Improving ED performance at Hotel Dieu and Kingston General

BY TROY JONES, DR. PAUL DUNGEY, MIKE MCDONALD AND JULIE CAFFIN

KINGSTON, ONT. – Every year, the Hotel Dieu Hospital (HDH) Urgent Care Centre and Kingston General Hospital (KGH) Emergency Department together provide care for more than 100,000 patients in Southeastern Ontario. Step by step we are addressing our key goals of finding ways to measure and reduce Urgent Care Centre and Emergency Department wait times.

Step One: Find the right technology and the right partner. In 2010, the HDH and KGH Emergency Program identified the need for an Emergency Department Information System (EDIS) to help manage day-to-day operations and provide real-time data to help with process improvements. A cross-organizational multidisciplinary team managed a thorough evaluation process which included a formal request for proposal, product demonstrations, technical conference calls and reference checks. Funding was made available through the South East Local Health Integration Network.

Wellsoft's Emergency Department Information System (EDIS) was selected as Wellsoft best met our requirements for features, service and support. In addition, Wellsoft met our IT requirements. Wellsoft EDIS works within our current network infrastructure and utilizes HL7 for integration with our hospital systems. Wellsoft EDIS runs on one centralized, virtual server, hosted at KGH. EDIS capabilities are extended to HDH from this central location.

The initial implementation (phase 1 of 3), was completed in March 2011 and included patient tracking, registration tracking, triage documentation, orders tracking, results reporting, patient discharge management, and hospital admissions tracking.

Step Two: Patient tracking. Since the first phase of our EDIS implementation, we have had positive results in both the Urgent Care Centre (UCC) at HDH and the Emergency Department (ED) at KGH. Wellsoft's EDIS is designed to track patients from their first encounter with a triage nurse until the time they are either discharged from the UCC at HDH or the ED at KGH or admitted to an inpatient bed.

The intent is to provide frontline care providers with immediate access to the information they need to track and treat patients more safely and effectively, and to assist with patient flow. Access to real-time ED statistics such as average Length of Stay (ALOS), total holding time, and time to admit has enabled us to assess and
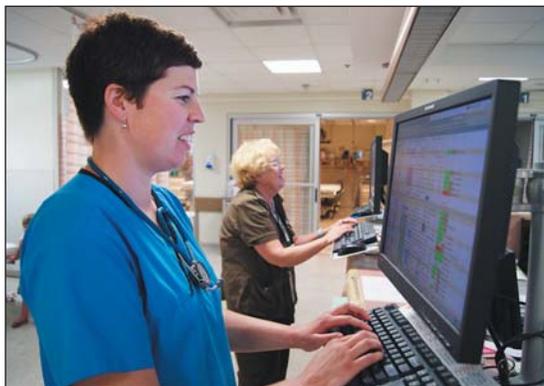
report on wait times, as well as identify areas for process improvements.

Step Three: Electronic documentation. In June 2012, we implemented electronic clinical documentation for nurses and respiratory therapists. Key members of our nursing staff, along with the information management team worked closely with Wellsoft to customize the electronic charting and documentation templates to support provincial health professional standards and the hospitals' inter-professional documentation methodology. Later this year we will complete the second phase when we add electronic physician documentation.

Electronic charting has reduced manual data entry. Our nurses now spend more time with patients and less time looking for charts and doing paperwork. In addition, the triage and care notes are legible and accessible from any workstation in the UCC or ED, which saves valuable time. A

shared clinical data repository between hospitals means that information is readily available for patients who have visits at either hospital.

Step Four: CPOE. After we complete the documentation phase of our implementation, we will move to our third phase: implementation of computerized provided order entry (CPOE) for our clinicians. Wellsoft's EDIS, which is integrated with our hospitals' information system for patient registration and order tracking, will be fully integrated with our laboratory and radiology systems.

Orders will be instantly transmitted to our hospital systems for completion and order status will be tracked in Wellsoft's EDIS. As results become available they will be automatically flagged on the patient tracking display – letting clinicians know they are ready for review – thereby eliminating the wait time currently experienced with the manual review process.

Steps to come: Continued process improvements. We continue to seek process improvements in the delivery of emergency services across our hospitals. Effective management tools such as Wellsoft's EDIS facilitate our goal of managing patient volumes efficiently and safely. Step by step we move closer to our goals.

Troy Jones is CIO, Hotel Dieu and Kingston General Hospitals; Dr. Paul Dungey is Emergency Program Medical Director/Deputy Chief, Hotel Dieu & Kingston General Hospitals; Mike McDonald, RN BScN, MPA, is Acting Chief of Patient Care and Chief Nursing Executive, Hotel Dieu Hospital; Julie Caffin, RN, BScN, BA, MHSc, is Program Operational Director, Cardiac and Emergency Programs, Kingston General Hospital.