

FAMILY HEALTH CLINIC

Doubling size without adding staff by engaging technology solutions



Family Health Clinic

“The EMIS EMR system gives our physicians 780 more hours a year to spend on patients instead of technology.”

– Dr. Norman Yee, family physician, Family Health Clinic, Calgary, Alberta

HP customer case study: Medical practice utilizes HP turnkey solutions for electronic medical records automation

Industry: Healthcare

Objective:

Improve patient care by reducing physician time spent on software access and server administration

Approach:

Provide technology that gives physicians instant access to patient records, simplifies record codification, and enables analyses to reveal trends to enhance diagnosis and treatment

Business benefits:

- 780 physician hours per year transferred from server login to patient care
- Reduction in salary expense of \$50,000 per year
- 30% improvement in physician-to-staff ratio (1:1 instead of 1:1.5)
- No downtime in access to patient data

Diagnosis: A digital future

The term “medical technologies” typically conjures a mental image of machines that diagnose, mitigate or cure illness. Systems that solve administrative challenges may seem less relevant to patient care. But this view misses the big picture.

“Healthcare is largely an information business,” says Dr. Norman Yee, a family physician who practices in the Calgary, Alberta, Family Health Clinic and serves as administrator of the clinic’s IT systems. “Having the right databases and technology platforms not only improves the administrative flow of information, but also improves physicians’ capacity to carry out our clinical mission.”

Yee has dedicated himself to improving the effectiveness with which his practice leverages data. In 2001, the clinic migrated patient records to an electronic format. “We saw great benefits from moving to an electronic system,” he says. However, he eventually realized that the system would not meet the clinic’s long-term needs: “We knew our practice environment would be different in the future. We needed a different platform to support that environment.”

780 more hours per year for patient care

Two years ago, the clinic replaced its first electronic medical record (EMR) application with a new EMR system from EMIS Inc., a solution that hosts 40 million patient records in 6,000 clinics worldwide.

EMIS provides the system via an application service provider (ASP) environment; it runs on HP ProLiant server blades in an HP BladeSystem c7000 enclosure, supported by an HP StorageWorks 4000 Enterprise Virtual Array storage infrastructure. Physicians and staff access patient information using 32 HP Compaq dc7900 Ultra-slim clients that connect to the servers via Citrix Access Gateway VPN technology. Some also use mobile devices to connect to the system through an HP ProCurve Wireless Access Point 420. Solution design and deployment services were provided by OnX Enterprise Solutions Ltd., a partner to both EMIS and HP.

The HP dc7900 clients are dispersed throughout the clinic. Each of the 12 examination rooms features one mounted to the wall behind an HP 22-inch widescreen monitor on an articulated monitor arm. Others are located in doctors’ and nurses’ stations, the reception area, and hallways. Physicians and staff log onto the EMR servers once a day via their personalized Aladdin eToken PRO Smartcard. Then, as they move through the office, they plug their smart card into a

Customer solution at a glance

Primary applications

Medical records automation

Primary hardware

- HP ProLiant server blades in HP BladeSystem c7000 enclosure
- 32 HP Compaq dc7900 desktop computers
- HP 22-inch wide-screen monitors
- HP ProCurve Wireless Access Point 420
- Aladdin eToken PRO Smartcards
- HP StorageWorks 4000 Enterprise Virtual Array

Primary software

- EMIS EMR System
- Citrix Access Gateway
- Microsoft® SQL Server

HP Services

- Solution design and deployment services provided by OnX Enterprise Solutions Ltd.
- Hosting services provided by EMIS Inc., which is supported by HP Care Packs

Operating system

- Genuine Microsoft® Windows Vista® Business
- Microsoft Windows Server® 2003

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workstation and their server session pulls up automatically. When the smart card is removed, the server session ends and the workstation locks. The server sessions can even roam offsite to authorized workstations on the clinic's WAN or to a remote secure web portal.

For every patient encounter, the physician records in the EMIS EMR system all symptoms, diagnoses and actions taken. Later, the EMR pulls coded data about the patient encounter into the practice's billing software. With the clinic's previous EMR system, logging in and out took about a minute each time the physician changed workstations. Now the doctor enters an exam room, inserts his or her smart card, and is immediately able to turn to the patient and start interacting—putting the focus on the patient rather than the computer.

Removing one minute from user authentication may not affect someone who logs in once a day, but for physicians who move constantly between machines, the savings add up. "The average patient visit takes about 10 minutes," says Yee. "I see about 30 patients in a day, so I'd guess that each doctor in our practice saves 30 minutes a day, if not more."

Between them, Family Health Clinic's eight physicians work the equivalent of six full-time schedules, Yee adds, noting: "The EMIS EMR system gives our physicians 780 more hours a year to spend on patients instead of technology."

Time transplant from IT to healthcare

The move to HP hardware saves Yee additional time that he used to spend rebooting the server that ran the previous EMR system. "I spend almost no time with the servers now," he says. "In the past two years, the server has gone down only once because of the hardware."

Yee believes that standardizing on hardware from a single vendor boosts a solution's consistency and dependability. "We like the fact that HP offers a wide range of highly reliable products," he says. "The vendor we used previously has a good service department, but that's not necessarily a plus. It means customers need to use customer service. It's much better when you don't need to talk to service at all."

Doubling in size without adding administrative staff

Electronic patient records have also saved Family Health Clinic from hiring at least one staff position. Since minimizing paper processes, the clinic has increased from four to eight doctors, but it hasn't added any administrative staff.

"Just in terms of filing, the EMIS EMR system is saving one and a half staff positions annually," Yee estimates. "That saves us about \$50,000 a year." Although a physician-to-staff ratio of 1:1.5 is common for similar practices, Family Health Clinic operates at a 1:1 ratio.

Prescription for better care

Beyond these impressive business results, Yee notes that the EMR system enhances patient care. It aggregates data on encounters with different patient populations to help physicians spot trends and predict outcomes related to those populations.

Yee explains, "The EMIS EMR system looks proactively at the information it collects. It guides us to ask certain questions about the health of a particular population, which enables us to initiate preventative care at earlier points in people's health. Instead of waiting for a patient to complain about symptoms, I can point out problems they're at risk for." Someday he hopes to expand this functionality to encompass data from a large group of clinics.

"HP and EMIS are important partners in healthcare delivery," Yee says. "They let me focus on enhanced clinical efforts by providing next-generation data management and reliable infrastructure. We have found our HP servers and workstations to be very reliable products that have very little downtime. This gives us confidence in our mission-critical patient information when providing health services."

The bottom line for Yee is that an investment in this type of technology isn't about the bottom line. "This solution is providing a healthy return on investment. But rather than focusing on profit, we're talking about improved health outcomes. We're saving time and costs—but, most important, we're improving patients' experience by being more proactive in keeping them healthy."

To learn more, visit www.hp.com
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