

Queensway Carleton Hospital Establishes Innovative Regional PACS to Support Several Provincial Hospitals



Carestream Health's PACS at Queensway Carleton Hospital in Ottawa, Ontario, allows clinicians to access patient information, radiology reports and imaging studies from the same workstation.



Manager of Diagnostic Imaging Shawn O'Rourke (left) and PACS/RIS/VR Administrator Debbie Magee confer on the PACS configuration in place at Queensway Carleton Hospital. The PACS can support a 50 percent growth in imaging procedures over five years, including volume from Queensway's teleradiology services for other hospitals in the region.

Carestream Health's PACS chosen for flexibility, scalability

In keeping with the Canadian healthcare system's focus on integrated eHealth initiatives, Queensway Carleton Hospital (Ottawa, Canada) implemented a PACS that can support 50 percent growth in imaging procedures over five years—and established a regional PACS network that is shared with other provincial hospitals. The 264-bed hospital is a regional referral centre that serves 1 million residents who live within a two-hour drive of the facility.

"Carestream Health came out a clear winner because of its PACS platform's flexibility and scalability, its integrated applications and the highly efficient workstation tools it provides for physicians," notes David Price, Director of Diagnostic Imaging, Queensway Carleton Hospital. "We also appreciate this platform's unmatched Web capabilities and the excellent support we receive from local sales and service personnel."

"Patient care is greatly improved with the precise planning provided by this digital templating tool. It also creates workflow efficiencies in the operating suite since surgeons can accurately select the surgical screws and other devices they will need in advance, so the suite is already prepared when the surgeon and patient arrive."

—Shawn O'Rourke, Manager of Diagnostic Imaging

As part of its conversion to a digital workflow, the hospital's Diagnostic Imaging department implemented a KODAK DIRECTVIEW DR 9000 digital radiography system and three KODAK DIRECTVIEW CR Systems. Carestream Health's CR and DR Systems were selected based on their productivity-enhancing touch screen interface, excellent image quality and ease of use. The company's consistent user interface between CR and DR equips technologists to maintain top productivity even as they use different platforms for imaging patients.

One of the key objectives of the new KODAK CARESTREAM PACS was desktop integration with RIS and other third party imaging applications. "Now we have the ability to access patient information, radiology reports and imaging studies from the same workstation. In addition to integrating its PACS with our new RIS, Carestream Health also integrated speech recognition software for even greater productivity gains," Price explains.

Integrated voice recognition speeds turnaround and enhances service to referring physicians. Final radiology reports are available within 24 hours for ER and inpatient exams and average just 24-48 hours for outpatient exams. In the past reports often took up to 10 days. "Referring physicians now book followup appointments two days after the exam, because they know the imaging results will be available," said Shawn O'Rourke, Manager of Diagnostic Imaging. "Using voice recognition is also much more productive for our radiologists."

Integrated Applications Earn Praise

Orthopaedic surgeons appreciate direct access to OrthoView surgical templating software from the PACS platform. "Patient care is greatly improved with the precise planning provided by this digital templating tool. It also creates workflow efficiencies in the operating suite since surgeons can accurately select the

surgical screws and other devices they will need in advance, so the suite is already prepared when the surgeon and patient arrive," O'Rourke reports.

The PACS' embedded 3D software is also an advantage as the hospital's future plans call for new modalities including a 64-slide CT scanner that can provide advanced cardiac and vascular functionality.

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While integrated tools enhance productivity for both radiologists and physicians, Web-based access is also essential. "Our physicians need reliable and productive access to images from any location. CARESTREAM PACS offers excellent Web-based connectivity that delivers consistent tools and interfaces for convenient image review regardless of whether a physician is at the hospital or in a remote location," said O'Rourke.

"Other vendors we evaluated required users to perform a series of steps to access information and were more difficult to use since the user interface and tools were very different."

A VPN provides referring physician access to images and information from the RIS and PACS, as well as laboratory results.

Other Hospitals Join Regional PACS Network

Queensway is currently sharing its RIS and PACS platforms with Carleton Place & District Memorial Hospital (Carleton Place, Canada). While Carleton Place has PACS servers and other components on site, it transmits images to Queensway radiologists for reading.

Each facility can retrieve imaging studies performed at both sites for efficient information exchange. Kemptville District Hospital (Kemptville, Canada) has also implemented PACS and is using Queensway for storage and disaster recovery. Imaging studies generated at all three hospitals are stored for two years on RAID storage at Queensway's data centre.

After two years, studies are moved to near-line storage for the length of time required for each exam. Exams are also stored on tape for disaster recovery.

Discussions are underway to add two more hospitals to this regional PACS and storage network to achieve enhanced efficiency in terms of both cost and care. "It's not cost effective for smaller hospitals to implement their own long-term storage and disaster recovery plans, and they usually do not have the IT staff needed to support extensive storage networks," said Price.

He adds that shared PACS networks and shared radiologist resources allow remote facilities to benefit from access to centralized radiologists and specialists, which greatly improves the timeliness of diagnosis and enhances patient care.

Essential Investment in Hospital's Future

The hospital's PACS installation was governed by a business plan that projected a five-year payback on the investment. Not only was PACS a smart business decision, it was an essential investment in the hospital's future.

"Converting to PACS and digital imaging technologies is the only way the hospital can adeptly handle its projected growth rate of 10 percent a year in imaging services," notes Price. This growth is driven by both population gains in the area and Queensway Hospital's planned expansion into a Cancer Centre in 2009. At the end of 2007, the radiology department was processing 115,000 imaging exams a year.

David Price is Director of Diagnostic Imaging at Queensway Carleton Hospital. He says the Carestream Health PACS was chosen because of its flexibility, scalability, integrated applications, and efficient workstation tools.





Sandra Jones-Spurr, MRT, prepares to review images captured using the KODAK DIRECTVIEW DR 9000 digital radiography system.

During 2008, Queensway Carleton Hospital will upgrade its PACS to provide a streamlined, completely Web-based environment for all users. Radiologists will have access to advanced clinical applications from any location. The upgrade also provides a foundation for future workflow changes that could involve reporting from one interface and sending to multiple RIS vendors, according to Debbie Magee, PACS/RIS/VR Administrator.

"Ontario is an extremely competitive environment where we need to support patients and referring physicians by providing excellent care and prompt results. Being able to offer PACS and digital imaging technologies helps us deliver top quality patient care and is also important for recruiting radiology staff, particularly radiologists," she said.

More Information

To learn more about KODAK CARESTREAM Solutions, contact your Carestream Health representative or call 1-877-865-6325, ext. 655.

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