

Denver Health



Name:	Denver Health
Location:	Denver, Colorado
Founded:	1860
Total number of beds:	477 licensed beds (Denver Health Medical Center)
Total admissions:	27,277
Outpatient visits:	350,000+

Overview

Founded in 1860, Denver Health has grown to include 5,500 employees and prides itself on integrating acute hospital and emergency care with public and community health in an effort to deliver preventive, primary, and acute care services.

Hospital Need

As core measure requirements continue to increase, Denver Health needed to capture unstructured data, including paper and electronic formats, and expedite chart abstraction times.

Solution

Denver Health selected Siemens Soarian® Quality Measures for its initiative.

Benefits

The inherent delay in identification of sampled cases was reduced from two months to seven days, helping improve the timeliness of performance feedback from six months to within ten days of discharge.

Challenge

Denver Health implemented Soarian Clinicals in 2008 and has been using the system to collect patient data. At the time, the number of core measure reporting requirements issued by the Centers for Medicare and Medicaid Services (CMS) was 31. When the number of requirements increased to 43, however, the manual chart abstraction duties exceeded the work capacity of one person.

Solution

Anticipating the future reporting requirements from the state of Colorado, Centers for Medicare & Medicaid Services, and the Joint Commission, Allison Lee Sabel, MD, PhD, MPH, CMQ, and Director of Biostatistics and Clinical Data Warehousing at Denver Health, identified a number of criteria that would be used during the selection process.

Denver Health had been on a path toward an electronic health record (EHR) for a number of years and, like most healthcare organizations, had modified its clinical workflows to reflect its growing mix of both paper and electronic records. Whatever solution was selected would need to accommodate its hybrid environment — to include the need to capture and feed unstructured data into the EHR.

Sabel also identified optical character recognition (OCR) and the natural language processor (NLP) as needed features. The OCR tool would collect and search individual words from a scanned document. The NLP tool would be used to help make text-based associations. For example, interpret words from a scanned page and automatically feed that information to the appropriate core measures metric.

Denver Health chose Soarian Quality Measures. Soarian Quality Measures — enabled by the patented REMIND™ (Reliable Extraction and Meaningful Inference from Non-structured Data) Platform — met Denver Health's criteria.

Soarian Quality Measures Streamlines Chart Abstraction Process

Case Study

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Implementation

With Soarian Clinicals already up and running, the implementation of Soarian Quality Measures was straightforward. The biggest task prior to going live was mapping the data collected back to the specific reports Denver Health wanted to generate.

"We had been running custom, manual reports for years and they were critical to our continued success," says Sabel. "Siemens helped us develop the reporting and custom views we needed." Sabel had a staff member capable of writing the custom code and Denver Health was up and running with the new system in four months.

Benefits

Optimized Resources

Prior to the implementation, Denver Health hired two additional staff members to handle the extra workload caused by the increase in core measure requirements. After the implementation, however, the workload was reduced and once again became manageable by a single person.

"The responsibilities of abstracting and reporting core measures were reduced back to one person," says Sabel. "As a result, we were able to reallocate the two other employees to focus on quality improvement and other higher-value activities."

Improved Communications

Before Soarian Quality Measures, there was a delay between patient discharge and having the data in hand for analysis.

"Sampled cases for our core measures population are available for abstraction seven days after discharge," says Sabel. "We can meet with physicians and review trends, knowing they are based on very current information. If we see a trend we don't like, we can pinpoint the source and make a change."

Accuracy of Reporting

The chart abstraction process at Denver Health prior to the Soarian Quality Measures deployment, although manual, was already very close to 100 percent accuracy. The challenge was transitioning to an electronic environment, to minimize the risk of human error, without taking a step back. Sabel reports that since going live with Soarian Quality Measures, data accuracy at Denver Health remains very close to 100 percent.

More Robust Data

In addition to maintaining its accuracy levels after the transition to Soarian Quality Measures, the volume of data being captured and reported also increased. As a solution that delivers optical character recognition and natural language processor features, Soarian Quality Measures includes data from hand-written physician notes and nurse documentation.

Protecting Revenue

As the industry moves away from a pay-for-reporting environment toward a pay-for-performance model, the ability to track core measures becomes increasingly important.

"Technology will not only be the future of the healthcare we deliver, but also the method used to determine the quality of that care," says Sabel.

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