



# IT underpins healthcare

by Anne Phillips

**The Ottawa Hospital is moving forward based on successfully meeting the IT challenges presented by the amalgamation of three hospitals into one.**

Ten years ago, four Ottawa area hospitals were required to amalgamate. Senior Vice President and CIO of the Ottawa Hospital, Dale Potter, spoke recently at an OCRI session in Ottawa about the challenges he met when faced with the diverse information technology systems operating in those hospitals that were now to be one.

Potter, who moved to the public sector from his position with Alcan in Paris, developed with his team an aggressive integration strategy that not only supports the three campuses that comprise the Ottawa Hospital (TOH) today, but one that will take them into the future and supports all the other hospitals within the Champlain Local Health Integration Network (LHIN).

Created by the Ontario government in March 2006, LHINs are not-for-profit corporations that plan, integrate and fund local health services within each region including: hospitals, community care access centres, community support services, long-term care, mental health and addictions services, and community health centres.

Today the Champlain LHIN ([www.champlainlhin.on.ca](http://www.champlainlhin.on.ca)) contains 17 hospitals over a region extending from Hawkesbury to Deep River, Ontario. TOH is by far the largest of the hospitals in the network with three campuses in the city of Ottawa: the Civic, the General and Riverside. TOH has an operating budget of

approximately \$900 million, 1,100 beds, and over 12,000 employees. Its lab runs over 30,000 tests per day and thousands of patients from both the LHIN and bordering Quebec communities are served by its clinics and emergency department. TOH manages the supply chain for the Champlain LHIN.

The administration, operations and care giving arms (which have silos within silos of different specialties of care) of the hospital generate huge amounts of data, all of which need to be captured, stored and transformed into useable information. All aspects of the hospital are supported by information technology: patient registration, clinical results, lab, pharmacy, imagery, records, finance, material management, HR/payroll, staff scheduling, case costing, the network, email, and office automation functions.

Potter is of the opinion that IT people develop, and in fact need, a complete view of all the processes and activities in order to build a system that will support the whole seamlessly. His team at TOH, who are all in-sourced, are the holders of invaluable institutional intelligence. To develop that intelligence, one of the first steps Potter took as he began addressing the challenge of moving from separate systems following amalgamation, was to consult with the staff, saying “Don’t tell me what software you want me to buy, tell me what you need to do.” Potter and his team would then find the best solution. The result is a set of suppliers including companies like GE, SMS, OACIS, Oracle,

Cisco, Microsoft, Dictaphone and others, that supply specialized systems that work in an integrated environment. Educational video conferences, telemedicine and integrated voice response systems (IVRS) are also supported.

Two of the main elements of data accumulation and storage are the EHR (electronic health record) and the PACS (photographic archive computer system). The patient who enters TOH and the care events that occur with that patient are recorded and tracked through the EHR.

TOH’s goal is to be a top 10 performer in its realm. Potter says that there is a “huge amount of pride in the hospital” and this translates into the corporate strategy of building the best – a culture of quality and safety – through service excellence, performance management and physician engagement. Potter is tagged with responsibility for the performance management area. As such he is building an IS (information systems) awareness model so that everyone will speak the same “language” and he and his team will then be able to get to the heart of user needs.

As he sees it, the critical element is to turn that huge amount of data captured into useable information that can be delivered swiftly and accurately to the bedside of the patient. It is moving data from its birthplace in the applications like PACS and pharmacy to the enterprise area and then to the portal for access by staff. Clinicians need a holistic view of all the information relating to the patient, and they need it in one view with one login.

The hospital system must also support chronic care patients such as those living with and managing diabetes, high blood pressure and extended medication regimes.

Some technology is already in place but others, like IVRS, are not only being used in a traditional setting such as communication between staff, but is being extended to provide support in the case of pandemics, emergency response and to monitor patients following discharge from the hospital. For example, Vocantas' CallAssure product (patent pending) helps to automate post-discharge telephone follow up, improving service. The technology being integrated at TOH is shared with other members of the Champlain LHIN.

Obviously a modern hospital operates on a wide variety of IT systems, both uniquely

specialized and not, but all having to work together. It is very important to understand the sequencing and dependencies of the overall system when choosing and implementing a new IT system. TOH is currently trying to do this with their ordering system.

The choice of systems and IT tools, whether large or small, and their integration into the whole is critical to the functioning of today's hospitals ...and tomorrow's, because the pressures of an ageing population and budget stresses means that even more reliance will be placed on IT to support healthcare delivery and quality.

As Potter put it, "It is unlikely you will ever see a sign saying, Patients Wanted." 

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