Australian Government

Australian Radiation Protection and Nuclear Safety Agency

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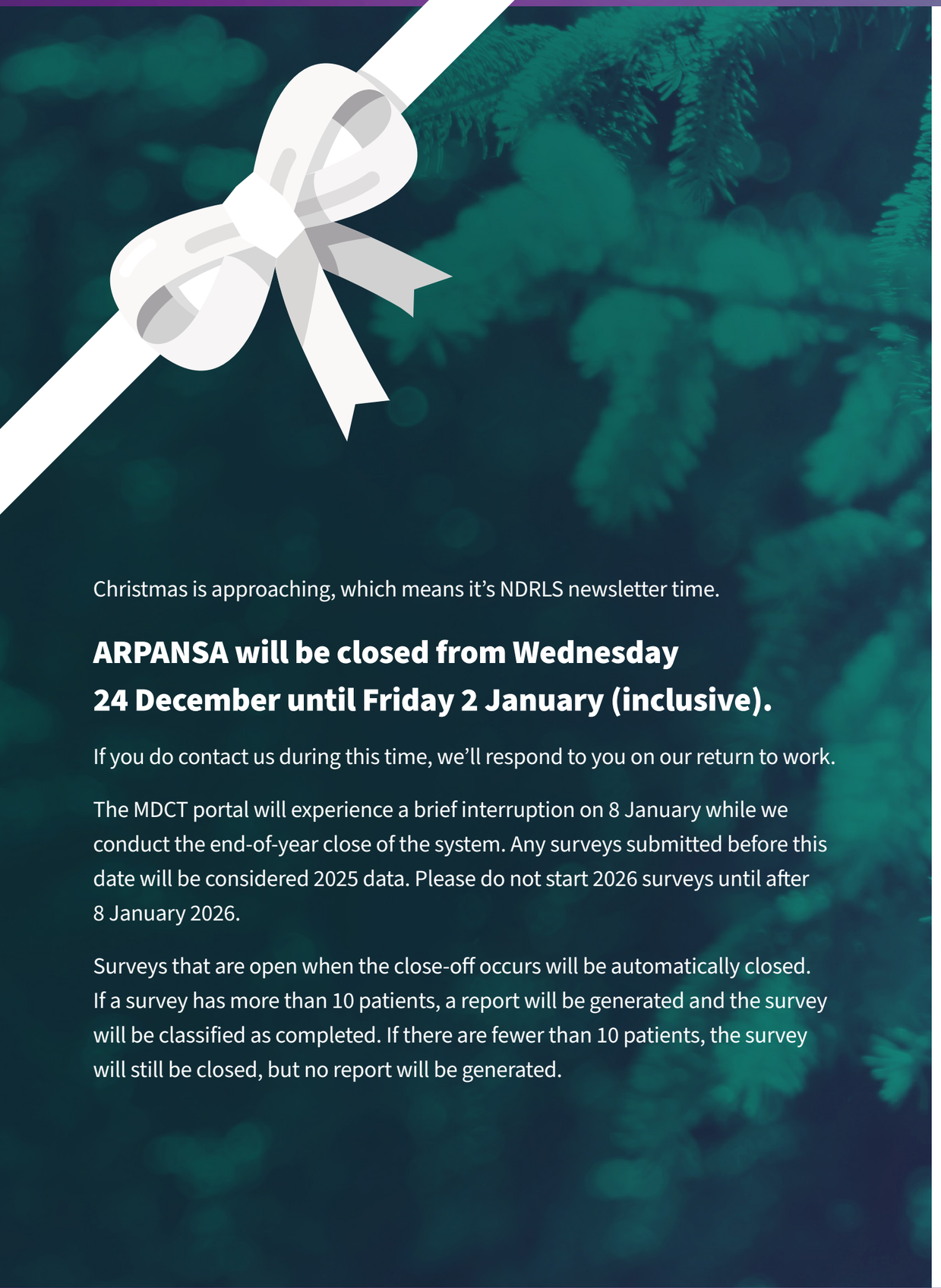
Welcome to the

ARPANSA NDRLS Newsletter 2025



Christmas is approaching, which means it's NDRLS newsletter time.

ARPANSA will be closed from Wednesday 24 December until Friday 2 January (inclusive).

If you do contact us during this time, we'll respond to you on our return to work.

The MDCT portal will experience a brief interruption on 8 January while we conduct the end-of-year close of the system. Any surveys submitted before this date will be considered 2025 data. Please do not start 2026 surveys until after 8 January 2026.

Surveys that are open when the close-off occurs will be automatically closed. If a survey has more than 10 patients, a report will be generated and the survey will be classified as completed. If there are fewer than 10 patients, the survey will still be closed, but no report will be generated.

MDCT news

By the end of November this year, the NDRLS had received:

3960 **MDCT surveys** from

534 **unique scanners**, including

90+ scanners that have **never** submitted data before.

This is a record for the first 11 months of the year, but we are still waiting for more than 250 scanners that submitted surveys in 2024 that have not yet done so this year. Please get your data in now! The more facilities we have participating, the better the outcome for everyone.

Updated DRLs

The national DRLs were updated in July this year, with the DRL values for the existing 8 protocols reduced and 2 new protocols added.

Submitting surveys to ARPANSA's NDRLS serves two purposes: the first is to compare your doses against the current DRLs. The second is to contribute data that will be used to calculate future DRLs. It is important that contributors to the service provide a true reflection of the doses delivered at their clinics, otherwise we might end up with artificially low DRLs and in a 'race to the bottom', So, please do not 'curate' your data!

Low Dose Chest CT DRL

A low dose chest CT DRL was added in July 2025 and, as of the end of November, 123 surveys have been submitted. Early indications suggest the DRL is quite conservative, with approximately 90% of surveys submitting Facility Reference Levels (FRLs) below both the $CTDI_{vol}$ and DLP DRLs. We will continue to monitor the submitted data and may look to amend the DRL at a later date.

The low-dose chest DRL is only for scans conducted as part of the lung cancer screening program or that match the imaging requirements of the screening program. Please do not compare the low-dose chest DRL with your high-resolution chest CT scans or other chest protocols.

MDCT news *(continued)*

Paranasal Sinuses CT DRL

Over 200 paranasal sinus CT surveys have been submitted to the NDRLS as of the end of November. As with the low-dose chest CT DRL, early surveys submitted to the NDRLS suggest that the paranasal sinus CT DRL is also quite conservative, with 90% of submitted FRLs being below both the $CTDI_{vol}$ and DLP benchmarks.

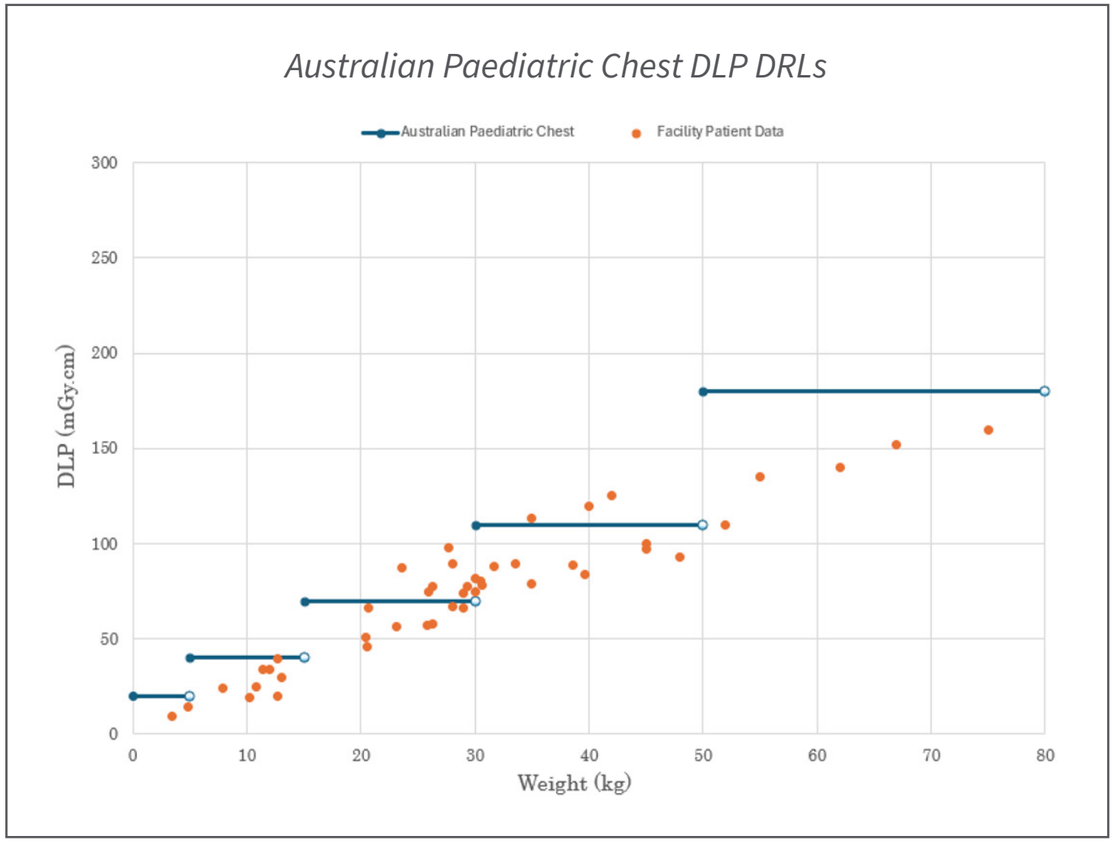
The intended scan region for the paranasal sinuses DRL is from above the frontal sinuses to the hard palate. Some surveys submitted have had median scan lengths of over 20 cm, suggesting a different protocol, that perhaps isn't suitable for comparison, has been used.

Diagrams of the defined scan regions are available on our website, or you can download our poster (pdf) that includes diagrams and some useful information about completing CT DRL comparisons.

Paediatric DRLs

July saw the release of new DRLs, and an associated change in data collection methodology, for paediatric patient scans. The DRLs have moved from a two-tiered age stratification (baby/infant and child) to 5 age categories for head CT and 5 weight categories for chest and abdomen-pelvis scans.

The change in categorisation means that the MDCT portal can no longer be used for paediatric surveys. Instead, the NDRLS has developed a spreadsheet where each survey can include patients from any of the weight or age categories.



We want to bolster the statistical strength of the paediatric DRLs and to do that, we need to collect paediatric data from more imaging facilities. You can find the Excel workbook on our website – if you regularly scan patients below 15 years of age, please consider participating.

If you have any questions about paediatric DRLs, or any other questions for the NDRLS, please contact us at ndrld@arpansa.gov.au.

Image-guided and interventional procedures (IGIP) news

In 2024, 162 surveys were submitted from 106 rooms at 39 facilities. Thanks to all who continue to contribute data. Please spread the word to your colleagues. Third quartiles of the FRL distributions for 2024 are shown in Table 1. We are planning to launch a review of the IGIP NDRLs in 2026. While we have received a healthy level of submissions for coronary procedures, more data is needed for the other procedure types.

Table 1: Third quartiles of FRL distributions for IGIP in 2024

Procedure	Surveys	DAP ($Gy.cm^2$)	$K_{a,r}$ (Gy)
Diagnostic coronary angiogram	54	20.9	0.30
Single lesion PCI	33	44.1	0.72
Line insertion	15	2.5	0.011
Barium swallow	11	16.6	0.068
Water-soluble swallow	6	9.6	0.054
Pelvic embolisation	8	145	0.62
Cerebral angiogram	6	70.8	0.43
EVAR	5	174	0.62

PCI = percutaneous coronary intervention

EVAR = endovascular aneurysm repair

DAP = dose area product

$K_{a,r}$ = cumulative air kerma at the reference point

IGIP close-off for 2025 and mailout of 2026 templates

IGIP survey spreadsheets for 2025 will continue to be accepted and processed through to **Friday 30 January 2026**. New IGIP survey spreadsheets for 2026 will be sent to all existing IGIP survey registrants from **Friday 23 January 2026**. Don't forget to read the *Introduction and Instructions* tabs and use the Unit Settings box on the Data Entry page of the template, and then make sure you use those units when you enter your data.

Safety guide updates

In exciting news, the safety guides published by ARPANSA for diagnostic and interventional radiology (RPS 14.1), nuclear medicine (14.2) and radiotherapy (14.3) are being revised and updated. This will be the first time the safety guides have been updated since their introduction in 2008.

Many of the NDRLS staff are involved in this update and we hope that public consultation will occur in the latter part of next year.

Do you know people who worry about radiation? Or someone who should be a little more aware?

Radiation in medical facilities is very well controlled and staff occupational radiation doses are typically small, negligible or non-existent. Staff not educated about radiation may be unsure of what radiation is, how it may impact, or be unnecessarily concerned.

That's where ARPANSA's Occupational Radiological Exposure (ORE) comes in – a free, easily accessible practical training tool designed to inform and reassure. It's suitable for all staff, user-friendly and individually tailorable by occupation and potential level of exposure to radiation. For example, someone on reception or in maintenance may only need and receive a small amount of information, whereas a nurse working with CT and brachytherapy could benefit from more.

ORE helps you understand what radiation is, how it behaves, and why simple good practice is so effective that occupational exposure is usually minimal and, in many cases, doesn't occur at all.

Why use ORE?

- It's free and online so you can do it in your time!
- It builds confidence through knowledge.
- It provides reassurance that most occupational doses are low.
- And it reinforces straightforward safety habits.

Learn more

If you have any queries or suggestions, please contact Alan Mason on 0414 747 447 or any of the Medical Imaging team at ARPANSA. ARPANSA's ORE training module helps staff stay informed and safe.