

Digital whiteboards and cool COWs transforming patient care at Ontario hospital

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5/11/2009 5:00:00 AM

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For link to interviews with Eric Vandewall, Susan Black, Dr. Gopal Bhatnagar, and Anne Marie Lynch, acting clinical leader on 4J Rehab, follow this link:

<http://www.itbusiness.ca/it/client/en/home/SingleVideo.asp?bcpid=1909906767&bctid=22729828001>

The powerful new tech systems at Trillium Health Centre's new in-patient wing are designed to be unobtrusive, blending in with the wing's atmosphere of "calm reassurance." But these low-key systems are at the very heart of the high-quality care patients receive.

Efficiency-boosting electronic whiteboards, a noise-free "nurse call" system, and computers-on-wheels (COWs) to give caregivers any-time, any-place access to patient data -- these are just some ways technology is quietly but decisively transforming the quality of healthcare at Trillium Health Centre's new in-patient wing.

The Centre's \$100-million, 190-bed wing in Mississauga Ont. was formally inaugurated on Friday by Ontario Health Minister David Caplan.

Other political dignitaries present on the occasion, included Mississauga mayor Hazel McCallion and Ontario Minister of Small Business and Entrepreneurship, Harinder Takhar.

Following the inauguration, members of the media were offered a tour of the facility.

Trillium executives and staff at the new wing spoke to ITBusiness.ca about how technology is fostering "patient-centred healthcare."

"This is a facility where embedded IT systems ensure safe care and improved outcomes," said Dr. Gopal Bhatnagar, chief of staff, Trillium Health Centre.

Healthcare technology, he said, should essentially liberate staff and physicians to do what they want to do most ... take care of people.

Wowed by COW

New tech systems, such as the computer-on-wheels (COW), are accomplishing just that at the new in-patient wing.

Every COW - essentially a desktop mounted on a cart - is wirelessly linked with the hospital infrastructure.

"As a physician, when I see my patients, this computer works with me," Dr. Bhatnagar said. "I can view their lab results right there, and document a progress note. Physicians anywhere in the hospital can access this note and know what my thoughts are."

The overall impact, he said, is safer care for everybody.

The immediacy brought by the COW to patient care is one of its coolest features, according to Eric Vandewall, senior vice-president, Trillium Health Centre. "A doctor can call up an x-ray on the computer, take a look at it right there, and explain to the patient first-hand what needs to be done."

And the system fits in perfectly with staff work processes, said Anne Marie Lynch, a nurse and acting clinical leader at Trillium Health Centre.

"Dieticians use it to put in the patients' choice of menus. If the nurse is busy, they can access needed patient information from the system directly." She said a physician doing an assessment of the patient can input data directly into the COW.

The multi-disciplinary team uses the system during weekly "huddles" -- meetings to discuss any highlights of treatments, procedures and patient progress.

"Anyone from the multidisciplinary team can access the workstation." She said lab work is also accessed through the computer, so no longer are there any paper trails.

In future, Lynch said, we're hoping to have the system tied in with many doctors' offices, so if a patient is discharged, their family physician would have immediate and direct access to their health records.

A whiteboard's worth a thousand words

Electronic whiteboards also exemplify the tremendous benefits of moving from manual to digital systems, Vandewall said.

Under the old system, clinicians would manually write down patients' names and those of assigned physicians, as well as other details on a chart.

"Now it's fully IT enabled, with colour coding to indicate new admissions, names of those who are soon to be discharged, and more."

A more efficient admissions and discharge process is one key outcome, he said.

Accuracy and safety are others.

Manual charts can create comprehension issues, as physicians and nurses don't have the easiest handwriting to understand, and everybody's style is different.

With the electronic boards, he said, greater clarity is infused into the whole process, and you can be sure "the right physicians [are] going to the right patients."

The new wing's designers say the inconspicuousness of the tech systems is one of their most compelling features.

"Powerful tech systems are really here, but they are hidden," noted Susan Black, principal and director of Perkins Eastman Black Architects Inc., the Toronto-based firm that designed the new wing."

Carry on [quietly] nurse

The new "nurse call" system is a case in point, Black said.

Physicians and nurses can take patient calls directly from a handheld device -- a Cisco smart phone, without overhead paging that could disturb the serenity of the environment, or going through the nurses' station.

Despite such unobtrusiveness, the wing has been designed to accommodate future tech additions and innovations, whenever these are required, Black said. "We've got buried cables everywhere, sophisticated telemetry on the ceiling ... and we've got teams that can find and fix everything, anytime."

Vandewall said the new systems actually contribute to the "atmosphere of calm reassurance."

"The biggest piece of feedback we've received about the new wing it's much quieter."

He contrasted that with older in-patient units where you hear nurse calls going off all the time.

Automatic escalation is another valuable feature of the new nurse call system, said Vandewall.

The system is fully integrated with the hospital's mobile infrastructure, he said, and if the concerned physician or nurse is busy, the call automatically escalates to the next caregiver that they're able to multi-task. Because they have their handheld phone with them wherever they are, they can [do their regular work] and at the same time talk to patients, and meet their needs."

The new system also makes for greater efficiency, the Trillium executive said.

Under the old "nurse call" system, he noted, every time the bell went off, the nurse would have to come in to speak to the patient, find out their need, and after that leave to get what they want.

"Now there's a direct conversation over the smart phone, and the caregiver can obtain what the patient wants (perhaps water or some extra blankets) even before they come to the room. So there are time and efficiency savings."

The Ontario government has announced a total of \$133.5 million for post-construction operating plans funding to 24 hospitals in 2008-09.

The Trillium Centre's expansion project is one among more than 100 hospital projects the provincial government is supporting, Health Minister Caplan noted. "It's part of what I call a renaissance of infrastructure in healthcare."

He said when he took over as minister of infrastructure around five years ago, he was shocked to discover that the average age of infrastructure in Ontario hospitals was 43 years.

That's going to improve significantly, he said, as the government continues to invest in systems that deliver the quality of healthcare Ontarians need.

But updating aging infrastructure and modernizing systems is a means to an end, suggested Dr. Bhatnagar.

"I believe we've launched a crusade against sickness, disease and misery," he said. "And our enemies -- cancer, heart disease, dementia - are indeed savage and unrelenting."

But he said with unprecedented support from the community and government partners the Centre would forge ahead undaunted.