



Making Healthcare Safer and More Efficient with Microsoft Azure

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Frank L. "Duke" Yetter, Chief Executive Officer, Mobile MedSoft



Although many healthcare facilities are transitioning to electronic health records (EHR), manual, paper-based processes are still burdening staff and putting patients at risk. Keeping track of multiple patients and their medical histories can make it all too easy to make errors or take shortcuts, especially when dispensing medication. For example, a single patient might have 50 active prescriptions out of 200 on file, and need to take certain medications five times a day, and others only twice. Now imagine a hospital with 500 patients and a two hour window to dispense medication, and it's not hard to see how mistakes occur. Or what happens when a facility's records disappear altogether in a flood or other disaster? Mobile MedSoft, a solutions provider for healthcare including pharmacies, hospitals, and assisted living facilities, wanted to help its customers increase accuracy, reduce liability, and improve patient safety. So the company decided to run its electronic medication administration software in the cloud on Azure, and connect the solution to health records and tablets. With real-time, continuous access to current medical history, drug administration schedules, signed prescriptions, x-rays, and more, facilities can take better care of patients, reduce liability, and meet stringent healthcare regulations.



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Confronts the limits of traditional technology platforms

Most healthcare organizations today operate in complex environments with multiple business processes and workflows, each generating its own set of records. From the pharmacy to the patient bedside, it's easy for mistakes to happen when dispensing medications, especially when using handwritten notes and working with diverse and disparate applications.

Finding information at the right time isn't always possible either. Providing immediate access to patient data can be challenging enough in normal situations, especially with mobile staff and a hectic, fast-paced workflow. However, that challenge becomes even more acute when disaster strikes. For example, "A fertilizer plant exploded in a town here in Texas, and half of a facility got destroyed along with all of their paper records," says Duke Yetter, Chief Executive Officer at Mobile MedSoft. And although the nursing home's residents were safely moved to different location, there was little that could be done to salvage the data.

Such scenarios spurred Mobile MedSoft to look beyond traditional IT platforms. "We wanted to create an environment that allows people to easily track doses and manage all of a patient's electronic health records in a remote, secure, and disaster-proof platform," says Yetter. "It's important for the simple fact that you need to know what drugs were given to a patient five minutes or an hour ago. Because if you get the wrong drug, you can kill somebody."

However, implementing an electronic medication administration record (eMAR) system can be out of reach for many organizations, who lack the funds as well as the IT staff to maintain it. To make eMAR capabilities more accessible, reliable, and affordable, Mobile MedSoft decided to explore cloud-based options.

Deploys electronic medication administration record system in the cloud

After trying out Amazon Web Services, Mobile MedSoft chose the Microsoft Azure platform including Azure Cloud Services, Azure SQL Database, and Azure Blob Storage, as the backbone for an eMAR system that integrates health records in the cloud. "We started down the Amazon path, and then quickly found out that it wasn't going to work for us," says Yetter. "And then we moved toward Microsoft Azure, and one of the reasons for that was the platform-as-a service capability. Microsoft does everything. We don't have to worry about upgrading servers or keeping up with the latest SQL Server updates. Azure is a one-stop-shop, so adopting it was a no-brainer."

Mobile MedSoft also wanted to take advantage of operational peace-of-mind with Azure Backup, a service that

automatically replicates data across two remote datacenters and provides a 99.9 percent availability guarantee. That reliability, coupled with HIPPA compliance and data at rest encryption, gave the company additional confidence that it had made the right choice. "We came up with a solution that not only puts data in a mobile platform, it stores all of it in the cloud on Azure. So customers can dose, administrate, and keep track of all the patients' records in an environment where it's secure, remote, and pretty much disaster proof. Even if tablets get destroyed you can go down the street, pick up a new one, connect to the cloud, and you have access to all the data."

The solution connects with external EHR systems, and also stores x-rays, signed prescriptions, and other unstructured data in the cloud. Naeem Malik, Vice President of R&D, Engineering at Mobile MedSoft says, "Any kind of document or scan you find in healthcare we can save in this application."

On the front end, medical staff connect using PCs or tablets, gaining real-time access to medical data virtually anywhere including in patients' homes. Mobile MedSoft is already thinking of more ways to benefit healthcare, including using analytics to monitor drug performance in multiple patients, or using the tablet's camera to photograph medical conditions for remote collaboration with care teams.

Automates manual processes and reduces patient risk

The Mobile MedSoft solution saves valuable time that can be spent interacting with patients to improve care. For example, according to Yetter, it's not

Overview

Customer: Mobile MedSoft

Customer Website: www.mobilemedsoft.com

Country or Region: United States

Industry: Professional services—Software engineering

Employee Size: 27

Customer Profile

Established in 1975, Mobile MedSoft creates software and mobile solutions for pharmacies and healthcare facilities that speed workflow and improve accuracy for healthcare organizations including pharmacies, longterm care and assisted living facilities, and hospitals.

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unusual to require one nurse to dispense multiple medications to 40 patients within two hours in an average-sized nursing home. This means that the nurse has approximately three minutes per patient to administer medication while taking blood pressure and other readings. Whether checking charts or recording data, any paper-based process eats up time and increases the risk of error. But by working with the Mobile MedSoft app, nurses can instantly access patient records, and automatically capture information including vital signs, administration time, dosage, and more. As a result, they can stay within the allotted time-window, and still have time to chat with patients for insight into less-measurable but extremely important factors such as mood and pain-levels. The detailed log files ease compliance audits too.

The efficiency gains are evident across the organization. In another common scenario, pharmacies send a list of each patient’s drugs for the coming month, which a nurse then manually checks against a list from the previous month.



Yetter emphasizes, “That’s just one patient, and one nurse, and potentially 15 different kinds of medication. And if you have a facility with 500 beds, like we do in New York City, that’s a lot of work. In fact, it’s days of work. And what if they make a mistake? But all of that goes away with the Mobile MedSoft solution on Azure because it’s handled automatically.”

Cuts implementation costs by approximately 85% and opens new markets

The solution enables organizations to extend care from inside facilities to patients wherever they’re located. And the mobile eMAR solution is within reach of virtually any care facility. “All an organization needs is a Wi-Fi network and a few tablets.

We’re bidding against a competitor for a 170- bed facility right now,” says Yetter. “Our quote for 11 tablets, training, travel and everything else was about \$9,000. Our competitor’s quote was over \$60,000.”

By running its medication administration solution on Azure, Mobile MedSoft is transforming the healthcare industry with safer and more efficient patient care. “One of the next places we’re gravitating toward is home health, and then we’ll move toward therapies like physical, occupational, and speech,” says Yetter. “The Azure Infrastructure opens up a whole new market for us beyond medications.”

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Software

- Microsoft Azure Cloud Services
- Microsoft Azure SQL Database
- Microsoft Azure Blob Storage