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IT Case Study Contest nominee: Great Plains Regional Medical Center, North Platte, Neb.

By Jim Anderson

Since 1975, Great Plains Regional Medical Center has been widely recognized for its medical excellence and innovative use of technology to support state-of-the-art quality care for 120,000 people living in a rural 24,230-square-mile area equivalent in size to West Virginia. The 116-bed full-service health system, which provides care services in more than 25 specialties, is the referral center for eight critical-care hospitals in west central Nebraska and northern Kansas.

Great Plains' emergency department was paper-based up until seven years ago. When patients transferred from the ED to the inpatient unit or tertiary facility or were sent home, acute-care clinicians frequently lacked access to their ED records. Staff had to hunt for charts, causing workflow inefficiencies for everyone. For example, a common practice was for referring physicians to request faxed records—a time-consuming and costly process.

In 2004, Great Plains invested in ED-specific technology to improve care management and continuity, clinician collaboration and physician alignment. It deployed a best-of-breed ED information system, or EDIS, that included patient tracking and nurse and physician documentation. An important functionality requirement was its ability to integrate with our inpatient electronic health record and other applications to enable seamless data exchange. Costs for the EDIS, training, support and implementation services for hospital personnel are proprietary to our organization.

To implement the system and integrate the EDIS to the hospital information system, Great Plains established a six-member implementation team composed of the chief information officer, ED medical director, ED director and three IT employees. We applaud our ED physician leaders for leading Great Plains to automate healthcare delivery and provided training support to enhance clinicians' computer skills.

Over the past seven years, Great Plains has realized significant quality, safety and patient experience improvements from its EDIS. Instant access to accurate and up-to-date data including allergies and lab results has decreased errors and duplicate tests, once common with paper-based documents regularly misplaced or inaccessible as patients transitioned from one level of care to another. Physicians and nurses report higher job satisfaction, crediting the EDIS for more informed decisions and time with patients.

The EDIS has enabled Great Plains to strengthen relationships with referring community doctors. The facility configured the system to prevent ED physicians and nurses from leaving their shift without signing their records. As soon as documents are signed, the EDIS automatically faxes a patient's complete ED chart to his or her primary-care physician. As a result, the PCP now has the relevant documentation in hand before the patient arrives for follow-up care, resulting in an 80% decline in calls asking for ED records.

The EDIS has allowed Great Plains to retain its status as the healthcare destination of choice for residents in west central Nebraska. Many opt to drive 60 miles to Great Plains rather than a competing facility 40 miles away because of our advanced EHR and extensive services. We strive to

make the ED the "front door" for our far-flung patient community to access those services, and the EDIS helps us achieve this strategic goal.

The EDIS is also playing a significant role in helping Great Plains qualify for stimulus funding. Great Plains currently meets or exceeds several of 14 core measures comprising Stage 1. Under those measures, facilities must perform at least one test of their EHR's capability to exchange data with a health information exchange. While this HIE requirement could be a major challenge to hospitals, the EDIS has made possible our joining the Nebraska Health Information Initiative (NeHII). Great Plains transmits all ED results and radiology and transcription reports to NeHII, making it the first system to successfully transmit data to the Web-based statewide data exchange. Authorized facilities and physicians in Nebraska, Iowa and Missouri are exchanging this and other critical data on 1.8 million patients. As NeHII expands, we plan to transmit a daily download of syndromic surveillance data via the EDIS.

Also, the EDIS leaves Great Plains well-positioned to comply with two other Stage 1 measures that are considered public-health criteria but require some type of health information exchange capability. Under those measures, hospitals must perform at least one test of their ERH's capability to submit syndromic surveillance data and reportable lab results to public health agencies unless those organizations cannot receive the information electronically.

The EDIS helped Great Plains:

- Save \$215,000 annually in transcription costs.
- Retain the same number of clinicians at 28 FTEs per adjusted occupied bed including five board-certified ED physicians and three physician assistants and advanced practice registered nurses, despite annual ED visit volume rising 25% since 2004.
- Realize its goal of maintaining ED turnaround time between the time a patient arrives and is treated within two hours—an impressive wait time given that GPRMC did not increase staff and currently averages 300 to 400 more patients monthly, a significant increase since 2004.

Great Plains is committed to evolving its EDIS as a critical-care delivery and health information exchange tool. By reducing its paper dependency and instigating secure data exchange, the rural health provider's investment paved the way for rendering higher quality and cost-effective care across its enterprise and beyond geographically connecting statewide and regional medical facilities.

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2011 IT Case Study Contest

Welcome to *Modern Healthcare's* third annual IT Case Study Contest, where you, the reader, have the opportunity to tell your peers about your innovative IT projects, how those projects are improving patient care and how you intend to seek federal funding for those projects.

In this special feature, we announce and publish the winner and honorable mention of this year's competition. Please join us in congratulating this year's winner—Decatur (Ill.) Memorial Hospital—and honorable mention—Centene Corp.

Here's how we made our selections. On Feb. 21, we announced the competition, which is designed to recognize healthcare IT implementation projects that have improved care and that also may be eligible for funding under the economic stimulus law. The original submission deadline was April 29, but we extended that until May 13 to accommodate late entries.

Healthcare organizations or corporations whose primary function was providing healthcare services to patients or financing healthcare services for patients were eligible to participate. IT vendors were not eligible to participate.

Submissions were required to be written by a

chief information officer or senior-level IT executive and must have included the following:

- A description of the health IT or system adopted, including cost, manpower and other resources needed.
- Evidence of how the health IT or system is being used to improve patient care or patient-care delivery.

A total of 11 case studies were submitted to the competition. All were deemed eligible. We forwarded the 11 case studies to three prominent healthcare IT executives to review. Our external reviewers were:

■ Russell Branzell, vice president of information services and CIO at Poudre Valley Health System, Fort Collins, Colo.

■ Charles Christian, CIO at Good Samaritan Hospital, Vincennes, Ind.

■ Edward Marx, CIO at Texas Health Resources, Arlington.

Based on the IT executives' feedback, a panel of senior editors at *Modern Healthcare* reached a consensus on the top case study and honorable mention, which are published on the following pages.

We would like to thank Branzell, Christian and Marx for their commitment to healthcare IT and their

invaluable insight in helping us determine this year's recipients. We'd also like to thank all of the healthcare organizations that participated in the IT Case Study Contest. All 11 case studies will appear in a special section on our website, ModernHealthcare.com, for our readers to learn from and share ideas.

Thank you.

—David Burda, editor



■ The strategy for seeking funding for the health IT system adopted from the stimulus act.

Submissions were to be no longer than 900 words in length and have included a color photo of the author and one of a caregiver using the IT system. Submitted case studies were to be original and exclusive to *Modern Healthcare*. *Modern Healthcare* reserved the right to edit or not publish case studies for appropriateness of content.