronic transfer of care documents
    - Ensured 100% compliance with SCIP 1 and SCIP 2 Measures
- Enhanced patient communication
    - 42% of our patients use the patient portal to electronically message providers
- External sharing/interoperability
    - 1100 to 1500 electronic exchanges of patient data with other facilities monthly
- Reporting and Analytics
    - One database for all clinical events and financial transactions
    - Simplifies extraction to a core data warehouse for combination with non-EHR data

Lessons Learned

- Prioritization of implementation: start with core/foundational functionality (e.g. registration, ADT) and move to clinical areas, or go big-bang
- Advantages to staging implementation
    - Allows issues to be identified and resolved by module, with whole-team focus on the specific area/module being implemented
- Balance local customization vs. standardization
    - Use as an opportunity to standardize process and workflow unless a business case exists for customization at the specialty level
    - Avoid over-customization at the individual provider level
- Governance
    - Set enterprise-wide guiding principles for the EHR and its interaction with other clinical systems
- Design with analytics and reporting in mind
    - Identify a single enterprise data storage location for key data elements, taking the workflow for recording into account
- Early adopter/vendor partner
    - Con: Work through product growing pains
    - Pro: Influence direction of product/module
- Maximize upgrades
    - Stay up to date with product