

Seeing Everything at Any Time

John McCormick, Contributing Editor
Health Data Management Magazine, May 1, 2009

El Camino Hospital, the pioneering Silicon Valley hospital that was one of the first in the country to implement a computerized physician order entry system, is again looking to push the edge of information technology.

The not-for-profit hospital will go live this spring with a new system that will aggregate patient, treatment, staffing, and facilities information from some 15 different systems, store it in a central hub, and distribute the data to any staffer, anywhere in the enterprise, at any time - and in just about any form they request.

ADVERTISEMENT



This data aggregation and distribution effort is part of an overall I.T. strategy - which the hospital calls El Camino 2.0 - to use real-time data and wireless networking to improve operational efficiencies and effectiveness. If a patient is given a test, for example, the hospital wants staffers with the right privileges to not only access the results, but to see how the results will affect the patient's treatment as well as the hospital's room occupancy, staffing requirements, pharmacy needs, and medical supply inventories, among other items, according to officials at the hospital.

"The end result is cultural, clinical, and strategic change on a vast scale," says Greg Walton, El Camino's chief information officer. "Because we're going to change how we, as an organization, get, manage and use information for patient care."

A New Hospital, a New Era

El Camino is a community hospital that sits on a 41-acre campus in Mountain View, Calif., and has been ranked as one of the leading hospitals in the area. But, not satisfied, management set an ambitious goal that El Camino be in the top 5% of hospitals in national quality rankings across all measures, including patient safety, by 2012.

To achieve that goal, the hospital knew it needed superior analytics. However, the hospital's data was stored in administrative, material, and clinical silos that made the quick collection, analysis and distribution of enterprisewide data difficult if not impossible.

So El Camino devised a strategy to open those data stores. A key piece of the plan was use of the Almaga data aggregation platform from Redmond, Wash.-based Microsoft Corp., which the hospital licensed in September 2008.

Almaga, developed at the Washington Hospital Center and acquired by Microsoft in 2006, captures transaction information as it's passed between hospital systems and stores that

information in a SQL Server database. El Camino plans to use the information from Amalga to build a scorecard by which it can evaluate patient care; patient safety; efficiency and throughput; and other areas as part of its quality improvement effort. The scorecard will track incidents of infections, medication errors and other metrics.

But it's not going to stop there.

The hospital, which is expected to move into a new 300-bed facility later this year, will transmit Amalga information literally through its walls thanks to advanced wireless technology.

El Camino installed a distributed antenna network from InnerWireless Inc., Richardson, Texas, and a wireless infrastructure - routers, switches, access points - from San Jose, Calif.-based Cisco Systems Inc. that will enable it to transmit voice, data, video and location services throughout the facility. Staff role will determine who can access what on the network.

Walton says the network, combined with the Amalga-based system, will allow El Camino to monitor patients, their locations, and physical items down to six-square-inches from where they're stored.

"We'll be able to know the relationship between physical things and process things that we can't even imagine today," says Walton.

The hospital has faced a number of technical and cultural challenges in building El Camino 2.0. On the technical front, the staff had to work out issues surrounding enterprisewide data standards, management and governance. And, says Michael Gallagher, M.D., the hospital's director of business intelligence and outcomes, the sheer amount of information delivered by Amalga has overwhelmed some staffers.

But, in the end, the hospital feels the end-result will be worth any pain it will endure.

"This, we believe, will be the next era of change," Walton says.

(c) 2009 Health Data Management and SourceMedia, Inc. All Rights Reserved.

<http://www.healthdatamanagement.com/> <http://www.sourcemedia.com/>

For more information on related topics, visit the following channels:

- Business Intelligence
- Disease Management
- Electronic Health Records
- Hardware
- Mobile Tech
- Systems Integration
- Hospitals

©2009 Health Data Management and SourceMedia, Inc. All rights reserved.

SourceMedia is an Investcorp company.

Use, duplication, or sale of this service, or data contained herein, is strictly prohibited.