

## Patient data outage exposes risks of electronic medical records

August 10 2012, By Chad Terhune

Dozens of hospitals across the country lost access to crucial electronic medical records for about five hours during a major computer outage last month, raising fresh concerns about whether poorly designed technology can compromise patient care.

Cerner Corp., a leading supplier of <u>electronic health records</u> to hospitals and doctors, said "human error" caused the outage July 23 that it said affected an unspecified number of hospitals that rely on the Kansas City, Mo., company to remotely store their medical information.

Doctors and nurses use these complex computer systems for nearly every task within a hospital, such as recording patient notes, ordering medical tests and drugs, and communicating with one another about lab results and changes in a patient's condition. Adventist Health, which runs White Memorial Medical Center in Los Angeles and 18 other hospitals, and St. Jude Children's Research Hospital were among those affected by the outage.

The episode highlighted some of the risks as hospitals and doctors' offices nationwide undergo a massive upgrade in the way they handle medical records. As part of the 2009 economic stimulus, the Obama administration is spending more than \$27 billion to speed the switch to computerized patient records.

The goal of the government incentives is to improve care by giving medical providers instant access to vital patient information and to help



cut costs by eliminating unnecessary tests and procedures. In 2015, the government will begin imposing financial penalties against hospitals and doctors that don't adopt electronic health records.

But critics say many of these systems are hard to use and poorly designed and the government's push for digital records could lead to more <u>medical errors</u>.

Cerner declined to comment on how many hospitals were affected in July's incident, but it said, "Our clients all have downtime procedures in place to ensure patient safety." Federal law requires medical providers and their vendors to have contingency plans for when systems go down.

Doctors and hospitals interviewed said they weren't immediately aware of any patients harmed by the disruption, but they expressed concern about how long the outage lasted and the failure of any Cerner backup system to kick in.

Within minutes of the outage, they said, doctors and nurses reverted to writing orders and notes by hand, but in many cases they no longer had access to previous patient information saved remotely with Cerner. That information isn't typically put on paper charts when records are kept electronically.

"If you can't get to all the patient notes and all the previous data, you can imagine it's very confusing and mistakes could be made," said Dr. Brent Haberman, a pediatric pulmonologist in Memphis, Tenn. He said the systems at Le Bonheur Children's Hospital and St. Jude Children's Research Hospital in Memphis were down for several hours. "A new doctor comes on shift and doesn't have access to what happened the past few hours or days."

Clayton Naeve, chief information officer at St. Jude, said the children's



hospital turned to its "downtime process" and was "able to deliver uninterrupted care."

In December, a similar Cerner outage struck the University of Pittsburgh Medical Center, which runs one of the most advanced electronic medical record systems across more than 20 hospitals. It suffered an outage of more than 14 hours, but the health system said a backup system allowed doctors and nurses to maintain access to patient files.

Cerner said about 9,300 facilities worldwide use its medical software, including more than 2,600 hospitals. Its overall revenue grew 19 percent last year to \$2.2 billion, and it competes against companies such as Epic Systems Corp. and General Electric Co. for multimillion-dollar hospital contracts.

Amid this growth, the Institute of Medicine recommended in November that an independent agency be formed to investigate injuries and deaths tied to health information technology. It urged regulators to track the safety performance of systems already in place.

"As vendors and the federal government push for totally electronic systems, the vulnerabilities of these hospitals to this kind of outage increases exponentially," said Ross Koppel, a sociology professor at the University of Pennsylvania who has studied the safety and effectiveness of electronic medical records. "The lack of access to previous patient records means that doctors were flying blind."

Cerner said it's looking at implementing additional safeguards to prevent future incidents.

"We are reviewing our training protocol and documented work instructions for any improvements that can be made," Cerner spokeswoman Kelli Christman said.



Dr. Thomas Beckett, an obstetrician in Naples, Fla., said he was at a local hospital monitoring several patients preparing to give birth when the Cerner system went out for about five hours. He said he lost remote access to fetal heart monitors on the expectant mothers, but the equipment itself continued working.

"This shows it's not as perfect as everybody says it is," Beckett said. "Are we putting too much faith in these people saying we have a backup?"

Officials at the U.S. Department of Health and Human Services requested the recent Institute of Medicine report as part of efforts to examine the unintended consequences from rapidly expanding health information technology.

Jacob Reider, acting chief medical officer at the federal Office of the National Coordinator for Health Information Technology, said these types of outages are quite rare and there's no way to completely eliminate <a href="https://linear.org/human.error">human error</a>.

A spokeswoman for Adventist Health said that "while the outage was inconvenient for our staff and customers, our facilities went back to the prior ways of documenting patient care on paper and were able to access historical information using alternate data sources," such as the hospital lab and pharmacy.

Bill Spooner, Sharp HealthCare's chief information officer, said its seven hospitals in the San Diego area rely on Cerner software but were spared from the outage because Sharp runs its own data center.

He said many hospitals choose to outsource that function to save money or to avoid having to hire the staff required. Cerner's revenue from that remote hosting and similar services grew 20 percent last year.



"We really have reached an era when downtime is not acceptable," Spooner said.

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