Case Study

NextGen EHR & EPM Systems Support Disaster Preparedness, Prevention, & Recovery

Like the rest of the country, America's healthcare community was stunned by the overwhelming damage caused by hurricanes and tropical storms that ravaged the southern states in 2005. The loss of life and property shocked and saddened physicians from coast to coast, and many rushed to provide support in any way possible.

While responding to the human tragedy was of paramount concern, physicians in the affected areas also were faced with an administrative nightmare. Damaged or destroyed were medical files, patient charts, diagnostic studies, insurance claims, clinical records, billing information—the myriad of invaluable and sensitive data vital to effective clinical practice and the ongoing treatment of patients.

Some physicians fared better than others, however, specifically those who had implemented highly flexible and accessible practice management and electronic health records systems from vendors who plan and prepare for these potential emergencies. These practices were not only able to prevent the loss of data, they resumed operations in record time—in many cases offering services to dislocated patients who had no other access to care.

Overview

PRACTICE 1
Southeast Texas Medical Associates
Beaumont, TX

PRACTICE PROFILE
SETMA has three clinical locations and 23 physicians and implemented NextGen® EPM and NextGen® EHR in 1998.

BUSINESS PROBLEM
Hurricane Rita struck the Beaumont area, causing overwhelming physical damage and threatening to destroy clinical and administrative records.

SOLUTION
Devised a fail-safe preparedness plan for NextGen EPM and NextGen EHR software so no records were lost and the practice was fully operational within days of the hurricane.

PRACTICE 2
City of Austin Community Health Centers

PRACTICE PROFILE
The City of Austin CHC comprises 17 clinics and provides outpatient primary healthcare to 45,000 low-income adults and children.

BUSINESS PROBLEM
Public services in Austin were quickly organized to provide care to thousands of evacuees from New Orleans after Hurricane Katrina; makeshift "clinics" in the city's convention center were needed to provide and document basic healthcare.

SOLUTION
Implemented NextGen EPM to capture and store critical information about each encounter with evacuees.

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Practice Records Restored

Such was the case with Southeast Texas Medical Associates (SETMA) in Beaumont, Texas, which lay in the path of Hurricane Rita late in September 2005. This multi-specialty practice uses both NextGen EHR (electronic health records) and NextGen EPM (enterprise practice management) software. SETMA experienced minimal downtime and lost no patient or administrative data because it had devised a preparedness plan that made use of NextGen software's advanced technology and ever-ready vendor support.

When NextGen Healthcare works with physicians to implement its applications, it helps practice leaders institute backup protocols for locally hosted servers. SETMA itself relies upon more than 30 servers with built-in redundancy to store and manage its NextGen applications. (NextGen Healthcare encourages the use of SQL servers that "cluster" systems, so one server can take over if another isn't operating.) Clinical and administrative data are automatically backed-up several times a day.

The practice's disaster plan includes a shutdown sequence, which is launched whenever a power outage or system failure occurs. Battery operated power sources ensure the servers shut down seamlessly, and no clinical or administrative data is lost.

In case of ultimate disaster, SETMA also developed a "bare-metal" disaster recovery plan, which would allow the practice to restore systems and then reintegrate its network from the bare metal of new servers if it experienced a total loss of software and hardware.

As the storm approached, SETMA CEO, James Holly, MD, triggered the shutdown protocol and instructed the director of the IT department to remove one back-up server to an offsite location remote from the storm-threatened area. This provided SETMA with "plug and play" functionality, to ensure the practice could resume operations as soon as physically able.

Within a week after the storm passed through Beaumont, the practice was operational at one clinic site, which had sustained minimal physical damage.

The server was returned to Beaumont and, once turned on, gave physicians complete access to all patient care records. Once other clinics were deemed safe and power was restored, physicians could examine patients with complete charts in those locations, too.

In addition to treating existing SETMA patients, the practice also cared for 4,000 evacuees. NextGen EHR software enabled physicians to create a hard copy "record" for these evacuees to carry with them to ensure continuity of care when they found more permanent residence.

SETMA's central business office was damaged extensively, so staff members were unable to return to work at that site for several weeks. However, thanks to the flexibility of the NextGen EPM system, leadership was able to establish a fully functional temporary business office in an empty exam room, with laptop computers set up on vacant countertops. The claims submission process was not disrupted, and SETMA suffered no lag in accounts receivable.

Care for Katrina Evacuees

Healthcare officials managing disaster response operations in Austin, Texas, were also able to use a NextGen application with great success after Hurricane Katrina. Although not directly hit by the storm, Austin became home for thousands of New Orleans evacuees, housed in the local convention center.

Many were in dire need of care, not only for illnesses and storm-related injuries, but also for chronic conditions such as diabetes and hypertension. To fully support their new "citizens" who had lost everything (including eye glasses, prescriptions, dentures, etc.), the City of Austin set up pharmacy, psychiatric, dental, immunization, and child care within the convention center and turned to its community health department to coordinate services.

Initially, the City of Austin attempted to record the care that volunteer physicians provided by using Excel spreadsheets. Unfortunately, this approach was highly disorganized and proved ineffective, as the software was not designed for healthcare documentation or emergency response.

Registration personnel were forced to work from individual PCs with various versions of the Excel spreadsheet, so information could not be shared or accessed effectively. With no centralized functionality, it was impossible for officials to track activities, identify health or safety threats, or follow up with specific individuals.

However, physicians and leaders with the city's Community Health Centers division were using NextGen EPM software, and within days were asked to take over the operation. They accessed the NextGen EPM server remotely via the city's Internet network and used the application to more effectively manage operations. Because the NextGen EPM is flexible and easy to customize, the CHC was able to deploy the application within hours, earning kudos from local and national officials alike. CHC leadership enhanced its credibility within the community and helped bring order and calm to an otherwise chaotic situation.

NextGen EPM software allowed volunteer physicians to see 500-600 patients a day and gave them easy-to-use tools to create permanent records of the encounters. The application allowed emergency officials to capture:

- Demographic information about the patient's home in New Orleans, which allowed emergency personnel to track the whereabouts and condition of individual evacuees
- The patient's chief complaint, thereby creating a permanent record for effective follow-up after the immediate crisis passed and evacuees were relocated
- Level of care provided, including specific diagnoses, treatments, and follow-up recommendations
- Insurance information, which provided the City of Austin with a vehicle to track expenses for eventual federal reimbursement
- A list of relatives so other emergency volunteers could notify worried family members
- Records of where each patient would be staying in the Austin area (or elsewhere) after they were relocated from the convention center and how they could be reached

With the wealth of information available through NextGen EPM's robust reporting functions, the City of Austin and other national agencies (such as the Centers for Disease Control and Prevention [CDC] and the Federal Emergency Management Administration [FEMA]) were able to monitor and analyze the situation in real time. The CDC could track and respond to possible disease outbreaks or epidemiological threats, for instance, while FEMA and the American Red Cross could locate missing persons to put them in touch with relief services or relatives. In addition, officials could monitor the volume of patients being seen in order to staff the effort more effectively.

Additional Protection

Fortunately, few physician practices will ever experience devastation of this magnitude. Nevertheless, lesser emergencies can also create havoc within a physician practice. While external forces (fire, storms, and water damage, for example) can easily destroy paper-based records, electronic records can also be vulnerable. For instance, they may be at risk in the event of power outages when local utilities or grids have failed, phone services are interrupted, or LANs or WANs have crashed. NextGen EHR and NextGen EPM software have been fully tested to ensure they protect and recover data in case of emergency.

NextGen Healthcare, for instance, at its corporate center, is beginning to accept transaction log transfers daily, to keep a mirror-image copy of a practice's database for emergency re-creation and use by the practice.

In addition, NextGen Healthcare can serve as data center host in an ASP environment, allowing physician practices to access the applications in real time without maintaining their own servers. This type of access would allow physician practices to continue operations from remote locations for a longer period of time until they can re-open local offices.

NextGen Healthcare also provides special maintenance features such as the WellCare program, where SilverBack Technologies remotely and proactively monitors a practice's servers. The program identifies reasons a practice's back-up protocol might not have been successful; monitors available disk capacity, warning users and the NextGen support team when it is nearly exhausted; and alerts users to viruses and other security threats.

Finally, NextGen Healthcare offers NextGuard[SM] Data Protection Services through an industry-leading technology and storage partner. NextGuard Data Protection Services provides off-site, web-based, data archiving, retention, and disaster recovery preparedness services for healthcare providers. An additional off-site copy of the clinical, financial, and other information critical to healthcare providers provides them with added protection from local system issues or more serious disruptions. Critical data can be restored quickly over the web, so that data is safe and accessible, to enable providers to continue practicing medicine as easily and quickly as the circumstances permit.

Unfortunately, disasters such as the 2005 hurricanes serve as a rude awakening and underscore a business' vulnerability to forces beyond human control. While it is impossible to prevent many crises, practices with access to appropriate tools and services can minimize disruption, speed recovery, and return more quickly to the important business of caring for patients.

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