NSW public hospitals accessing digital radiology images

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HealthShare NSW is leading innovative solutions for digital imaging by making radiology images available across all NSW public hospitals through the implementation of the first state-wide Enterprise Imaging Repository (EIR).

The newly developed EIR is a centralised repository for medical images captured by radiographers and reports compiled by radiologists. The new system will allow clinicians and radiologists quick and efficient access to patient studies, and assist them in making faster and more accurate diagnoses and treatment plans, leading to better patient outcomes.

HealthShare NSW, Australia's largest health support service run through NSW Health, engaged Fujitsu and their partner - TeraMedica Inc - to draw on their international experience in developing the EIR.

Jim Prekop, President and CEO, TeraMedica Inc said that he sees the EIR as "one of the most groundbreaking projects of its kind in the world, as it will connect over 100 clinical facilities, each using their own patient identifiers, Electronic Medical Record (EMR) systems, Picture Archiving Communication Systems (PACS), Radiology Information Systems (RIS), and archives".

The new system has come about through NSW Health's commitment to improving patient care and increasing access to patient records across the state through implementing Information and Communication Technology systems.

Joe Hughes, Program Manager, Medical Imaging Program, HealthShare NSW said that "implementing information and communication technology systems such as the EIR is fundamental to the delivery of ongoing quality health services to NSW public hospital patients. This is because we face an increasing demand for services due to an ageing population, rising rates of chronic diseases, increasing patient expectations on service as well as the financial sustainability of the NSW public health system".

The new system will benefit patients because clinical staff will have immediate access to their previous and current images and reports irrespective of which NSW public hospital the patient visits.

The EIR will also reduce the need for costly repeat studies, as well as improve patient safety by reducing exposure to radiation. It will also reduce the need to unnecessarily transfer patients from regional hospitals.

The new system will provide clinicians with a more comprehensive picture of the patient's condition and medical history. It will also save time as clinicians will no longer wait for physical films or CDs because they will have immediate access to medical imaging studies across NSW.

"Australia maintains a low profile when it comes to healthcare IT, but we're a very innovative country. Now, in addition to having the first children's hospital PACS in the world, we have one of the largest and most intricate vendor neutral imaging repositories. We expect to be among the first in the world to tangibly demonstrate the benefits this can provide to the people of New South Wales", said Joe.

Supporting technology

The EIR system acts as a central repository for digital images and reports captured using PACS-RIS. The PACS and RIS systems were the first step in providing universal access to radiology images across the state.

In recent years HealthShare NSW has implemented PACS to capture, store and distribute digitised images replacing the need for and cost associated with x-ray film printing, saving clinicians time looking for films or duplicating examinations.

In parallel, the RIS was installed to support radiology departments in all key areas of patient service provision including: ordering exams, coordinating appointments,

registering patients, and reporting on the exam.

Pilot

A pilot of the EIR was launched across Western Sydney and Nepean Blue Mountains Local Health Districts (LHD) and the Children's Hospital at Westmead. This involved eight hospitals that together perform approximately 400,000 radiology exams a year.

Dr Kerrigan, Paediatrician, Orange Health Service, was one of the first to use the new EIR system during the pilot and achieved success in tracking and supporting a patient in their journey across various hospitals.

"*I was recently treating a boy who was born in Nepean Hospital and then transferred to his local hospital in Orange where he was under my care. I would normally wait up to a few days for the images to come from other hospitals, but the EIR enabled me to view the child's images instantly and also to compare images taken at Orange to those taken at Nepean. This meant the treatment of the patient was more efficient and he was able to be discharged sooner*", said Dr Kerrigan.

Due to the success of the pilot the EIR system will be rolled out across all 15 LHDs in NSW in the coming year, making radiology images and reports universally available across the state.

Acknowledgements