Associate Professor Nick Stephenson

SUBMISSION FEEDBACK

Please provide comments on all or any of the following, particularly in relation to each Option outlined in the Consultation Regulation Impact Statement:

- The appropriateness and feasibility of the proposals.
- Whether the proposed changes will address current concerns with the regulations in the diagnostic imaging sector.
- Potential costs associated with each option.
- Potential benefits associated with each option.
- Potential workforce impacts.
- Impacts on patient access to appropriate imaging.
- Rural and remote access for patients.
- Time required to implement the potential changes.
- Impact on both smaller diagnostic imaging practices and larger practices.
- Any other comments, questions and concerns that relate to the proposed

options. In addition, you may wish to respond to questions listed against specific

Options. Submissions should include substantiating evidence, where possible.

Option 1 – No regulatory changes or deregulation (refer to page 23 of the RIS)

Features:

- The current supervision requirements remain unchanged.
- The person under the professional supervision of the radiologist would require the appropriate qualifications, credentials, or training to provide the service.
- The current substitution rules in the *Health Insurance Act 1973* remain.
- Rural and remote exemptions.

Comment

Thank you for the opportunity to respond. This is a very important government consultation and it is very pleasing to see the approach taken, focussing mainly on supervision, which I believe is a fundamental and key factor in the delivery of safe, appropriate and high quality diagnostic imaging (DI) services and is essential to make sure there is real benefit to patients.

This is because there are direct Diagnostic Imaging (DI) patient and service safety and quality benefits of having a radiologist or radiologists on-site where DI services are provided:

- perform imaging guided procedures, which are growing in importance to acute inpatient and some outpatient care
- available for contrast reactions and other patient safety issues
- review prior imaging studies and other test results as necessary, some of which the patient may bring as hard copy and may not be available for remote digital review
- review appropriateness of the requested examination or procedure, including as necessary by personal attendance on the patient
- optimisation of particular studies, including as necessary interviewing of patients and/or carers, reduction of radiation exposure, ensuring appropriate coverage of the anatomical area(s) of interest, refining and supervising contrast administration, etc
- on-site and face-to-face supervision of radiographers and sonographers, nurses, clerical and other staff

personal attendance and image production where necessary for ultrasound and flourographic studies
- real time review of initial imaging in case further targeted imaging or another modality (e.g. ultrasound) is required (mammography being the classic example)
- performance of barium studies, angiograms and other diagnostic contrast studies requiring the personal attendance of a radiologist
- be the local *accountable* face of the practice, including being the clinical leader for all staff, referrers, managers, hospital administrators, etc
- be available for face-to-face referrer consultation
- be the local and consistent advocate for more appropriate use of DI with referrers, hospitals and patient groups
- attend local meetings: practice-based clinical or management or education meetings, referrer meetings, oncologic multi-disciplinary team meetings, hospital medical staff meetings, other clinical governance meetings, local or regional health service development and improvement meetings, etc
- be a part-time senior manager if necessary
- assist, mentor and educate management, particularly in clinical governance matters
- mentor and educate staff so as to optimise safe role extension
- mentor and educate medical students and junior hospital staff, so at the very least there is better utilisation of DI services, but also for workforce development
- etc.

I support dot point 2 above, i.e. "The person under the professional supervision of the radiologist would require the appropriate qualifications, credentials, or training to provide the service."

Otherwise I do not support this option, because it does not in any way address the stated purpose and objective, nor the industry's concerns. At the very least the regulations and definitions (including matching accreditation standards) need clarification and I believe they also need considerable strengthening.

I note from the RIS Consultation document, p.4:
The purpose of this regulation impact statement (RIS) is to review the existing requirements for the provision of Medicare eligible diagnostic imaging services and explore options for enhancing quality, reducing waste and minimising harm caused by inappropriate, unnecessary and sub-optimal diagnostic imaging services.
And p.12:
The Government's objective is to ensure that Medicare benefits are currently claimed and paid for diagnostic imaging services that are provided by appropriately qualified professionals, who have the training, knowledge, and experience required to provide quality outcomes for patients and that patients receive services that are clinically appropriate, safe and provide benefit.

I support the stated purpose and objective and I hope my response helps them to be met. As a taxpayer, that is what I want. As a regional Australian and doctor I know rural communities, patients and referrers will want it so long as they have an adequate understanding of the issues. As a radiologist, I want there to be funding for patient services I and others provide that truly contribute to patient health outcome, without funding being wasted on inappropriate, unnecessary and suboptimal services, of which too much currently is.

Potential costs
No change, but that means that practices providing supervision and all the associated safety and quality benefits will have increased costs compared to those practices not providing supervision.

Potential benefits
It will maintain current patient access, but that is at the expense of unaddressed inappropriate, unnecessary and suboptimal services and the unaddressed competitive factor mentioned in the paragraph above.

Workforce impacts
It will [deleteriously] entrench:

1. The current workforce maldistribution between metropolitan and non-metropolitan Australia - because the rural exemptions will not be addressed
2. Teleradiology as a default adequate general service model, resulting in degraded safety, quality and patient benefit.

Patient access to appropriate imaging
As stated in the potential benefits paragraph above, while access will be maintained, it will be access to services that are potentially unnecessary, inappropriate or suboptimal, because the services are not adequately regulated (whether by industry or government).

Rural and remote access
See the above two paragraphs, as well as the relevant Comment box below.

Time required; Impact on practices of different size; etc
No further comment.

Option 2 – Minor changes including clarification of current requirements (refer to page 24-26 of the RIS

Features

- Amendments to the current supervision requirements to clarify the circumstances under which a radiologist and/or specialist or consultant physician must provide supervision and how the supervision must be provided.
  - Professional supervision would require: the medical practitioner be available to observe and guide the conduct and diagnostic quality and safety of the examination and if necessary in accordance with accepted medical practice, attend the patient personally, within a reasonable period of time.
- The personal attendance requirement of musculoskeletal ultrasound would be amended to align with all other ultrasound items.
- The person under the professional supervision of the radiologist would require the appropriate qualifications, credentials, or training to provide the service.
- The current substitution rules in the *Health Insurance Act 1973* remain.
- Rural and remote exemptions.
- Specified qualification requirements for ultrasound providers.
- Definition of diagnostic ultrasound

Comment

I support at the very least clarification of the current requirements, but that will not be enough to achieve the purpose and objective and it will not address adequately the industry's concerns. In other words, there will still be unnecessary, inappropriate and suboptimal services, suboptimal patient benefit and ongoing suboptimal utilisation of Medicare funding.

There is no doubt that as per page 14 of the RIS, the DIST needs to be amended to align and ensure consistency with the relevant Act and legislation, by removing "or a person employed by a medical practitioner".

My preferred definition of supervision is:

"The medical specialist or consultant must be available to:

- Observe and guide the conduct and diagnostic quality and safety of the examinations
- If necessary and in accordance with established medical practice, to attend on the patient personally within 10 minutes."

This is on the following assumptions:

- It applies to usual business days and usual business hours (9am-5pm), noting that there

needs to be a margin of latitude for meal breaks, attendance at a multidisciplinary meeting nearby, emergency attendance on a patient at a nearby hospital or other imaging site. My view here is that the radiologist needs to be on-site for at least 6-7 hours of the 8 hours between 9am and 5pm of a usual business day and thus cannot fully supervise more than one site a day.

- It applies to all CT, mammography (except Breast Screen services, which have their own accreditation and regulation and are not funded by Medicare), ultrasound, MR and
  fluorographic services (e.g. barium swallow, meal, enema, small bowel series, sinography and the like), but not plain x-rays.
- It must be a radiologist for CT, MR and mammography (not another specialist).
- A radiologist must be on-site (within the actual practice premises) for the parenteral (non-oral)
  administration of any contrast or drug and it must be a radiologist (or accredited trainee) who performs all imaging guided procedures and interventions.

With respect to the time of 10 minutes, versus the "reasonable period of time" (RIS, p.24; and above), I note the further discussion of this on p.25 of the RIS. I do not support the concept of supervision by
a single radiologist of a number of practices in a single region. The added clarity of "within the examination" (i.e. close enough to attend the patient "during their scheduled appointment [time]") is inadequate, because there could be argument about the appointment length, etc. I believe to be truly clear and enforceable, an actual time needs to be given.

Musculoskeletal ultrasound
See the Comment box below.

Rural and remote exemptions
See the relevant Comment box.

Ultrasound (specified qualifications of providers and a definition of diagnostic ultrasound)
See the discussion of this in the Musculoskeletal Ultrasound Comment box.

Potential cost and access impacts
It is expected that there will be a net reduction of sites with this Option, more so with Option 3. It will only be a marginal reduction with this option, which would result in a marginal efficiency gain for those practices closing sites (and thereby also averaged across the sector). The downside is that there will be marginally less consumer access, but that is offset by the safety and quality gain, i.e. offset by the common good that comes from achieving the stated purpose and objective.

However, there will be two significantly increased costs:

1. In regions where there is a relative shortage of the radiologist workforce (some outer- metropolitan regions and virtually all non-metropolitan regions) practices will have to pay radiologists extra to either move to or regularly travel to outer metropolitan, RA2 and RA3 sites that need new or increased supervision (noting that if radiologists are travelling there will be associated travel and accommodation costs). My experience is that to attract a radiologist to move to a regional (~RA2) site, a 'regional salary premium' of <u>at least</u> 25% per year pro rata (FTE) per radiologist is required, even more in rural (RA3) Australia, depending on the remoteness and size of the town or city the DI site is located in. This cost should decrease to ~zero once there are adequate numbers of radiologists who choose primarily to live and work where health services are provided for patients.
2. Having adequate resources to allow for reporting at the sites, including network radiology considerations. It could be argued that the reporting workstation could be moved with the radiologist if the role is moved full time to a new site, but for sites where there may be only part-time supervision (e.g. RA3+) or where there may be more than one radiologist on-site in a fluctuating manner, then there will be some reporting workstation redundancy. In addition, where a radiologist is required to supplement the local workload by reporting studies from other sites (network radiology), then having adequate ITC infrastructure (including download bandwidth) is essential.

See more discussion of this in the Rural and Remote Exemptions Comment box.

Potential benefits

This option would result in achievement of some of the stated purpose and objective and addressing some of the industry concerns, noting that I believe there needs to be considerable strengthening of the regulations and related standards and definitions to achieve a satisfactory improvement.

In addition, the expected consolidation of sites (a net reduction of sites with more modalities, equipment, staff and radiologists at each site; which will only be marginal with this option but considerably more with Option 3 and implementation of the Comprehensive Practice definitions) will have direct quality benefits:

- The group nature of radiology (where while most radiologists are multi-skilled generalists they each usually have areas of subspecialty interest) lends itself to better quality coverage of all body systems, modalities and patient ages and conditions when there are more than one radiologist within the one site. The following would all be enhanced: peer communication;
  instant 2nd opinions; mentoring of junior radiologists; optimizing teaching and learning opportunities; cover for meal breaks and other breaks; cover for an emergency response during procedures, etc. In addition, it means more sites would be in a position to train radiology registrars, which the RANZCR is trying to facilitate as part of its network training model (with the full support of the Australia Medical Council). Thus there is a potential direct workforce benefit.
- The change to a level playing field (which would be marginal with this option and of greater impact with Option 3 and implementation of the Comprehensive Practice definitions) will result in more competitive activity and resultant benefit at the real patient and service safety, quality and efficiency/value end of the competitive spectrum, rather than a deleterious focus on exploiting weaknesses in the current regulations and standards.

Potential workforce impacts

The Royal Australian and New Zealand College of Radiologists have the best workforce data on radiologists in Australia, noting that the Australian government data is either not significantly different or based on data that is out of date. Based on the RANZCR 2013 Workforce Report there were 1,856 active radiologists and by the RANZCR 2012 census there were 1497 FTE radiologists in Australia in
2012. It is my understanding that there are ~700 comprehensive sites in Australia. Thus there are more than enough radiologists to cover all current CT and comprehensive sites, noting that if Options
2 or 3 were implemented there would probably be a ~5-10% reduction in the number of sites. Please note however that there is a maldistribution of the radiologist workforce, the nature and significance of which is discussed in the Rural and Remote Exemptions Comment box.

Time required to implement

Clarification could and should occur very promptly. All it is doing is clarifying the original intent, so there should be no reason for delay.

Impact on practices of different size

The impact will vary not on practice size per se, but will vary directly on the site:[on-site]radiologist ratio, i.e. the impact will vary depending on the ability of the practice to provide adequately supervising (i.e. on-site) radiologists at its practice sites (where it provides more than plain x-ray).

Musculoskeletal Ultrasound (refer to page 25-26 of the RIS)

Questions:

- Are the principles as outlined satisfactory to clarify the requirements?
- What reasons, if any, are there for the personal attendance requirements for musculoskeletal ultrasound to remain?
- Would a minimum set of guidelines for 'accepted medical practice' per modality be appropriate?
- What savings are anticipated to be realised from removing the personal attendance requirements for musculoskeletal ultrasound services?
- What additional costs are anticipated to be incurred by requiring a medical practitioner (eg radiologist) to be in close proximity to attend on a patient personally within a

reasonable period of time in circumstances where this is not currently the situation?

- What other costs (if any) might be associated with the proposed changes?
- What are the potential consequences of the proposed changes?

Comment

I support changing the personal attendance requirement of *musculoskeletal ultrasound* so as to align with all other ultrasound services, because musculoskeletal ultrasound is now a mature service and like all ultrasound, the need for a radiologist (or other appropriate medical specialist, e.g. DDU, COGU, etc) to personally attend depends on:
nature of the patient's clinical problem (symptoms, history, physical examination, etc) and the referrer's request

- knowledge, skill and experience of the [ASAR] sonographer
- nature and results of any prior imaging or other tests or information
- radiologist confidence on the day.

Ultrasound [in general] - specified qualifications of providers and a definition of diagnostic ultrasound
It is about time the roles and definitions of ultrasound were at the very least clarified. It is a mature technology and recently there has been considerable divergence of two types of ultrasound imaging used in medicine, namely:
Diagnostic – imaging services performed by an appropriately knowledgeable, skilled and experienced specialist medical practitioner [sonologist] at the request of a referrer, with the following caveats: there is a valid referral; an Australian Sonographer Accreditation Registry accredited/credentialed sonographer can perform the study (obtain the images) but only under the supervision of the sonologist who is able to attend (as per my proposed supervision definition), or else a student sonographer who, in addition to the over-riding sonologist supervision, is under the tutelage and [close] supervision of an ASAR-accredited sonographer who is on the premises while the study is being performed and who personally attends on the patient as necessary depending on the student's ability (etc); protocols are in place for the services provided, which must include comprehensive coverage of the body region(s) relevant to the patient's clinical problem and the referral; there are minimum equipment standards; the sonologist provides a written, final report; captured images are stored and available to the referring clinician and other clinicians involved in the patient's care (as appropriate).
Point of Care – targeted (or focussed) imaging performed by a clinician during or as part of their clinical examination of a patient.

To be an "appropriately knowledgeable, skilled and experienced specialist [sonologist]" able to provide ultrasound services for referred patients, I believe the following qualifications are necessary:

- FRANZCR for all ultrasound
- DDU for either all ultrasound or as limited by the DDU type, e.g. DDU (O&G) allows provision
of obstetric and gynaecology services
- COGU or CMFH for obstetric and gynaecology services
- FRACS Vascular Surgeon for vascular ultrasound.

Point of Care ultrasound should not be funded by the DIST, e.g. it should either be part of new Medicare consultation items relevant to each situation or considered part of the current consultation items.

Option 3 – Practice based approach (refer to page 27-34 of the RIS)

Features

- Amendments to the current supervision requirements to clarify the circumstances under which a radiologist and/or specialist or consultant physician must provide supervision and how the supervision must be provided.
  - Professional supervision would require: the medical practitioner be available to observe and guide the conduct and diagnostic quality and safety of the examination and if necessary in accordance with accepted medical practice, attend the patient

personally, within a reasonable period of time.

- The personal attendance requirement of musculoskeletal ultrasound would be amended to align with all other ultrasound items.
- The person under the professional supervision of the radiologist would require the appropriate qualifications, credentials, or training to provide the service.
- Computed Tomography services would only be able to be provided in a comprehensive practice, with the exception of CT of the coronary arteries (items 57360 and 57361).
- Supervision would be tailored to the type of diagnostic imaging practice.
- A comprehensive practice would require a radiologist to be available during agreed operating hours.
- Where a radiologist is on site during ordinary operating hours, the radiologist would be allowed to determine the supervision requirements for the practice and have the flexibility to implement and supervise efficient and effective processes.
- Where a radiologist is on site during ordinary operating hours, the radiologist would be allowed to substitute a requested service for a more appropriate service, without the need for consultation with the requester, if the substituted service has a lower MBS fee than the requested service.
- The current substitution rules in the *Health Insurance Act 1973* remain.
- Where a radiologist is NOT on site during ordinary operating hours, a radiologist must be on site for the performance of the following services:
    - Mammography;
    - The administration of contrast; and
    - Image guided intervention procedures/surgical interventions.
- The reporting and supervising radiologist would not have to be the same person, but practices would be required to maintain records which indicate the name of all the radiologists involved in the service.
- Rural and remote exemptions.
- Specified qualification requirements for ultrasound providers.
- Definition of diagnostic ultrasound.

Comment

This is my preferred option and I support it, with the following caveats: with respect to 'supervision' as noted above in the Option 2 Comment box; with respect to Ultrasound as in the relevant Comment box; with respect to Substitution as below.

Substitution
It is my understanding that radiologists already have the ability to substitute another imaging examination of lesser or equal Medicare cost. In addition, we radiologists can contact the referrer and discuss imaging options with them, including getting them to send a new referral or the radiologist making a note on the original referral re the conversation with the referrer. The only problem in this regard might be if the referrer (or their locum, etc) is not available, when the imaging may need to be delayed after attendance on the patient and confirming any change or other arrangement with the patient. This underscores the importance of adequate supervision (i.e. having the radiologist on-site where the patient is) to allow for this to occur optimally (in the best patient's health care interest). I do not believe any more is required and any greater allowance could be dangerous because:

- Some in the radiology profession would abuse it, harming the process.
- We radiologists do not always have the 'clinical ability', without consultation with the referrer, to decide what is best for every patient after perusal of a referral, some information from a professional staff member (radiographer, sonographer, nurse or NM technologist) and usually a relatively short consultation with the patient. We are very rarely eligible for a 104 consultation item, for time efficiency reasons alone. Short consultations with patients are considered part of the DI item, but such consultations do not extend to an always-adequate history taking and physical examination and we cannot profess to have the same clinical ability as a good GP or a consultant physician or surgeon in their field of specialty.

Appropriateness and workability of the changes
Certainly the regulations, definitions and standards need more than 'clarification' if patients, referring doctors, government, taxpayers and other payers want to significantly:

- enhance quality, reduce waste and minimise harm caused by inappropriate, unnecessary and sub-optimal diagnostic imaging services
- ensure that Medicare benefits are currently claimed and paid for diagnostic imaging services that are provided by appropriately qualified professionals, who have the training, knowledge, and experience required to provide quality outcomes for patients and that patients receive services that are clinically appropriate, safe and provide benefit.

This option provides an excellent structure for implementing meaningful change for the common good. There will need to be some refinement of definitions and other wording in the regulations, services table and alignment with accreditation standards so that ambiguity is eliminated, i.e. so that the intent is achieved and services can be adequately monitored and when necessary, regulations and standards enforced.

In addition, getting the right balance between what should be regulated and what should be accredited will require some refinement by negotiation during the process of definition refinement.

Potential cost and access impacts
See my response in the Option 2 Comment box.

Potential benefits
See my response in the Option 2 Comment box.

Potential workforce impacts
See my response in the Option 2 and Rural and Remote Exemptions Comment boxes.

Rural and Remote Exemptions
See the relevant Comment box.

Time required to implement
This will require ~6 moths to optimally refine, align and balance the definitions and other wording in the regulations, services table and accreditation standards so that ambiguity is eliminated, that the intent is achieved and that services can be adequately monitored and enforced.

During this time practices can prepare themselves for the basic intent (i.e. better on-site supervision), noting that there may need to be transition arrangements for non-metropolitan practice sites, depending on what is agreed for Rural and Remote Exemptions.

Impact on practices of different size
See my response in the Option 2 Comment box.

A Comprehensive practice (refer to page 28-29 of the RIS)
Questions:

- Are there any other types of practices which have not been identified?
- Are there comprehensive practices that do not currently have a radiologist onsite?
- What are the costs of employing a radiologist onsite during ordinary operating hours?
- What are the costs of non-comprehensive practices expanding to become comprehensive practices?

- Are there enough radiologist for this to occur? What are the barriers?
- Is there any role for standalone CT and, if so, how would current safety and quality concerns be addressed? What will be the impact of this change on providers and patients?
- What other costs (if any) might be associated with the proposed changes?
- What are the potential consequences of the proposed changes?

Comment

I support the concept of a comprehensive practice being a key factor in the delivery of appropriate and quality imaging services, which includes CT and MR only ever being provided where there are at the very least x-ray and ultrasound services also provided. This is because at the very least the modalities are often complementary (a specific patient or imaging problem may require 2 or more modalities to solve) and substitution requires relevant modalities on-site, e.g. substituting ionizing CT for non-ionising ultrasound in a paediatric patient.

There are comprehensive sites that currently do not have on-site radiologists, the number of which is hard to know (noting some may have a radiologist on-site 'part-time').

The costs of providing an on-site radiologist have been answered in the Option 2 Comment box. Access

impacts, potential benefits and workforce impacts are also answered in Option 2 Comment box, noting that there is further discussion in the Rural and Remote Exemptions Comment box.

I believe there is no role for 'CT alone' sites, except possibly in a remote hospital or other triage site where there is:
- on-site x-ray
- no local expertise adequate for the performance of diagnostic ultrasound 9and hence no associated ultrasound service)
- local patients and doctors who could use the service appropriately (and without a commercial conflict of interest), e.g. trauma cases where there is a large distance to the next nearest CT and where the doctors are able and available to manage patients appropriately based on agreed state health jurisdiction trauma and emergency care protocols.

Non-radiologist specialist practice (refer to page 30-31 of the RIS)

Question

- Are there any other services currently performed by non-radiology specialists?

Comment

Not that I am aware, beyond the discussion in the RIS document. Nonetheless, while Nuclear Medicine services are not considered in this RIS Consultation, there is a considerable workforce shortage and maldistribution of nuclear medicine physicians and [dual trained] NM radiologists that needs to be addressed at some stage by government and the relevant Colleges.

ADDITIONAL ISSUES FOR CONSULTATION

1. Rural and remote exemptions (refer to page 31-32 of the RIS)

The intention of having rural exemptions is to ensure patients have access to services without compromising on quality. However, current arrangements for rural exemptions vary for each of the modalities, creating confusion due to an inconsistent approach. The current approach is also difficult to administer.

Questions

- Does the current rule meet its goal of increasing access for patients without

comprising on quality?

- Should exemptions be geographically/distance based rather than looking at population base and local availability of specialist services?
- Are there any other mechanisms that provide incentives for local services provision in rural Australia?
- What is the role of tele-radiology? Should it be the only service, or an adjunct the local service provision?
- Should the exemption not be available for certain types of services?

Comment

It is time the rural and remote exemptions are changed, given the dog's breakfast of exemption criteria that are not uniformly complied with or enforced.

Exemptions undermine the safety, quality and funder surety benefits of DI service provision. Whatever argument can be applied to rural and remote sites to justify 'adequate remote/off-site supervision' without a local/on-site radiologist present, could just as easily be applied to small or quiet metropolitan sites, or teleradiology as a reasonable DI service delivery model as a whole.

To do so for rural and regional areas only is inequitable to rural communities in terms of access to quality and safe services and also inequitable to rural providers who have radiologists 'on-site', especially those who have local radiologists living and working in regional and rural areas providing services to regional, rural and remote communities. Practices that recruit and retain locally resident radiologists should be rewarded, not the current situation where they are at a significant economic competitive disadvantage.

There is a systemic bias in Australia, because there has been a collective failure of governments and the profession to make sure that there is an equitable and appropriate distribution of doctors and specialists. We are a first world country, so we should have done better, despite the multiple factors involved. In addition, we should not be actively seeking doctors from the developing world to fill our workforce shortfalls or to correct our maldistribution(s). There is an inherent inequity in accepting that country people can have second best, either in the form of overseas trained doctors that are not allowed to work in the capital cities or by flooding the Australian medical graduate market in the hope some will eventually 'go bush'. This inequity has to be seen for what it is and addressed.

Medical imaging (DI) has grown tremendously in importance as a key factor in safe, quality and efficient patient care outcomes. Doctors and other health professionals need radiologists who are locally accessible. In NSW, non-metropolitan Local Health Districts face considerable risks, difficulties and increased costs because of the radiologist workforce maldistribution, significantly impacting on the health services that the Ministry of Health can deliver in regional and rural NSW.

In addition, there is now established information and communication technology being used very efficiently in radiology practices around the country, which has put paid to the old argument that it is not viable to have a radiologist(s) at sites that do not generate enough work for a radiologist(s). This is because a radiologist living and working in a small city or town can be sent work from other busy sites (including metropolitan sites) if there is not enough work being generated at the local site where he/she is working. This is '[work] load balancing', an important part of 'network radiology'. Many practices that have more than one site now use 'network radiology' to 'load balance' and also to allow for some subspecialty reporting and in-house second opinions.

'Load balancing' means that extra work be available to [on-site] radiologists at sites that are relatively 'quiet', from sites that generate too much work to be reported in a timely fashion by the locally available on-site radiologist(s), so that all work can be reported in a sustainable, timely and safe manner. The work that is used for such load balancing is work that is deemed suitable for such off-site reporting, e.g. no musculoskeletal ultrasound or mammography; no work that had the direct involvement of one of the on-site radiologists; no work for which there are only locally available hard- copy comparison images; no work that requires comparison with a large amount of prior imaging (such as oncology cases), etc

An example of subspecialty reporting is: MR studies of body parts that the local on-site radiologists do not regularly report – the local radiologists may very competently report all brain and spine MR studies and most joint and other musculoskeletal MR studies, but they may not be confident to report, for example, wrist or elbow MR studies, which in a particular practice it has been deemed better to be reported by other radiologists who do have the confidence, extra knowledge and experience to report the studies, especially in a more timely fashion (without having to say consult a colleague or check text books, etc).

The local on-site radiologists (at either site type) are still on-site and available to provide all the quality (and safety) benefits, as listed in Option 1 Comment box, Para 2.

My basic view is that in general there should be no exemptions, rural or otherwise, to the new quality initiative and in particular supervision, but there are a number of factors that need to be considered and addressed for this to be a truly fair outcome for non-metropolitan Australia.

Patient access considerations
Some leeway in the delivery of services needs to be made so that people living in remote and rural communities get adequate access to adequately safe DI services, which is appropriate to their remoteness, community size, local health professional resources and local health service infrastructure (hospitals, clinics, triage centre, etc).

Radiologist workforce considerations
There is a maldistribution of radiologists in Australia. The 2012 RANZCR report *Resident Radiologist Distribution in Australia* showed that 14% of radiologists reside in non-metropolitan areas, as compared with 30% of Australians. Hence there are not enough radiologists resident in regional and rural Australia for the community need. Thus, how will rural CT, mammography, ultrasound and MRI services (or if you like, comprehensive practices) get all the benefits of on-site supervision and thereby better quality practice? This is answered below in 'How to address the above'.

Before it is answered, it has to be acknowledged that the radiologist maldistribution is not a new or only recently recognised problem. It has been known for almost 2 decades that rural communities have shorter life spans and more morbidity because of poorer access to services that includes a medical workforce shortage. It would be a travesty of equity and natural justice if, because of the long known and unaddressed maldistribution, government entrenches suboptimal access to quality DI services in regional and rural areas by continued exemptions, instead of government and the profession taking the opportunity to proactively address the radiologist maldistribution.

With respect to responsibility for addressing the radiologist workforce maldistribution, it is governments and their respective health service jurisdictions' responsibility (not the medical specialist Colleges) to make sure there is a workforce suited to the [respective] population(s), as per the ACCC's and Australian Health Workforce Officials Committee's 2005 *Review of Australian Specialist Medical Colleges* (Report to Australian Health Ministers). The medical specialist Colleges are primarily responsible for training standards and assessments, with training best organised in networks to enhance training experiences (as per AMC guidelines). Thus governments should work with the RANZCR to facilitate and help fund changes to the public health system's and the RANZCR's training programs that will result in a better distribution of radiologists. Literature from around the world as well as from Australia shows that the two methods with the most predictive results of correcting non- metropolitan workforce maldistribution are:

- attracting rural origin trainees to the profession (noting also the importance of their life partner's affinity for a rural life style)
- increasing training time in non-metropolitan locations.

Proactive measures to achieve these factors will result in a workforce that better matches the population's distribution and needs.

With respect to the funding of training, Radiology (and Pathology) are uniquely different from the 'clinical' specialities, because Medicare Benefits Schedule (MBS) items numbers for Diagnostic Imaging services can only be accessed by [fully trained] specialists, not general medical practitioners (and the general MBS items are not relevant to Radiology). Thus when radiology trainees are in the private environment, there is no MBS funding available to help 'pay' for them. However, standard consultation Medicare payments can be accessed by GP and physician trainees, as can a lot of other items in the general part of the MBS. In addition, surgical trainees can access theatre assistant MBSitems when assisting in the private environment.

Demographic considerations
'Remoteness' is a national geographic issue, hence I believe use should be made of the Australian geographic classification system the Australian government does, namely the ASGC-RA and the associated Monash Modified Model (MMM). See the DoH DoctorConnect locator map http://www.doctorconnect.gov.au/locator

Radiology is a referral specialty, so DI should only be provided where there are doctors providing local services appropriate to the DI service to be delivered locally, i.e. if there are no acute medical or surgical services, then no CT is warranted unless there is a local hospital staffed by appropriately trained rural generalists able to provide services appropriate to the locality and in coordination with
the broader regional referral system. Ultrasound and obstetrics is a potential special access issue case, which can be partly covered by 'point of care' ('focussed') ultrasound, but some referred
'diagnostic' ('comprehensive') ultrasound services may be required in certain remote areas. Cancer CT studies can be done on the day the patient gets reviewed by the oncologist/surgeon at the regional centre, etc.

Acknowledge openly the radiologist workforce maldistribution and address it with specific short term and long term actions.

Community considerations
Communities (Mayors, cancer support groups, etc) often lobby for off-site/remote supervision of DI services (using teleradiology), but what they do not realise is that oftentimes they are effectively advocating for the provision of unnecessary, inappropriate and/or suboptimal services and outcomes. For example, often patients get referred to my practice for imaging guided spine injections based on dubious patient assessment following an unnecessary CT study performed at unmanned competitor CT service sites.

There will be self styled champions of remote supervision from within the radiology profession. These providers are often supported by a local GP group who have a conflict of interest because the GP group may get (or plan to get) rental income from the imaging provider (+/- some direct equity in the provider service site). This conflict of interest is often undeclared and the 'new' arms-length referral rules have allowed this situation to flourish.

There will be arguments for greater role extension from GPs, radiographers and sonographers, while instead the sustainable and better plan should be greater action to improve radiologist distribution in non-metropolitan Australia.

How to address the above

Aim
Have a relatively simple Australia-wide quality framework that gives surety of compliance AND promotes a proportionate distribution of radiologists in the long term, while in the short term specifically addressing workforce maldistribution. Do not have complex and costly rules and regulations to manage the *symptoms* of radiologist workforce maldistribution.

Given the known radiologist workforce maldistribution and the considerable current costs associated with redistributing radiologists so as to provide on-site services for CT, mammography, ultrasound and MR (see Option 2 Comment box, *Potential cost and access impacts*), the profession and government should commit to specific measures to sustainably address the maldistribution. This obviously must include a focus on getting radiologists to live and work in regional and rural sites, i.e. select trainees who originate from sites of workforce need AND have good training sites in the same sites of workforce need (which is itself a unique problem, because there may not be enough appropriate radiologists locally able to initially provide the training, but you have to start). There may also need to be an interim period of time-limited exemptions (but preferably not or else keep them to an absolute minimum).

Recommended framework

The RIS document is clearly not in favour of retaining the current 30km rule and is advocating using a geographic model based on ASGC-RA classifications, as it does for capital sensitivity. See the DoH webpage http://www.health.gov.au/capitalsensitivity

Thus I recommend use is made of the ASGC-RA classification, including the Monash Modified Model (MMM), noting that I have not had time to research the recent Commonwealth government modification of the RA boundaries for GP support payments using the MMM. I also note that the DoctorConnect locator map does not have an MMM overlay showing the RA modification.

In addition, I recommend that in addition to using the RA +MMM classification, there must be recognition of the local referrer and health service need (and stability). LSPN data could be used here, together with state hospital data +/- other Medicare data, both to: better understand the current distribution of practice sites and modalities offered; come up with a radiology/DI version of the MMM, based on town health services and remoteness.

My recommendations are:

1. No exemption: ASGC-RA1; ASGC-RA2 + DI-specific MMM.
2. Exemption based on local health service and referrer need, but excluding referrers who have a commercial conflict of interest: ASGC-RA5; ASGC-RA4.
3. The problem is ASGC-RA3, which is the middle ground. My view is that the profession and government should develop a DI version of the MMM that assures quality while optimising access AND which supports and promotes a proportionate distribution of radiologists in the short and long term, e.g. time-limited or staged exemptions, such as starting with at least 5 working days of provable on-site supervision in the first year, going to 20 days the following year, 40 the following year, etc, up to no exemption over a ~5 year period. Review of LSPN data and local health service needs would be useful to better understand this category.

In addition, I believe the Commonwealth and state governments and the RANZCR have obligations to proactively address the workforce maldistribution. It is the governments' prime responsibility to ensure there is a workforce appropriate to the needs of the population. Thus there needs to be an increase STP and public hospital funding for new training positions in non-metropolitan regions and facilitation and strengthening of post-graduate training in non-metropolitan regions. The RANZCR should:

- continue with its mandated network training model (which includes non-metropolitan training sites)
- strengthen the trainee selection guidelines so there are more trainees with backgrounds from workforce challenged regions
- actively strengthen training capacity in workforce challenged regions, by engaging with the states' post-graduate training hierarchy and infrastructure, encouraging the rural clinical schools to assist in anatomy, medical imaging technology and pathology tuition and lobbying for direct funding for radiologist trainers.

A deal could be struck with the Commonwealth specifically as part of this initiative, e.g. so as to achieve the government's and Department of Health's aims re this RIS/quality initiative, including reduction of unnecessary, inappropriate and suboptimal Medicare funded DI, there be targetted funded for training in regional and rural Australia.

Potential cost and access impacts

See Option 2 Comment box.

Community actions

The benefits of achieving the stated purpose and objective need to be paramount and reinforced. A rational framework that gives a balance of quality and access can be explained and is defensible. The specific actions and measures whereby the maldistribution will be addressed need to be explained and then support can be garnered for the 'home grown' approach, i.e. promote understanding so there is active support the long term, sustainable workforce solution.

There is safer, more appropriate and better quality utilisation of DI services when radiologists are locally resident because they can be held accountable for their report and procedure outcomes by local patients, referrers and hospitals. All the benefits of on-site supervision, as detailed in the Comment boxes above, need to be promoted. In addition, there are other direct benefits to the community by having locally resident radiologists:

- investment in the local real estate market
- other local investment
- consumer spending locally
- involvement in other community activities, e.g. sporting clubs, service organisations, community self help groups, local charities, cultural societies and activities, etc
- family involvement in the same, including offspring attending local schools, etc.

In addition, increased numbers of locally resident specialists results in:

- greater/actual choice of doctor/specialist and all the 'market benefits' of that, including competition to improve service/product quality and improve efficiency/pricing
- true multidisciplinary care, e.g. cancer care services that are world's best practice.

There are many regional centres in Australia that now have large numbers of locally resident Australian trained and recently graduated medical specialists. It is ridiculous to think that there could be exemptions for radiologists to provide a similar level of local service in these 'regional medical hubs'. Such hubs, as they further strengthen, will help to support the training, mentoring, recruitment and retention of doctors in surrounding towns and hence are a key factor in addressing the rural workforce crisis.

The Choosing Wisely messages are relevant to this discussion, e.g. unnecessary investigation of non-specific acute low back pain and then improperly acting on that investigation by requesting unfocussed CT guided intervention ("CT guided spinal injection, see recent CT"). Investigation of non- specific abdominal or pelvic pain are other examples that lead to unnecessary further investigation and specialist referral.

Adequate explanation of the term 'network radiology' may be required for some interested parties, including government.

2. Implementing any changes and the relative role of regulation and the Diagnostic Imaging Accreditation Scheme (DIAS) (refer to page 33-34 of the RIS)

The relative role of regulation and accreditation in enhancing the quality framework for MBS funded diagnostic imaging services will be determined following feedback received from stakeholders under this consultation process.

Questions

- Would changes to supervision be better placed in the DIAS or remain in the regulations?
- How would a practice based supervision approach be incorporated into regulation?
- Is it necessary to have a modality based approach in the regulations (as a minimum) and a practice based approach in accreditation?

Comment

As discussed above in the Option 3 Comment box (specifically with respect to *Appropriateness and workability of the changes* and *Time required to implement*), refinement of definitions and other wording and alignment and balancing of that between the regulations, DIST and accreditation standards is fundamental to a successful outcome.

There needs to be at least some change in the regulations and DIST, so that there can be funding accountability enforcement. Accreditation alone is not enough in this situation.

3. Any additional proposals, suggestions or comments?

Comment

Safety of MRI
While MRI may be considered "safe" because there is no ionising radiation, there are still considerable physical safety issues that have resulted in patient death and/or injury in Australia and overseas, as a result of the strong magnetic field, microwave heating effects, induction effects and quenching of superconducting machines. Thus they need supervision for this reason alone.

In addition, while acknowledging the physical safety aspects of imaging is important, of more importance is the optimisation of images and reports so as to reduce inaccurate, false negative and false positive test results. More harm comes to patients from inaccurate images and reports than comes from any of the physical safety aspects (including radiation effects). That is why 'supervision' is so critical to safe practice.

Safety of ultrasound
While ultrasound does not use ionising radiation, there are safety considerations, the most important being image and report accuracy and fitness for the purpose (e.g. musculoskeletal conditions are often better investigated by an x-ray than an ultrasound).

Within the practice I have worked in for 19 years based in Wagga Wagga, we have provided 'roving' ultrasound services to surrounding towns for many years, a service that is becoming increasingly costly because of the escalating staff related costs. It is my experience and advice that 5-10% of all remotely performed ultrasound studies need to be called in to our manned site in Wagga Wagga so I or another radiologist can personally attend on the patient (including scanning ourselves). In addition,
I have a major issue with sonographers who work exclusively or almost exclusively in a remote setting
– in such a setting, there can be no 'team' to the ultrasound service provision. Reporting such studies is fraught with hazard, when you do not know the sonographers' strengths and weaknesses, you are unable to have face-to-face communication with the sonographer and you are never able to personally check findings yourself. My own view is that except for truly remote areas (RA4 and RA5), sonographers should have to spend a minimum amount of time at a supervised site so that they have direct access to a radiologist(s) or other appropriate sinologist(s) who reports their work, as well as access to other sonographers for peer to peer communication and learning.

Finally, while I am a single radiologist responding to this consultation process, I do so with a significant background in the following:

- Accreditation and quality assurance: I was active early in my career in convincing the RANZCR and the profession to embrace quality standards
- Appropriate utilisation of services: I was a member of the NPS Diagnostic Expert Advisory Panel (DEAP) and I have personally delivered NPS DEAP researched sessions to health practitioners on the role of imaging in acute low back pain.
- Workforce: amongst other things, I am Chairman of the RANZCR Radiology Workforce Committee and Chairman of the Riverina Medical Specialist Recruitment & Retention Committee
- Training: I have played an active role in changing the RANZCR training program so that there is more rural and regional training, I am Chairman of the Rural Medical School Implementation Committee (Wagga Wagga) and a Conjoint Associate Professor at the UNSW Rural Clinical School
- I am a committed regionalist. I do not have equity in any radiology practice (rural or metropolitan) and my motivation in making this submission is to help shape a better framework for the delivery of safe, appropriate and necessary DI services to Australians wherever they reside.