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Telepharmacy increases pharmacist availability in small hospitals

BY DAVID MILLAR
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In March 2010, West Haldimand General Hospital, a 23-bed facility with active emergency and day-surgery services in Hagersville, Ont., was looking for ways to include their hospital pharmacy in their outcome-based improvement programs.

Doing so was a challenge, as the hospital also faced a common and persistent constraint: The cost of a full-time equivalent (FTE) pharmacist was hard to justify on the basis of the low medication volumes.

West Haldimand initially entered into agreements with West Lincoln Memorial Hospital, a 50-bed hospital located sixty kilometers away in Grimsby, to share the services of a pharmacist/manager, who spent two days per week (0.4 FTE) at West Haldimand and three days per week (0.6 FTE) at West Lincoln.

Pharmacy technicians and nursing at West Haldimand performed the necessary quality checks when the pharmacist was unavailable. However, it was recognized that this temporary solution ran counter to trends in the healthcare industry, with pharmacy practice becoming more visible and pharmacists increasingly viewed as key contributors to medication management.

Concurrent to this trend, Accreditation

Canada also started to look for evidence of pharmacist participation in outcome-based improvement programs and adverse drug reaction (ADR) risk mitigation planning.

Faced with overwhelming evidence that the status quo was unacceptable in the face of these pressures, West Haldimand management directed their new Pharmacy Manager to find ways to institute medication order review during prime daylight hours and arrange on-call services so that the organization had 24/7 access to a pharmacist.

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Progress toward instituting a clinical

pharmacy model was reprioritized to occur at a later date.

Of the two project objectives, after-hours coverage was less critical because dispensing during these hours was minimal and, if planned well, could be staged during prime hours. Therefore, solving the prime-hour FTE pharmacist oversight was the first order of business.

That project resolved into two medication workflow issues. First was the lack of planned, systematic medication order (prospective) review. Second, and equally important, was consistent, programmatic verification of the actual fill before delivery.

It was fairly obvious that the key was to find and deploy workflow solutions that would reduce cycle times and increase the pharmacist's availability. Likewise, it was obvious that any solution would be information technology-based, since such technology is the only solution with claims of 'doing more with less' or at least 'doing more with the same.' What technology, and at what price?

Assisted by a team from North West Telepharmacy Solutions of Winnipeg, West Haldimand chose the Pharm-Q Electronic Supervision (ES) solution from Envision Telepharmacy of Alpine, Tex.

This state-of-the-art, web-based electronic supervision and medication order management (MOM) solution allows the

authorized hospital pharmacist to review orders from any web-browser, located anywhere. It also provides anywhere/anytime high-definition electronic imaging of completed and filled orders, enabling the pharmacist to verify a fill before delivery to the floor, dispensing machine or patient.

A simplified end-to-end process begins with the nurse scanning an order sheet into the Pharm-Q ES system, at which time it shows up in the pharmacist's queue as a line item waiting review. The pharmacist opens and reviews an order sheet, and either releases it for fulfillment or puts it on hold while waiting for additional information. Once a medication order is filled, the pharmacy technician arranges the medication on a specially designed, high-definition camera station, and takes a series of pictures which are electronically attached to the order sheet image, and are then sent for pharmacist verification. After the pharmacist verifies the fill, the order is ready to be delivered. The whole process occurs while the nurse, pharmacist and technician are in different areas of the hospital and in most cases while the pharmacist is remotely located.

The biggest impact on service levels and cycle time came from the switch from a paper to a paperless system, inherent with the use of a Medication Order Management (MOM) system.

While a paper-based system can be modified to provide remote medication order review by using fax technology, it is not recommended.

Additionally, the advantages of a remote telepharmacy service are only truly available when deployed along with a database-enabled MOM. Such solutions permit a

remote pharmacist to see the order queue and status, meet the demands of fill verification when equipped with high resolution imaging, and meet all of the accreditation standards for pharmacy oversight.

The Pharm-Q ES solution was designed, installed and up-to-speed in eight months. The same pharmacist who previously commuted between two hospitals located sixty kilometers apart could now serve both pharmacies simultaneously during prime service hours.

Installing the remote telepharmacy solution, along with a MOM, provided the coverage and oversight needed for any

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time/anywhere supervision. A recent Accreditation Canada survey at West Haldimand highlighted the hospital's innovative approach to achieving 24/7 pharmacist access using supportive technologies.

While the technology can reduce cycle times, improve scheduling and provide information for data-driven decisions, it still takes a pharmacist to do this work. Before installing any pharmacy workflow technology that promises improved efficiencies, hospitals also should determine whether there is capacity in the current pharmacist's work day to take advantage of the improvements or whether there is additional budget to grow the pharmacist staff.

Otherwise, only part of the problem of

meeting expectations of 24/7 medication review and verification by pharmacists is addressed. In this case electronic supervision provided enough improvement of the pharmacist's time management that additional pharmacist staffing during prime hours was avoided.

What West Haldimand accomplished in less than eight months can be adapted by many small hospital pharmacies looking for ways to improve medication services within very limited budgets.

Likewise, in-house electronic supervision of technicians and nurses also lends itself to large metropolitan healthcare systems facing significant increases in demand for services and concurrent pressure to reduce costs. Applying information and communication technology solutions to these challenges is one of the few tools that can keep the promise to do more with the same.

For its part, Envision Telepharmacy, established in 2004, is a pioneer in developing services, tools and systems that provide electronic supervision and remote order processing through high-bandwidth, standards-based web technology, still imaging, and high resolution video. Enabling and realizing safe, quality patient care and pharmacist access through the use of compliant and cost-effective telepharmacy solutions is its mission. North West Telepharmacy Solutions is the exclusive software distributor of Envision's Pharm-Q Medication Order Management (MOM) software in Canada.

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