

Addressing radiology workforce issues

Lizbeth M Kenny and Matthew W Andrews

Diagnostic imaging is a key component of patient management and must be provided in a clinical context

Task transfer has been suggested as a solution to medical manpower shortages in this issue of the Journal¹ and elsewhere.²⁻⁴ The Royal Australian and New Zealand College of Radiologists (RANZCR) has recently explored this issue pertaining to diagnostic imaging (DI)⁵ in response to the Quality Use of Diagnostic Imaging (QUDI) Program's discussion paper on role evolution.

Radiologist workloads are heavy and increasing.⁶ In addition to the general growth of medical services, traditional history taking and clinical examination are increasingly supplemented by and dependent on multiple and more complex DI to provide a definitive diagnosis. Expansion of DI is placing workforce pressures on all members of the DI team. Radiographers are also in short supply.

Radiology services have always been provided by a multidisciplinary team, including radiologists and radiographers. The optimal DI outcome is dependent on team members working in a cooperative manner, mutually recognising and maximising individual areas of expertise.

Rapid changes in DI technology necessitate constant review of work practices to provide the most efficient service. Optimal patient outcome must form the cornerstone of any changed practice. Role evolution, including task substitution and delegation, is one potential means of better utilising the skills of the whole DI team. It must be considered in the context of responsibilities and core competencies to perform tasks. Clear definition of all DI tasks and essential task competencies is thus essential.

The radiologist carries a duty of care and legal responsibility to the patient and referring doctor for the overall conduct and result of the radiology service. The radiologist's expertise is built on a background of medical training and experience followed by specialist training in medical imaging. The comprehensive radiology service is an integral component of patient management. It includes appropriate use, performance and interpretation of DI and imaging-guided intervention, drawing on the specialist skills and knowledge of the radiologist. The radiology report, which requires technical observations and medical interpretation in the clinical context, documents the medical specialist service. Such a report can only be provided by a radiologist.

Focusing on image reporting by non-medical personnel assumes that preclinical, clinical and specialist training and experience can be fast-tracked or avoided without negative impact on the nature and quality of the DI service. In addition, radiology has become a more body-system-based rather than modality-based service — reflecting patient presentation and radiology's increasingly clinical role. Plain x-rays are just one component of the often complex and integrated imaging required to optimise patient management. There is also a misconception that plain x-ray interpretation is simple and thus readily delegated, and that the radiologist's role is limited to provision of images and reports. This ignores the clinical context of the DI service.

The RANZCR is constantly considering entire service delivery measures to mitigate the impact of DI team workforce shortages. Providing additional training places may eventually ease the burden on DI teams, but there will be a considerable lag period. There is little doubt that a substantial proportion of current imaging has no impact on patient outcomes and is thus unnecessary. Increased early involvement of the radiologist in clinical management, particularly to advise appropriate imaging, would minimise unnecessary studies. This would relieve workforce pressures across the entire DI team, whereas reporting by radiographers would exacerbate current radiographer shortages and potentially diminish the clinical value of the DI service. Quality and efficiency of service to patients is paramount, and system changes should not be driven primarily by the desire to create potential new career paths, although the RANZCR recognises that work satisfaction of all DI team members should always be considered. Introducing new technologies such as picture archiving and communication systems (PACS) will largely eliminate the need for film production by radiographers and handling by radiologists, thus contributing significantly to workforce efficiency.

In summary, the RANZCR recognises that coping with increasing demands on DI services requires innovative approaches. The cooperative team approach remains crucial to service delivery. Scope for review of tasks within the team may exist, but any changes must occur with current key competencies maintained. The radiologist's responsibility for the totality of the DI service is a function of core skills and experience and is non-delegable. Radiologists are uniquely placed to advise the need for and choice of imaging. They supervise and interpret radiological and interventional procedures and communicate results to referring clinicians. Any system redesign must build on these pivotal roles of the radiologist. The RANZCR is firmly of the view that the radiology report, which communicates the medical interpretation of the patient's imaging in a clinical context, cannot be currently delegated to those who are not trained initially as medical practitioners and then as medical imaging specialists.

Author details

Lizbeth M Kenny, MBBS, DRACR, FRACR, President,¹ Radiation Oncologist²

Matthew W Andrews, MBBS(Hons), MMed, FRANZCR, Principal Councillor, Economic Affairs and Workforce,¹ Radiologist³

¹ Royal Australian and New Zealand College of Radiologists.

² Division of Oncology, Royal Brisbane Hospital, Brisbane, QLD.

³ Radiology Department, Sandringham and District Memorial Hospital, Melbourne, VIC.

Correspondence: lizkenny@bigpond.net.au

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