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IN DEPTH: HEALTH CARE

Technology nod: Health care strives for 'paperless office'

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They take up space, put a crimp in the work process and they don't generate revenue -- and at the Bone & Joint Clinic in Franklin, file cabinets are a thing of the past.

The clinic has gone paperless, moving everything from patient insurance card information to records and charts into digital information stored on servers.

"As of now, we're completely paperless. We scan everything and then throw it away," says Duane Murray, Bone & Joint CEO.

Under the new setup, doctors dictate the specifics of their visits with patients and then transcriptionists type up the notes and put them into the patient's digital file.

Insurance cards that were once copied and re-copied for each new patient are scanned into the clinic's database and placed in the patient's electronic file. The clinic put flat-screen monitors in each examination room.

It's a solution to a problem that is inherent in any medical practice of an appreciable size.

Keeping and tracking patient records is a cumbersome process filled with plenty of wasted time, he says.

"Most practices have been struggling with the same problem. The question of 'where's the chart?'" Murray says. "Based on any individual patient's scenario, his or her chart could be in 20 different places at any time. Multiply that by a few hundred patients."

The bottom line is finding a cost-effective solution to the problems of the daily grind in a medical facility, Murray says.

"You don't want to be equipment-based as much as solution-based," he says. "In our case it was space and

inaccessibility of records. You have to have those motivations there."

Financial rewards

All contracts signed by the company are handled digitally and Bone & Joint is moving its human resources functions into the system -- maintaining an employee director, orientation manuals and handbooks in digital form made accessible to employees.

"I now have the capacity to grow efficiently. I didn't look at this as means to reduce staff," he says.

Faced with an expanding business, the clinic needed to increase the size of its facilities. The problem: how best to handle the expense of a buildout while growing efficiently. The answer was to turn existing space tied to filing and paper-laden back office functions into patient space.

The clinic spent \$70,000 in upgrades to the building's systems and network and another \$80,000 doing chart conversions.

"This approach is more cost-effective for us. We would've spent \$70,000 on upgrades anyway and then we would still have the question of 'Do I build another building?'" Murray says. "I know \$80,000 wouldn't build an additional building."

Moving into a paperless environment gives the clinic a leg-up on meeting federal Health Insurance Privacy and Portability Act (HIPPA) requirements.

Part of the federal legislation requires health care facilities to guard patient records closely and increase availability to the records.

A byproduct of the technology upgrade should also cut costs on the development of the Bone & Joint's new surgery center. Construction on the \$3.8 million surgery center is expected to begin this summer on a vacant lot adjacent to the clinic, will be linked into the clinic's files and network.

Rather than go full-bore into new technology, the clinic started small, Murray says.

After visiting a paperless clinic in Lexington, Ky., Family Practice Associates, Bone & Joint officials began the planning process of making a similar move in baby-step fashion, focusing only on the processing of insurance cards, then expanding gradually to include all records.

Digital Vandy

Vanderbilt Medical Center's division of general internal medicine has also taken up the paperless methods to keeping track of patient records with software systems developed in-house.

The StarChart and StarPanel programs are home runs in managing records associated with the 700,000 outpatient visits at the Medical Center and its clinics, says Nancy Lorenzi, professor and vice-chancellor in medical center's office of informatics

"If you visit to our clinics twice a year, that counts as two visits. We count each time a patient comes in," she says. "StarChart is our electronic repository of data (related to those visits)."

Going to digital records allows the Vanderbilt clinics to pull out the bulk of its paper records and speed the efficiency of access, she says.

"(An) adult primary care physician is able to take all of the StarChart ocean (of information) and pull information about only his patients. What he now has is the ability to look at just those records, so if he orders a

test, the new results come onto the screen," she explains.

"If a major drug has a recall, he could sort out the five or 10 patients on that particular drug in less than a minute. The way it was, when a major drug is withdrawn, we would have nurses, secretaries and others going through charts."

The design of the system was based on a survey of physicians on how they would like to practice medicine in 2004.

"We wanted to take them out far enough to say, 'If you had your vision, what would you do?'" she says. "In Informatics, we have been trying to create the products to make that a reality."

The result was the E3 project (electronic in three years) and StarChart and StarPanel are steps in that direction.

White patient care has been at the forefront of technological advancement, medical facilities have lagged behind the corporate world in the adoption of record keeping and back-office systems, says Abe Niedzwiecki, president of CabinetNG.

Located in Athens, Ala., near Huntsville, CabinetNG developed the systems used by the Bone & Joint Clinic.

It's not so much the lack of desire to move toward paperless technology that has held up the medical industry. It was the cost and the cost is dropping, Niedzwiecki says.

"This software has been around since 1992," he says. "The other side (facility network infrastructure) didn't catch up to make it viable cost-wise. The hardware, the PCs, the storage space and those kind of things have come down in cost."

HIPPA is also a driving force in the increase of demand.