

When Computers Can't Communicate, Patients Suffer

HEALTHCARE MATTERS: CLIVE FIELDS, MD

GOOD COMMUNICATION BETWEEN PHYSICIANS AND PATIENTS IS THE FOUNDATION OF A SUCCESSFUL RELATIONSHIP. NATURAL DISASTERS LIKE FLOODS, HURRICANES, AND FIRES CAN DISRUPT THE NORMAL LINES OF COMMUNICATION, HOWEVER, AND WITHOUT A PLAN, THESE DISRUPTIONS CAN SERIOUSLY HINDER PATIENT CARE. IT IS QUITE COMMON FOR PATIENTS, ESPECIALLY THOSE WHO ARE ELDERLY AND MEDICALLY VULNERABLE, TO BE CUT OFF FROM THEIR TRADITIONAL HEALTHCARE PROVIDERS DURING CATASTROPHIC EVENTS. PHONES LINES ARE DEAD, ELECTRICITY IS DOWN, AND IN MANY CASES, TRAVEL IS NOT POSSIBLE.

Recently, Hurricane Harvey dropped 50 inches of rain over 48 hours on the Houston metropolitan area, the nation's fourth largest city, leaving many medical offices, hospitals, and freeways inaccessible.

Days before landfall, weather forecasters predicted Harvey's landfall in the area, and medical providers began preparation. Village Family Practice, a multisite primary care group based in Houston, was one of these organizations. The medical group used its cloud-based electronic health record (EHR) system to send mass communications to its more than 160,000 patients through phone, text, and email, thereby effectively alerting patients to the impending storm, ensuring they had access to critical medications, and communicating the expected hours of clinic operations during the storm. The practice also provided direct phone numbers to on-call physicians in case the central call center lost power or—more likely—call center employees could no longer access it due to flooding.

Good communication was instrumental in helping Village Family Practice prepare its patients for the storm, but it made an even greater impact in the aftermath. Many of the practice's elderly and vulnerable patients evacuated the Houston area prior to the storm, and as the storm stretched from hours to days, many of these patients ran out of medications, suffered acute illnesses, and saw their chronic conditions become exacerbated. Calls came in from patients, emergency departments, and hospitals across the Southwest, all looking for patient medical information needed to deliver clinical care. Being able to access medical records from a computer, phone, or tablet made it possible to provide that information quickly and accurately.

Many Houstonians did not leave the city but instead moved in with friends and families in less flood-prone areas. After the flood, transportation was limited, and many patients could not return to their homes, forcing them to seek care from different providers. Village Family Practice physicians treated many of these locally displaced patients. Data on these patients was frequently not available; their physicians' offices were flooded, their pharmacies were closed, and their friends and families were unaware of their medications or medical history. EHRs can store a wealth of patient data, but the lack of interoperability across disparate systems makes much of these data inaccessible in the aftermath of a disaster. Starting from scratch without access to medical information is far from ideal, particularly for patients with chronic conditions.

It is clear that communication between patient and physician supported by access to medical records is critical during a natural disaster. However, not all physicians use a cloud-based EHR, and connectivity between disparate cloud-based EHRs is poor to nonexistent. To combat this problem, many cities have created health information exchanges (HIEs) to serve as a common repository for medical information. In San Antonio, major healthcare providers and hospitals participate in a citywide HIE, accessible to all providers. This approach not only reduces redundant care and duplicative testing, but also makes critical information available in times of emergencies. In Houston, major health systems do not contribute to the local HIE, creating huge gaps in medical information.

Natural disasters and their ability to disrupt standard lines of communication are becoming more frequent and severe. Electronic exchange of health data is imperative, and healthcare organizations need to do a better job of making this capability a reality. Physicians require plans for addressing disruptions in communication, focused on their most vulnerable patients. We need a national commitment to improving communication among EHRs, to better serve patients wherever they go for care. All healthcare providers need to commit to participation in secure HIEs, especially hospitals and pharmacies, both of which have critical information needed in the management of chronically ill patients.

Technology should offer a path to improved communication and improved health care; let's do the work before "Harvey" reaches your neighborhood.

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