



## A Step Closer to Systemised Image Access, But ...

A small but important step has been taken towards Australia developing a safe and efficient system to allow broader access to diagnostic images. But it's only a start.

Developing the fully integrated system that Australians expect and deserve requires a tremendous amount of work, substantial funding and the broad goodwill of all parties involved.

The first step, announced by the Federal Health Minister, the Hon Tanya Plibersek, is an \$8 million investment for patients' diagnostic imaging reports (not images) and pathology reports to be uploaded to their personally controlled electronic health records (PCEHR).

According to the Minister, the money includes funding for planning and design work to upgrade medical software used by health professionals so "results can be downloaded or uploaded at the click of a button".

ADIA welcomed the surprise announcement and is committed to working with the government to bring it to fruition. Indeed, we are well placed given the work ADIA and RANZCR have already done.

However, it is unlikely to be as simple as suggested with the government's timeline of 2014 looking ambitious. The main issue is that the government has yet to detail exactly how the system would work.

Who would upload the report? The radiologist who makes it or the GP/specialist after consultation with the patient? Who would have access? How are the reports updated or removed? How will reliability and accuracy be maintained?

For the system to be universal, all diagnostic imaging (DI) providers will have to be linked to PCEHR and, quite rightly, providers will need confidence that the system is secure and workable before they commit.

These concerns are shared by Pathology Australia, with CEO Prof Katherine McGrath expressing "serious concerns about patient safety" and describing the \$8 million announcement as a "pre-election rush".

Assuming the details can be worked out, ADIA envisages DI reports being routinely uploaded to the PCEHR system as uniform PDF images. These PDFs could have embedded links to connect to the images stored in DI practice systems.

When up and running, this could be a useful start—providing GPs, specialists and patients with an electronic record of past DI examinations and reports.

However, what is really needed is accessibility to original images, with all images stored by practices in accordance with agreed standards.

All treating clinicians should have desktop access to past patient images. Together with RANZCR, ADIA has created a roadmap which defines a process to create a picture archiving and communication system for DI in Australia.

The strategy – **Securing Quality Outcomes: Systemised Access to Digital Images** – is fully supported by the Medical Software Industry Association of Australia, and is available at the ADIA website ([www.adia.asn.au](http://www.adia.asn.au)).

At the moment, with no plan, vision or standards, crucial diagnostic images are being stored and shared in any number of ways, with many simply being lost or locked away.

Dr Julian Adler is a member of the ADIA Informatics Subcommittee which developed the roadmap. "Radiologists, hospitals and all sorts of providers are acquiring and storing excellent data, but they don't have the systems which allow data to be shared between providers and clinicians in a seamless and timely way," he said.

It's simply unacceptable that in Australia, which boasts one of the best healthcare systems in the world, it's still incredibly difficult—often impossible—to transfer a person's diagnostic images to where they are needed.

This adds additional costs to the healthcare system; it slows diagnosis and exposes patients to undergo unnecessary scanning.

A video outlining the need and solution can also be found at our website.



While ADIA works with the government and other stakeholders to develop the initial system to share DI reports, we will also continue to garner support for the early stages of the strategy which are:

- Developing guidelines for image date storage, retention and disposal, and
- Development of an orderable catalogue.

An orderable catalogue—a nationally agreed list of DI descriptors—is necessary even for the government's DI report plan to be efficient.

It's right that private practices also invest in the system which, in the long run, will provide considerable savings for all concerned. Thankfully, there are a number of well-tested, patient-centric solutions openly available for consideration. But even then we estimate it will take four years for a system to access digital images to be put in place.

That's why ADIA is now actively working with all parties to seek agreement on the way forward.

**Dr Sue Ulreich**  
ADIA President

*The views expressed are those of ADIA and publication of this article does not in any way constitute an endorsement by The Royal Australian and New Zealand College of Radiologists (RANZCR).*

## PACS and Data Availability

### The Potential for Medical Error

The following incident was submitted to the Radiology Events Register (RaER - [www.raer.org.au](http://www.raer.org.au)). Anyone working in medical imaging can enter a near miss or adverse event by following the link from the website. It should only take five to 10 minutes and will help to inform practice and improve patient safety in medical imaging.

#### Incident Report

**Description of incident:** An upgrade to the Picture Archiving and Communication System (PACS) took longer than expected and resulted in loss of functionality in the PACS. The next day it was evident the images could not be transferred to PACS patient folders. This resulted in delayed reporting of images that were acquired but not loaded into PACS.

**Contributing factors:** Unexpected difficulties with the upgrade and lack of situational awareness as to the severity or impact of this issue and no plan of action available for dealing with this problem.

**Consequence/outcome:** Delayed reporting and referrers unable to view images in a timely manner.

**Action taken:** All radiologists were made aware of the problems and arrangements were made for radiologists to work late to report the outstanding studies.

**Preventability:** Having plans for PACS upgrades with contingency and potential problem action plans and redundancy capability in place. Ensuring adequate communication of problems across department with escalation if problems are encountered and having PACS health dashboards, alerts and escalation policies and procedures.

**Reporter:** Radiologist

#### Discussion

Health information technology systems, particularly those in use in radiology (PACS, RIS, CPOE etc.), have been deployed by healthcare organisations globally and are promoted as the solution to many of the challenges faced by

radiology departments<sup>1,2</sup>. One of the primary goals of a PACS is to increase the availability of timely results at multiple locations, by multiple providers or referrers. However, there is growing evidence that problems with PACS and similar systems can impact on patient care, and lead to unsafe practice and harm to patients<sup>3</sup>. Although it is clear that good clinical practice is dependent on the proper functioning and integration of the PACS system into a facility, radiologists are generally given minimal training on the use and operation of such systems. Awareness and resolution of the potential flaws in a system will prevent patient harm and reduce the risk of litigation. Any issues related to integration into a radiology unit or healthcare organisation must be addressed.

While it is easy to rectify a single error, for example, an error that was detected because a referrer complained that a result was not available, recurrent errors of the same type are unacceptable. Practices are expected to have reliable IT systems for acquiring and reporting images and for distribution of reports. Creating resilient systems means ensuring that the infrastructure can recover from any faults and failures quickly and that the same types of error will not be repeated. Health IT systems must be (re)designed to reduce our dependence on vigilant practitioners and auditing processes to detect and prevent patient harm<sup>3</sup>.

The information technology error demonstrated in the RaER incident report above provides insight into how data availability errors occur and how inadequate planning, a lack of foresight and, importantly, poor understanding of IT system integration can affect patient safety and the quality of care provided to patients. Reviewing your protocols for managing both planned and unexpected downtime of the PACS system may be the best place to start thinking about managing risk related to healthcare information technology.

Written by **Natalie Hannaford** – Australian Patient Safety Foundation; **Dr Catherine Mandel** – Peter MacCallum Cancer Centre

#### References

1. Collin, S., et al., *Implementation of computerised physician order entry (CPOE) and picture archiving and communication systems (PACS) in the NHS: quantitative before and after study*. *BMJ*, 2008. 337(a939).
2. Siegel, E.L. and B. Reiner, *Work Flow Redesign: The Key to Success When Using PACS*. *Journal of Digital Imaging*, 2003. 16(1): p. 164-168.
3. Savoie, B. and P. Nagy, *PACS and the Potential for Medical Errors*. *Journal American College Radiology*, 2012: p. 756-758.



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