

Duke University Health System

Mobilizing Information to Maintain Excellence in Healthcare

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—Allen Coleman,
IT Manager,
Mobile Computing Group
Duke Health Technology Solutions

ABOUT THE ORGANIZATION

- Duke University Health System is a world-class healthcare network dedicated to providing outstanding patient care, educating tomorrow's healthcare leaders and discovering new and better ways to treat disease through biomedical research.

BUSINESS CHALLENGES

- To advance the Duke University Health System's mission by mobile-enabling its physicians, professors, medical students and researchers.

SOLUTION

- A mobile enterprise infrastructure managed and secured by Afaria.

Duke University Health System (DUHS) is a world-class healthcare network dedicated to providing outstanding patient care, educating tomorrow's healthcare leaders and discovering new and better ways to treat disease through biomedical research. Duke University Medical Center – the hub of the health system – is consistently ranked among the top ten healthcare organizations in the country.

The Health System has approximately 11,400 full-time employees of whom more than 5,000 are Duke University Health System physicians, researchers and faculty. Many of these employees rely on mobile technology to maximize their effectiveness and document their activities.

To say the Health System is a bustling organization is a vast understatement. The most recent available figures document that the organization admitted over 62,000 patients, handled over 1.6 million outpatient visits, performed more than 72,000 surgical procedures and nearly seven million lab procedures in fiscal year 2004.

MOBILITY CRITICAL TO ACCOMPLISHING MISSION

"The Health System's mission," explains Allen Coleman, IT Manager of the Mobile Computing Group for Duke Health Technology Solutions, "is to meet the healthcare needs of the people we serve, and to foster the very best medical education and biomedical research. As the healthcare provider of choice in our region, we know that we need to employ innovative technology to develop new and better models of healthcare. Most recently, we've been implementing a variety of mobile solutions on handheld devices which are managed and secured by Afaria from iAnywhere. Mobile technology provides our clinical, academic and research constituents with the information they need when and where they need it."

The mobile computing initiative at DUHS was initially driven by a group of doctors in the Department of Medicine who wanted access to critical patient information and research materials on their PDAs.

"The physicians wanted to be able to view current information on patient status, lab results, and other data to allow them to deliver the best possible care," recalls Coleman. "To provide this capability, we needed to be able to deliver and update a patient information application and to ensure the security of the information in accordance with HIPAA regulations. They also wanted access to other related reference information, such as pharmaceutical and insurance formulary information."

This project became the initial pilot program that has led to the Health System's institution-wide mobility initiative.

RESULTS

- Clinicians can now access and update patient information and applications from PDAs for more efficient and effective patient care
- Ability to record and monitor medical student activities more efficiently as they are entered on school-issued PDAs
- New applications can be pushed out to end-user PDAs, and existing applications can be updated centrally and transparently
- Information is collected and securely exchanged between PDAs and back-end systems to protect patient confidentiality in accordance with HIPAA regulations

INDUSTRY

- Healthcare

SYSTEM CONFIGURATION

- End-users – physicians, professors, residents, medical students and researchers – are equipped with Palm OS-based and Pocket PC-based mobile devices running the Afaria client software. The recommended devices include Palm Tungsten C and Compaq iPaq 2570 handhelds.
- Users synchronize their various applications with a number of back-end databases via the Health System's wireless network and the Afaria Server.

“WE NEEDED A PROVEN MOBILE MANAGEMENT INFRASTRUCTURE”

“As we approached this project,” says Coleman, “we realized that we needed a way to centrally manage the physicians’ PDAs, including initial software distribution, updates as needed, and security. Looking farther ahead to our goal of mobile-enabling the entire Medical Center, we knew we needed a proven, robust mobile management infrastructure that would allow us to support mobile users without having to physically touch each device.”

DUHS’ IT team researched and evaluated a number of mobile management solutions. The team determined that Afaria frontline management software from iAnywhere was the best solution based on the Health System’s list of criteria.

“We found that Afaria’s frontline management capabilities allowed us to proactively manage all the devices, applications, data and communications critical to our frontline users – in this case, our physicians,” says Coleman. “We were specifically impressed with its abilities to manage software distribution and updates, provide access to current information, and enable device management and security from a centralized browser interface. Equally important, the technology was essentially transparent to our end-users, which is always the sign of an effective and well designed technology solution.”

“Afaria’s Security Manager module was also a significant factor in our selection process as our physicians are regularly entering and accessing patient information which must be protected in compliance with HIPAA regulations,” adds Coleman. “In our Internal Medicine division, for instance, implementation of Security Manager on 20 physicians’ PDAs was absolutely mandatory.”

On the heels of DUHS’ successful patient information pilot project, the Health System’s IT organization was able to turn its attention to achieving the ultimate goal – to make the entire institution more mobile through the implementation of a system-wide mobile infrastructure to enable efficient, central management of devices, information and security.

“Our wireless infrastructure is growing,” says Coleman. “It’s one of the largest wireless infrastructures in the country, which allows us to support more and more wireless PDAs.”

Since the initial pilot project with the Department of Medicine, the DUHS’ IT organization has expanded its efforts to support other mobility initiatives. These include deployment of applications to support and document the activities of medical students and residents, distribution of reference applications such as an in-house developed antibiotic guide as well as a pharmacological calculator to ensure proper medication disbursement, and a reference directory to provide medical staff with contact information for senior medical staff who are on call for emergencies.

All of these applications are distributed to devices and managed by DUHS’ Afaria-powered infrastructure.

AFARIA KEY TO ACHIEVING INSTITUTION-WIDE MOBILITY GOAL

“Afaria is the software distribution and device management solution that allows us to manage these applications and deliver the information our various end-user groups require to do their jobs effectively,” says Coleman. “We’ve had individuals tell us that we are the most mobile institution they’ve ever seen, and that’s due in no small part to the Afaria’s effectiveness.”

“Our goal is for the Duke University Health System to be increasingly mobile over time,” says Coleman. “The key to our ability to achieve this goal is having Afaria and its Security Manager module in place to allow our local IT administrators to manage the hundreds of mobile devices being used here from a central location – to push out new applications, update applications, secure devices and do all of this without having to touch each device. It does

a very good job, and I'd highly recommend it."

ABOUT AFARIA

Afaria is frontline management software that allows companies to centrally manage and secure devices used by workers at the front lines of business, such as sales people and service technicians. Afaria goes beyond traditional systems management to help companies secure devices, automate processes and manage software, content and data whenever workers have a connection. With Afaria information is secure, IT is in control, and workers have the data, content and applications they need, regardless of available bandwidth.

ABOUT IANYWHERE

iAnywhere enables success at the front lines of business. The company holds worldwide market leadership positions in mobile and embedded databases, mobile management and security, mobile middleware and synchronization, and Bluetooth® and infrared protocol technologies. Tens of millions of mobile devices, millions of subscribers, and 20,000 customers and partners rely on the company's "Always Available" technologies, including SQL Anywhere, Afaria, OneBridge, and the AvantGo® mobile Internet service. iAnywhere is a subsidiary of Sybase, Inc. (NYSE:SY). Visit www.iAnywhere.com for more information.