CUSTOMER CASE

Sunnybrook Health Sciences Centre, Toronto, Canada

MUSICA² images convince radiologists and technologists at Sunnybrook

Performing more than 300,000 imaging exams annually including 100,000 plain radiographic procedures, Sunnybrook Health Sciences Centre uses Agfa HealthCare's CR, DR and RIS/PACS solutions to enhance clinical care and aid research

AGFA HealthCare

It was originally called Sunnybrook Veterans Hospital when opened shortly after WW II. While still retaining its veterans' care component, Sunnybrook Health Sciences Centre (Sunnybrook) has evolved into one of Canada's leading academically focused hospitals, fully affiliated with the University of Toronto. With the largest regional trauma centre and the second largest cancer centre in Canada, Sunnybrook's mission is "We care for our patients and their families when it matters most. In partnership with the University of Toronto, Sunnybrook leads by discovery, innovation, teaching, and learning" while its vision is "Sunnybrook invents the future of healthcare".

Part of Sunnybrook is the Sunnybrook Research Institute (SRI) located on an adjacent campus. It employs 600 scientists and invests more than $100 million annually in medical research involving molecular and cellular biology, clinical epidemiology, brain, heart and cancer studies. A key SRI discipline involves advancing medical imaging techniques and applications.

Medical imaging department and imaging research Interact to achieve academic and research mandates

A tight interaction between Sunnybrook's Medical Imaging Department and imaging research at SRI is evident, according to Henry Sinn, Director of Medical Imaging at the hospital department. "For example, our Radiologist-in-Chief is also an SRI associate scientist, and many staff radiologists here are associate scientists and investigators at SRI."

Sunnybrook has invested in the integrated RIS/PACS (Radiology Information System/Picture Archiving and Communication System), a corporate applications solution provided by Agfa HealthCare for its high quality and dependability in imaging informatics. The solution provides a common platform for clinicians and researchers to access images for clinical, academic and investigation purposes and more importantly, for collaboration when required.

In addition, IMPAX PACS is integrated with one of North America's largest regional medical imaging/information archives – Toronto East Network (TEN). This is also powered by Agfa HealthCare's IMPAX system that faithfully manages 2.5 million exams annually, supporting multiple digital imaging solutions at 23 hospitals with data flowing seamlessly even at peak, high-volume periods.

"Sunnybrook is currently generating 14 terabytes of image data to be stored in this offsite diagnostic image repository and has the largest share of image archive among member hospitals in the TEN group," says Henry Sinn.

Radiologists and technologists find DR image quality to be excellent

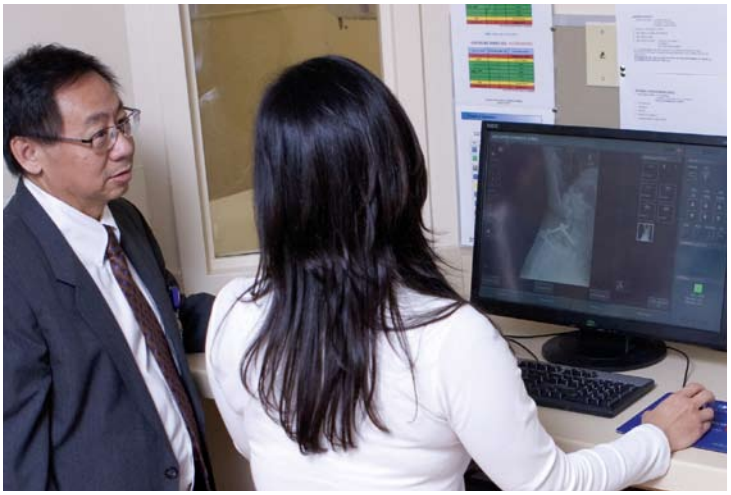
The General Radiography Division has ten general radiographic rooms, a fleet of ten mobile X-ray machines as well as a dedicated ceiling suspended U-arm radiographic Direct Radiography (DR) system serving a three-bay trauma room in Canada's first and largest trauma centre. Most DR systems in use are supported by Computed Radiography (CR) digitizers from Agfa HealthCare. Over the summer, a new DX-D 500^n ceiling-mounted DR solution was installed in each of two procedure rooms.

"With image quality highly emphasized here, we felt it was time to advance to the excellent detail that DR brings to all general and special procedures enhanced by Agfa HealthCare's MUSICA^2 image processing software," Henry Sinn said. "Radiologists and technologists like the resolution, latitude, contrast and range from the DX-D 500^n and its accompanying NX workstation. The image quality is excellent. Of course, our long experience with Agfa HealthCare's CR and IMPAX, as well as its impeccable reputation as the backbone of TEN, were positives as well."

With the choice made, installation of the two Agfa HealthCare DR solutions began, as well as the company's DX-S integrated, point-of-care CR digitizer with state-of-the-art image quality for general radiographic exams. For the DR rooms, the DX-D 500^n uses two high-quality Cesium Iodide detectors resulting in fast cycle times and rapid image preview

Agfa HealthCare's contribution

- A mix of CR, DR, RIS/PACS solutions designed to cost-effectively enhance radiology productivity with the highest image quality possible regardless of platform
- Ability to propose realistic solutions that address customer needs, complemented by reliable, consistent and knowledgeable support



"On multiple levels, Agfa HealthCare's DR, CR and PACS solutions have repeatedly demonstrated their value."

Henry Sinn, Director of Medical Imaging, Sunnybrook Health Sciences Centre, Toronto

Did you know ...

- Sunnybrook made history in 2008 when it received an unprecedented $74.6 million research award.
- As of 2010, it was estimated that more than half of all Canadians have EMRs.

between exposures. Detectors also offer the potential for significant patient dose reduction. Henry Sinn adds technologists immediately saw a major improvement in exam turnaround thanks to these attributes, as well as the ease of operating each solution's accompanying NX workstation with MUSICA² image processing software.

"We recently had an example of how the DX-D 500ⁿ greatly enhances productivity," Henry Sinn added. "We typically have four to five technologists performing exams each workday in the outpatient area. But after a recent holiday ending in a long weekend, and the first week of having both new DX-D 500ⁿ systems in full swing, we inadvertently wound up having just three technologists on duty for a heavy orthopaedic clinic patient schedule. Not only were all patients examined promptly with fewer technologists, but we estimated the exam room's efficiency improved by 75 percent over our previous configuration thanks to the DX-D 500ⁿ's fast preview, high image quality, simplified operation and overall versatility."

Image quality, obviously, remains the top attribute for any X-ray solution installed at Sunnybrook. "Our academically focused radiologists are a tough crowd to convince," concludes Henry Sinn. "On multiple levels, Agfa HealthCare's DR, CR and PACS solutions have repeatedly demonstrated their value." •

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