

Humber River goes beyond EMRAM to achieve better patient outcomes

BY JERRY ZEIDENBERG

ORLANDO, FLA. – It drives Peter Bak nuts when hospitals tout their HIMSS Analytics EMRAM scores and make reaching Stage 6 or 7 the object of their I.T. strategies.

Not that he's against the EMRAM program. It's just that he believes there's more to healthcare I.T. than dreamt of in the HIMSS Analytics philosophy. "EMRAM doesn't cover what's going on, above and beyond the patient charts," he said. "It's limited."

Bak, CIO with Humber River Hospital in Toronto, gave an interview to *Canadian Healthcare Technology* while at the annual HIMSS conference, in Orlando.

For its part, Humber River Hospital – which calls itself North America's first 'Digital Hospital' – recently invested in a predictive analytics Command Centre. It presents real-time data on screens at the front of the room, called tiles, and alerts the staff if too many patients are waiting for care in the ED, if there are delays in diagnostic tests for patients on the floors, and if patients are waiting to be discharged.

Once they are apprised of these delays, staff in the Command Centre can provide solutions. That's made the hospital much more efficient. Since its opening at the end of 2017, the Command Centre has led to the creation of 23 "virtual beds", which means extra capacity for the hospital without the cost of extra nurses or staff.

Yet, this kind of project isn't part of the EMRAM ladder.

"Where's the Command Centre in the EMRAM score?", asks Bak. "It's nowhere."

Another example: outside of each patient room at Humber River is a large-sized computer monitor and a supply cabinet.

The computer screen is connected to the patient electronic chart, and it displays icons of note to the nursing staff. So, if the patient has special needs or conditions, like an infection or risk of falls, the nurse sees a warning right away.

Moreover, if there is a particular precaution that requires gloves or gowns, as indicated on the monitor, the nurse doesn't have to trek to a supply station – the supplies are right there, in the cabinet.

"This saves time for the nurse, and saves steps," commented Bak. "And it's not in EMRAM."

Neither are the integrated bedside terminals that are used throughout the hospital. They enable the patient chart to be displayed, and also connect the patient with a nurse, when needed. They allow the patient to control the lighting in the room, temperature and window shades, and also offer entertainment services.

They contribute to both better patient care and patient satisfaction. "But they're nowhere in EMRAM," reiterated Bak.

He observed that lab orders, which used to take two to four hours of turnaround time in the old hospital, are now com-

pleted in one hour, with zero labelling errors. "This is what digitalization is all about, and it's not in EMRAM."

Bak said that planning for I.T. should start with the healthcare and administrative improvements an organization wishes to make; it should then acquire the

right technology to achieve these goals.

In the case of Humber River Hospital, the planning started with a strategic vision that included the elimination of "never events". These are medical errors or adverse events that experts say should never happen.

The Canadian Patient Safety Institute says

they include surgery performed on the wrong patient or body part; the wrong tissue of blood type given to a patient; an unintended foreign object left in a patient after a procedure; patient death or serious harm as a result of pharmaceutical errors; and several others.

CONTINUED ON PAGE 27

 EMR: EVERY STEP
CONFERENCE

 OntarioMD
Empowered Practices. Enhanced Care.

June 13, 2019

Brookstreet Hotel, 525 Legget Drive, Ottawa

Canada's largest EMR conference series returns to Ottawa!

- ▀ New physician-driven content presented by OntarioMD Peer Leaders
- ▀ Practical tips in EMR Training Workshops
- ▀ Earn Continuing Medical Education credits
- ▀ Network with your peers
- ▀ EMR and Digital Health Vendor Showcase



Register today with the
early bird rate and **save 15%!**
Expires May 13th, 2019.

Register for the conferences at OntarioMD.ca or call **1-866-744-8668**



OntarioMD



OntarioMD



@OntarioEMRs



OntarioMD



OntarioMD



ontariomd.blog

Virtual house calls

CONTINUED FROM PAGE 10

hospice care at her request, where she died peacefully. There are many other anecdotal stories like this one, including one Virtual House Call that we performed to a patient who had neither heat nor electricity. We conducted this visit by flashlight!

I imagine as other front-line providers read this article, patients will come to mind who would clearly benefit from this technology and service.

In time, it is my hope that we can find more resources and opportunities for collaboration to make this service more widely available.

Limitations: When the first version of this service was offered, in 2017, the discus-

sion around integrating digital health into the Canadian system was in its infancy.

There was limited ability to integrate this care with other services, and while we had good success with conducting encounters with patients, we struggled to integrate this service into their healthcare and often lost track of patients as they traversed the healthcare system.

Admission to hospital in some instances was unavoidable, and subsequent discharge did not return the patient to our care. Moving forward, and with greater awareness of the benefits of digital health, improved integration of these types of services should prove beneficial.

More resources will be required to demonstrate the magnitude of the benefit with respect to reduced hospital admissions and ER visits, among other things.

Technical limitations: Early technical

limitations related primarily to the quality of objective information obtained in the course of conducting an assessment and making a diagnosis and treatment plan.

Videoconferencing capabilities have supported the collection of subjective information, i.e., history, for a long time.

Many software platforms provide the

“It is my hope that we can find more resources and opportunities to make this service more widely available.”

required security for this encounter. The challenge, however, lies in the physical exam. Early stethoscopes proved technically limited in several ways.

Higher level Bluetooth stethoscopes that are very similar to traditional stethoscopes promised connectivity, but in practice, they were not overly reliable, especially for remote use in real-time (asynchronous remote care is another topic entirely!)

The quality of the acoustic information was good, but unreliable.

Basic USB enabled stethoscopes, such as the one that we ultimately used, offered easy connectivity (to REACTS, not all platforms) but limited quality of information.

These stethoscopes do not offer the abil-

ity to adjust the frequency settings. This is critically important for digital auscultation as background noise is a much more significant factor than in person auscultation.

High-frequency sounds, such as lung sounds, require different settings in digital auscultation than low-frequency sounds such as heart sounds. The device that we used performed well at low-frequencies (heart sounds), but poorly for higher-frequency sounds (lung sounds).

Accordingly, auscultation of the lungs was of low-quality, and in some instances rendered the visit technically suboptimal. After each visit a telemedicine provider should assess whether or not the visit approximated an in-person encounter; if it did not, then the patient should be notified of this concern and the assessment and plan may be modified.

Summary: Virtual House Calls are technically feasible and result in high levels of patient and caregiver satisfaction. Technological advancements since the inception of this program have made this service even more beneficial, such that it is rare that a trained provider would be unable to approximate an in-person visit.

More study is required to produce information on the scalability of this service and the cost savings that will be realized. Consideration will have to be given to the fact that acquiring data requires an investment.

Humber River goes beyond EMRAM

CONTINUED FROM PAGE 21

On another note, Humber River is using technology to improve overall efficiency, quality and to reduce resource utilization.

“It’s a logical progression,” said Bak. “Everything we do is driven by these themes.”

He asserted the direction was originally set by former CEO Dr. Rueben Devlin and current CEO Barb Collins.

One of the ways in which communication has been improved in the hospital has been through the use of Ascom smartphones, which are assigned to staff when they start their shifts. Of course, one might

“Whether the patient is in serious pain, or simply wants a blanket, we want to respond,” says Bak.

think a personal phone would do the job, but Bak asserted that these devices are more than just phones, they are “tools of the trade” and thereby need to be well managed: devices must always be available and working.

Once nurses are on a shift, patients can reach them through the smartphones. There’s intelligence built into the system, too. For instance, the system knows if a patient’s primary nurse is occupied with another patient and cannot respond; it will automatically re-direct the call to the secondary nurse.

Moreover, the nurse must respond to the call. “You can’t just ignore it,” said Bak. “We’ve created service level agreements with the nursing staff, and they can’t let the patients sit there. There’s also a central dispatch centre that can see if you’ve responded.”

This is all part of a quality drive. “Whether the patient is in serious pain, or simply wants a blanket, we want to respond,” said Bak. “For this, the communication system is very valuable.”

While much has been accomplished in the past few years, Bak said, “We still have a lot to do.” In particular, more work is being done on the Command Centre. A set of “generation two” tiles are being constructed to provide alerts in new areas.

One of the focuses is on perinatal alerts, and Humber River is creating an early

warning system for babies in distress during perinatal care. Bak stressed that Humber River’s strategic direction isn’t the only solution for improving care and efficiency in the hospital sector. “We’re not saying it’s the only way to go. But it’s how we’ve chosen to invest our money.”

Care providers can maximize benefits of genomic knowledge

CONTINUED FROM PAGE 19

comprehensive record directly into the clinician’s workflow regardless of EHR.

The advantages of this approach are many and include critical IT considerations such as:

- Data liquidity. This enterprise approach means genomic insights can be applied across the organization for better patient care and population management.

Assembled into a comprehensive and discrete informatics layer, data can follow a patient into various clinical settings. The

entire care team can access valuable insights; information is available and not isolated in a single care encounter or specialty area.

- Data governance. There is no doubt that precision medicine introduces new challenges related to lab ordering practices, prescribing decisions and data management. An enterprise-spanning informatics approach means organizations can enact consistent practices according to their own policies and priorities – as well as apply governance to this new layer of complex data to ensure organizational and legal compliance.

Denis Chamberland

CONTINUED FROM PAGE 20

produces is often startling and makes the exercise well worth the extra effort.

So effective is this approach that the health system’s procurement counsel should be asked to structure a robust dual-track negotiation process and be prepared to put his (her) fees at risk in the event of a disappointing result.

There is also reason to doubt the accuracy of the guide’s assertion that negotiations are legitimate provided they do not “result in a material change to the scope of the RFP and the terms of the legal agreement.”

What if the RFP explicitly reserves a right to materially change direction as the health systems learns of the solutions being offered during the procurement process? Particularly where the health system is tapping the market for a highly innovative solution and may even be defining a new path never seen before in the industry, there is nothing sinister about an important change in direction. There is no process unfairness. As al-

ways, provided the language of the bid call document properly anticipates the possibility of an important change, the rule on transparency is honored.

It is noteworthy that the misconception around the bar on negotiations with vendors precedes the arrival of the BPS Procurement Directive by precisely 30 years! Clearly the Directive did not trigger this misconception, and the guide – while usefully clarifying that negotiations are not

“I believe that what is needed now is a higher level of ambition to try new approaches in procurement.”

prohibited by the Directive and despite the best intentions of the myth busters – may well contribute to new misconceptions, as can be seen by point no. 12.

To have called the guide *The Art of the Possible* is apt, as it connotes the goal of trying to achieve something that is good enough rather than being driven into complete paralysis by a desire to achieve perfection. To be sure, the pro-

Recognized as a thought leader in the field of precision medicine, Dr. Joel Diamond is an Adjunct Associate Professor of Biomedical Informatics at the University of Pittsburgh. He is a diplomat of the American Board of Family Practice and a fellow in the American Academy of Family Physicians. He cares for patients at Handelman Family Practice in Pittsburgh, Pennsylvania.

Learn more about Allscripts innovations at the e-Health 2019 Conference, Toronto, May 26-29. Allscripts is a Silver Sponsor.

curement regulatory framework is complex and will continue to provide endless learning opportunities for all of us working in the field. But waiting to have mastered everything before innovating is unrealistic, will not produce the results hoped for, and will unnecessarily slow the pace of innovation.

As a procurement specialist who has worked in public procurement in many industry sectors over many years in Canada and abroad, I believe what is needed now is a higher level of ambition to try new approaches in healthcare procurement. The guide purports to be “for hospital executives”. If significant new innovative outcomes are to be achieved through healthcare procurement, it will fall on such executives to see their way through the barriers to innovation, real and imagined, and ambitiously lead the way.

Denis Chamberland is CEO of MES Group and a lawyer with extensive procurement, technology and trade law experience in the healthcare sector in Canada and Europe. He can be reached at dachamberland@gmail.com