



Testimonial | The Alfred Hospital, Australia

Innovative Carestream DRX Systems Help Improve Care for Critically Ill Patients



DRX Systems Deliver X-ray Images in Seconds, Enabling Physicians to Make Immediate Diagnosis and Treatment Decisions

As one of the leading healthcare organisations in Australia, The Alfred Hospital is committed to delivering exceptional patient care and attracting highly qualified and dedicated clinicians and staff. Leaders of the hospital's radiology department are members of the Australian Institute of Radiology (AIR) and continuously follow advances in the field and evaluate new imaging technologies.

An innovative imaging technology that has been implemented at The Alfred Hospital is Carestream's DRX systems, which allow the hospital to convert existing X-ray rooms and portable imaging systems from computed radiography (CR) to digital radiography (DR). DRX detectors are cassette-sized, so they fit into the Buckys of existing systems, with images available for viewing in about five seconds. These images can be immediately displayed on a console and communicated wirelessly to a PACS or other image management system.

In urgent care settings, the ability to instantly review images can dramatically improve patient care; with The Alfred Hospital handling 60% of trauma patients in Victoria, the hospital installed two DRX detectors in the emergency department's X-ray room. One detector is placed in the X-ray system's wall stand and the other is used in the table. The detector from the table can be quickly removed and used for patients that need to be imaged on a stretcher, explains Gillian Tickall, Chief Radiographer, The Alfred Hospital.

She adds that both physicians and radiologists report the DRX detectors deliver the exceptional image quality and high resolution needed to enhance patient care.

"The DRX detector delivers exceptional benefits for trauma care. We can place the detector behind any area of the patient and capture images in seconds. Physicians review these images at the patient's bedside and can make immediate decisions about how critical the patient's condition is and what the next steps for treatment should be," Tickall reports.

Fast Image Access is Essential for Trauma Cases

"In a trauma setting we talk about the 'golden hour' because for serious injuries, the patient's life can depend upon whether we can detect and correct the problem within an hour," she explains.

"During a recent trial using the DRX detectors in the trauma centre, we managed to shave off a good 9-10 minutes from

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the total imaging time, allowing physicians to review images constantly rather than having to wait for them to be processed. That's a huge amount of time when you need to prepare a patient for surgery or other emergency procedures. In the past doctors and nurses were waiting for us to produce X-ray images, now they are able to take immediate action to deliver the care that is required," she said.

And since the detector is thin and wireless, radiology technologists can take multiple images of different areas of the patient very quickly and with minimal patient movement. "Moving seriously ill or injured patients not only increases their pain but can actually cause further damage," she adds.

Special Software Enhances Visualization of Tubes, Lines

Seriously ill patients may need medical devices such as breathing tubes, PICC lines or nasogastric tubes. Physicians must often work quickly to insert these devices, but X-rays are needed to verify correct placement. Now physicians can verify placement in just seconds by looking at an image on the monitor and adjusting the device if needed at the bedside.

Carestream also offers a unique Tube and Line Visualization Software feature that produces a companion image from the original exposure that is designed to optimise display of tubes or lines. "This software produces a much sharper, clearer view of the tube or line without requiring another exposure, so it's a major advantage for our physicians and patients," Tickall notes.

Another key area of concern is patient dose, particularly for ICU patients and other seriously ill patients that may need to be imaged one or more times every day to monitor their condition. The Alfred purchased three of Carestream's DRX-1C lower-dose cesium iodide detectors for use with its portable imaging systems that conduct bedside exams for seriously ill patients.

Detectors Deliver Reduced Dose

"The new DRX-1C detectors have dramatically reduced dose," Tickall said. "We used to use exposure settings of 85 KV on 5 or 6 MAS for a chest exam and now we are using 90KV on 1.6 MAS. That is a huge dose saving for patients who require multiple exposures on a daily basis during their time in ICU and even though they are absolutely necessary it is nice to have that dose saving."

As with all technology upgrades, obtaining funding can be a challenge. Hospitals are now subject to the newly introduced capital sensitivity policy, which has extended the lifespan of equipment to reduce expenses. Carestream's DRX family of systems fits perfectly into this plan by allowing hospitals to upgrade existing X-ray rooms and portable imaging systems at a fraction of the cost of purchasing new X-ray systems.

"Carestream's DRX technology was clearly designed to address both clinical needs and financial realities," said Tickall. "The DRX-Mobile Retrofit Kit is ideal in this situation, even if you don't have the capital funding to replace equipment, by using the DRX-Mobile Retrofit Kit we can still produce high-resolution images in just seconds so we can deliver enhanced patient care while using our existing X-ray systems."

About The Alfred Hospital

A member of Alfred Health, The Alfred Hospital has been recognised as a pacesetter in the national medical arena and has consistently been linked to progressive developments in acute care, medical research and health care teaching.

Today, The Alfred enjoys a reputation as one of the world's leading health care providers, which is largely attributable to its concentration of specialized leading edge services, including Cardiovascular Medicine, Heart and Lung Transplant, Trauma Care, Oncology and Respiratory Medicine.

The Alfred provides a wide range of specialized medical and surgical services in Victoria and offers every form of medical treatment except obstetrics and paediatrics.



CARESTREAM DRX Dectector. Carestream's DRX family addresses both clinical needs and financial challenges.