

Diagnostic Imaging Medical Physics (DIMPs)



Health

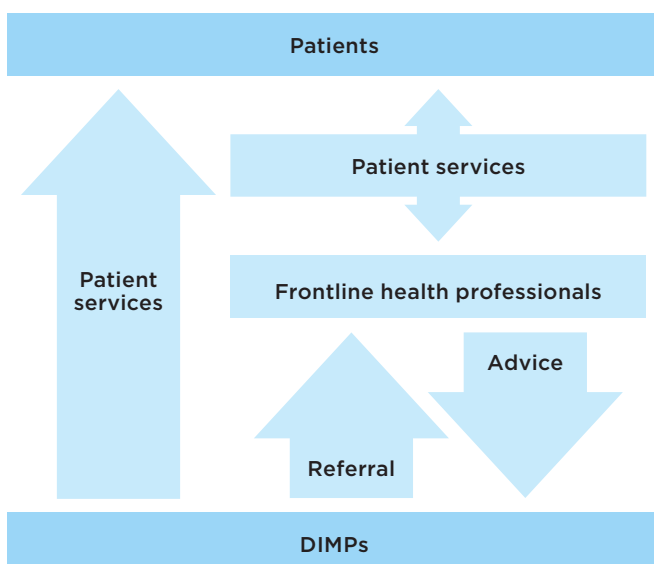
Who are DIMPs?

Collectively, Radiology Medical Physicists and Nuclear Medicine Medical Physicists are referred to as Diagnostic Imaging Medical Physicists (DIMPs), whom are recognised as a 'small but critical' workforce. DIMPs provide expert scientific input into multidisciplinary health teams to deliver clinical services that comply with the standards set out by the Australian Radiation Protection and Nuclear Safety Authority (ARPANSA), DIAS and legislation.

DIMPs play a vital role in the optimisation of image quality and patient dose across a range of diagnostic and interventional imaging modalities. They are also the qualified experts for consultation on the dosimetry, quality assurance and radiation protection associated with these modalities. Nuclear Medicine DIMPs are also qualified experts for the therapeutic uses of unsealed radioactive substances.

Service access and contact points

DIMPs are classified as 'allied health' professionals. Although there is no direct referral pathway, patients can access the expertise of a DIMP via other associated health professionals. DIMPs interact directly with patients providing advice, explaining risks and taking part in unsealed source therapy.



Workforce characteristics 2014



81.4 total certified FTE

Required FTE **114.1**

National FTE shortage **32.7**



Current qualified positions per million population **2.7**

Requirement per million **4.8**

25.5 total certified DIMP FTE in NSW



Total number of radiology DIMPs working clinically in NSW public hospitals **4**



14 registrars in training Australia-wide

4 registrars in training in NSW

Considerations for service planning

- Training capacity is limited by a shortage of senior DIMPs for supervision, and by difficulties accessing equipment for training purposes
- The small-but-critical nature of the workforce necessitates a focus on workforce sustainability
- Additional training placements are required to meet current and projected service demand
- Currently not all Local Health Districts have access to a DIMP in Nuclear Medicine, and very few have access to a DIMP in radiology

Drivers of demand for DIMP services

Patient outcomes may be impacted as a result of insufficient access to a DIMPs expertise in the appropriate field

An increasing emphasis on compliance and reporting requirements around radiation protection and safety place increased demand on the role, e.g. DIAS and ARPANSA requirements

Awareness, understanding and perceived value of the profession by community and key stakeholders is limited

Initiatives to increase coverage of, and access to, diagnostic imaging services are required

Increasing use, complexity and capability of therapies and equipment causes increases in DIMP workloads

Increasing service volumes due to increasing population size, the ageing population, increasing burden of disease and the increasing acuity of presenting patients represents high likelihood of increasing service demand

The cross-over of radiology & nuclear medicine disciplines creates certification and scope of practice challenges

The increasing personalisation of the application of medical radiation is likely to increase DIMPs demand

Challenges

Senior DIMPs have limited capability to provide training and supervision

Awareness and attractiveness of the profession to prospective students is limited

A significant proportion of the workforce is nearing retirement age



Drivers of DIMP workforce supply

The present capacity of the system to train graduates is recognised as a constraint, limiting the supply and flow of future professionals. This is due to a lack of suitably qualified supervisors in the workforce and difficulty in accessing equipment for training purposes due to availability. Supervision costs and training equipment access are also barriers to professional development

The projected attrition rate due to retirements is likely to impact a significant proportion of the workforce

DIMPs perceive that a present lack of strategic, whole-of-workforce approaches to workforce planning and succession limits service development and coverage

The number and location of training centres is highly limited

There is limited availability of career progression opportunities within the Australian workforce for qualified DIMPS

International demand and opportunity for DIMPS may impact local recruitment and retention

Opportunities

Potential exists for state-wide centres to provide services to facilities and training centres within appropriate geographical regions, or groupings of LHDs in a 'hub and spoke' configuration.

DIMPs share a degree of scope overlap with administrative staff and there is potential for these groups to perform some tasks which are currently performed by DIMPs, thereby increasing DIMP capacity for high value activity, as opposed to routine administration and compliance tasks

Scope exists to ensure all Local Health Districts have access to expert DIMP advice

There is a growing global demand for DIMPs. The International Medical Physics certification board was established last year and is seeking to set up an international accreditation scheme which will create a truly global standard and mobile workforce. Not all nations presently participate. Overseas recruitment may increase the supply of DIMPs in Australia.

References

Round, W. H. 2012, 'A 2012 survey of the Australasian clinical medical physics and biomedical engineering workforce' *Australasian Physical and Engineering Science in Medicine* vol. 36, pp. 147-157

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