Healthcare Network, Heal Thyself!

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Among the world's remaining bastions of disparate legacy systems, hospitals and health delivery networks may top the list. Not all of them, of course. The best know that while successful patient outcomes hinge on many factors, first among them is the ability to link multiple data sources to ensure that the right clinical data gets to the right clinicians at the right time. Only then can diagnosis and treatment proactively protect health and efficiently contain costs.

Rush Health is surely among the best of them, proving that world-class, cost-efficient care is an oxymoron no longer. Representing a network of hospitals and physician practices, Rush Health met its challenge of linking multiple data sources with TIBCO® Patterns, a proactive solution that eliminates data-quality problems. Thus equipped, Rush Health is now prepared to lead on emerging healthcare reform issues by providing outstanding clinical outcomes and cost-effective care.

This "best-of-both-worlds" story begins with the Master Patient Index (MPI), a unique identifier that links patient records across many data sources: hospitals, physician practices, and ancillary care. This ensures that a patient is logically represented only once and with the same set of data. On an enterprise level, it assures that vital clinical and demographic information is cross-referenced between different facilities of the same network – linking each admission across multiple care settings for a view of each patient that is single, complete, and unique. Before MPI, Rush Health had multiple records for a patient with no way to link them for a full picture of the patient's health and services required.

It's a different story today. With the MPI, Rush Health rolls data up by patient: it identifies clusters of duplicate patient records, picks a "lead" record, and links remaining records in the same cluster as likely those of the same patient. With TIBCO's help, the network has replaced disparate data sources, stand-alone databases and multiple versions of clinical "truth" with data standardization and a single source of truth across the network – a duplicate-free MPI that enables the highest-quality care at the lowest-possible cost.

But it goes beyond the simple consolidation of patient records. A single, complete, and unique view of each patient supports clinical integration and population management, the improvement of patient outcomes, the monitoring of performance, and management of the complex network that

RUSH HEALTH

Rush Health replaced disparate data sources and stand-alone databases with a duplicate-free Master Patient Index as a single source of truth across the network – enabling the highest-quality care at the lowest-possible cost.

is Rush Health. This from Theresa Burkhart, Vice President for Data Management and Business Intelligence, Rush Health: "Our sharpest focus is on the quality of patient outcomes. Thanks to TIBCO, we now offer our providers a powerful tool for optimizing these results: a single, certain view of each patient, linked over time across multiple sites of care."

Rush clinicians now tap a duplicate-free MPI that integrates multiple data sets from the network. Stored in an enterprise data warehouse (EDW), golden records hold two core assets: a Master Patient Identifier and basic patient information (date of birth, gender and address). The EDW also stores financial information and cost of care for each patient. For clinicians, this is just the starting point.

Clinical rules are applied to these golden records that meet the clinician's need for a medical context for each patient. Active patients are defined by condition: asthma, congestive heart failure, diabetes, etc. To these definitions, the system attaches performance measurements across all sites of care: frequencies and outcomes of hospitalizations, ER visits, and medical-home visits; lab results; overall cost profiles; and more. This information helps healthcare providers maintain a long-term focus on patient health improvement instead of episodic care.

Using this information as the backbone, Rush Health built a web-based patient registry to pull together patient-focused data and present information in an easy-to-use format. This helps clinicians find patients most in need of outreach, based either on their condition, utilization of hospital and healthcare services, lab results or other criteria.

OVERVIEW

An amalgam of Rush University Medical Center and Rush Oak Park Hospital, Rush Health's high patient volume and complex systems brought about a serious need for data standardization in creating a single acclaimed patient registry.

35,000 annual admissions and over 500,000 outpatient visits

The patient registry has won acclaim and rightly so. When seven Rush Health physician practices recently achieved Level-3 recognition as a Physician Practice Connections-Patient Centered Medical Home (PPC-PCMH) – the highest designation conferred by the National Committee for Quality Assurance (NCQA) – the patient registry was cited front and center. In assessing whether physician practices are functioning as "medical homes," and recognizing them for these efforts, the PPC-PCMH program supports a central plank of healthcare reform: active, ongoing relationships between patients and physicians in medical homes supports health and the prevention of illness.

PPC-PCMH recognition demonstrates that Rush has the tools, systems and resources to provide patients with the right care at the right time – and data linkage is essential to this ability. "The use of technology to improve the coordination of care and transmission of clinical information is important to the development of new care models, such as the medical home," said Brent Estes, president and CEO of Rush Health. "While the medical home concept has been around for 40 years, today's complicated healthcare industry creates enormous

obstacles for physicians to proactively manage patients and coordinate care beyond the physical borders of their practices. The NCQA designation recognizes the delivery of high-quality care for patients, and the more efficient use of resources."

Bottom line: as medical centers grow increasingly complex, a result of the ongoing need to consolidate fragmented information across the continuum of healthcare services – Rush Health has crafted a powerful tool to optimize clinical outcomes and cost efficiencies. This master record of patient care across the network strengthens chronic disease management and targets pay-for-performance objectives.

Utlimately, TIBCO is driving a virtuous cycle at Rush Health that begins by identifying populations: by condition, services, lab results, and more. This strengthens patient outreach associated with the "medical home;" outreach that impacts outcomes of clinical performance and population management. Finally, all of this drives efficient new models of value-based reimbursement and pay-for-performance – by physician, practice and network.

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Ms. Burkhart sums it up this way: "It's an exciting time to be at the intersection of healthcare and enterprise technology. From the government to insurance companies to patients themselves, all constituents demand one thing: a healthcare system that is outcome-based, not volume-based. Rush Health is quickly evolving in this direction with help from our TIBCO solution – a platform that builds and maintains a consolidated and integrated view of each patient. "

Detail

Over 750 Physicians in 150 medical practices

Representing the continuum of specialties from primary care to specialized medicine, and including private practice as well as hospital-employed, Rush Health was named one of the nation's best hospitals, in part due to the TIBCO-powered patient registry, by U.S. News and World Report and as one of only 65 "Top Hospitals" by Leapfrog Group.

TIBCO Software Inc. (NASDAQ: TIBX) is a provider of infrastructure software for companies to use on-premise or as part of cloud computing environments. Whether it's efficient claims or trade processing, cross-selling products based on real-time customer behavior, or averting a crisis before it happens, TIBCO provides companies the two-second advantage™ - the ability to capture the right information, at the right time and act on it preemptively for a competitive advantage. More than 4,000 customers worldwide rely on TIBCO to manage information, decisions, processes and applications in real-time. Learn more at www.tibco.com.

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