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Clinical Radiology
The Royal College of Radiologists

Sustainable future for diagnostic radiology: the older radiologist

Faculty of Clinical Radiology

Contents

Key points

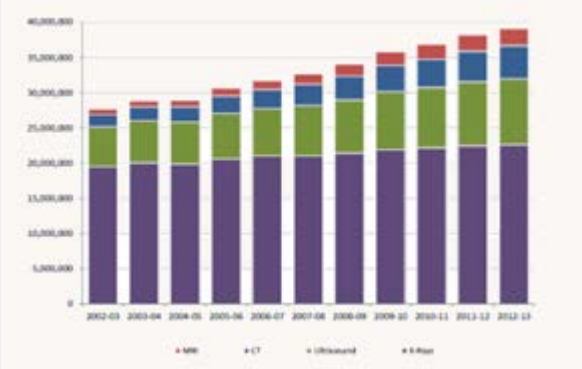
- Changes to pension regulations have resulted in many radiologists who are approaching 60 considering retirement.[1]
- Older radiologists (nominally 50 years and above) are a valuable resource and there are great benefits to retaining them within the workforce, either on a full-time or less than full-time basis.[2]
- There are potential financial gains for the employer in retaining radiologists returning to work part-time.[2] (They would not be placed at the top of the salary scale nor pay superannuation.)
- Employers need to be open minded about ways in which this group of radiologists can be optimised to address shortfalls in radiology manpower, both within the trained radiology workforce and in the deficit in trainee numbers compared with the rising workload demands.[2]

Background

Radiologists over the age of 50 constitute an essential component of 21st century workforce planning. At present, 35% of radiologists are older than 50 and 7% are more than 60 years old.[3] This demographic often has more clinical and diverse reporting experience and can be more comfortable with risk management than their less experienced counterparts. They have had more time to gain leadership experience than their younger colleagues. The older radiologist's experience in plain-film reporting alone (which still represents the majority of radiological studies) is unparalleled and, given the fundamental changes in practice that follow from the *European Working Time Directive* (EWTD), is unlikely ever to be matched.[4]

The demographics of the UK radiology workforce are changing rapidly and workload has increased dramatically.[3] Data from NHS England show that examinations in each key radiological modality have significantly increased between 2003–2014.[5] Over the last 10 years, the average year-on-year increase for magnetic resonance (MR) examinations was 12.3%, computed tomography (CT) 10.1%, ultrasound 5.3% and plain X-rays 1.4%.[5] In total, between 2003–2004 and 2013–2014, the number of radiology examinations has risen by 42%, from 28.8 million to 40.9 million.[6]

Figure 1. Number of imaging and radiodiagnostic examinations, England, 2002–2003 to 2012–2013[a7]



[a] Adapted from the RCR submission to HEE workforce planning 2014/2015 – Call for evidence[8]

Although there is regional variation within the UK, on average there are 4.8 whole time equivalent radiologists per hundred thousand of the population.[3] This is a much smaller ratio than the European average, which is 11.7.[9] Furthermore, one-third of the current UK workforce is female and this is set to increase as 40% of trainees are female.[3] The number of female radiologists working part time is increasing and, by gender, the percentage of less than full-time radiologists is greater for females compared with males in all age brackets. Currently, 50% of female radiologists (50–54); 47% (55– 59) and 44% (60– 64) work less than full time.[3]

Current manpower shortages/vacancies across UK regions

In all UK regions there is a crisis in radiology manpower levels with problems identified in both the appointment and retention of radiologists in NHS departments. Between 2012 and 2014, there was an overall increase of 1–2% whole-time equivalent (WTE) radiologists within the UK. However, this figure masks significant regional and country variation with WTE deficits of up to 7% reported by 14 respondents.

In 2014, 41% of unfilled consultant posts were advertised but failed to appoint; 88% of radiology departments were unable to meet their reporting targets. Ad hoc arrangements depending on outsourcing and the unpaid goodwill of existing radiologists were frequently cited as temporary local expedients.[3]

Estimated future retirements

Next five years (up to 2019)

Within the next five years, 401 consultants are expected to retire (based on a retirement age of 62). This represents 14% (or 13% WTE) of the current UK consultant workforce. For Wales, retirements are expected to account for 18.9% of its workforce, 18.6% in South East England and 16.4% in the East of England.

Radionuclide radiology is a subspecialty area where there is particular concern; 23% (37 out of 161) of its workforce is expected to retire by 2019. In addition, 21% of consultants (105 out of 493) with breast radiology in their job plans are expected to retire within five years.

Next 10–15 years

Estimates for the longer term have projected that 29% of the current consultant workforce will retire by 2024. The estimate for 2029 is 46%.

In summary, approximately 50% of the current workforce will retire within the next 15 years. This workforce has a significant female component and, of these, 50% within the 50–54 age bracket and 44% within the 60–64 age bracket currently work less than full time.[3] Added to this is the current crisis in workforce numbers across the UK regions. It is imperative to retain experienced radiologists and to design job planning structures that permit them to maximise their potential within clinical radiology departments. NHS management should be imaginative about such retention and innovative about constructing a working environment that facilitates a longer working life for radiologists.[2]

The effect of aging on performance

There is no evidence that older radiologists are less competent than their younger peers.

With age comes experience and it would seem logical to assert that, with decades of reporting experience, for example plain films, CT, MR, ultrasound and nuclear medicine, pattern recognition (unless impaired by physical or psychological illness) would be finely honed. However, radiological investigations that involve hand–eye coordination, manual dexterity and prolonged procedural time may be more challenging with age. Recovery time after loss of sleep lengthens with increasing age.[10] Consideration should therefore be given to tailoring the job plans of all radiologists to optimise their performance: factoring in age; child and elder care responsibilities; health problems and so on. An older radiologist might focus on those components of the job (for example plain film and cross-sectional reporting) that are well-established and driven by experience and pattern recognition thus spending less time on overnight working or more physically-demanding procedure based tasks. Some retired radiologists may wish to work from home if facilities permit.[11]

Reporting discrepancies, errors and procedural incidents occur in all types of radiological practice and at all ages. Even if one has retired but returns to work part time, one has a duty to continue lifelong professional learning relevant to one's case-mix and to participate in peer feedback, learning from discrepancies meetings, audits, governance, mandatory training and registries.[12,13]

More experienced radiologists are an underused resource for induction, training, policy development, mentorship and leadership. However, these activities must substitute other roles and not be in addition to them.

Universal experience is that on-call work, with its associated interrupted sleep patterns, becomes more cumulatively onerous, with longer recovery times, as one gets older.[7] In itself this is corrosive, but as access to out-of-hours imaging studies, demand and the volume of work continue to rise inexorably, the stress of such non-elective activities takes its toll and is one of the cited reasons for early retirement. Another is the role of 'duty radiologist'. Both these factors are complex in nature and in their solution. However, by novel and imaginative management, the considerable experience, motivation and professional satisfaction of a senior and expert workforce are retained. The older radiologist also has a pivotal role in the education and training of specialist registrars. This is particularly valuable given the acute shortage of trained radiologists within the UK and the deficit in training numbers when considered in relation to the rapidly increasing demands for service provision.

The older doctor has a positive contribution to make to radiology as in all medical specialties. Careful consideration of workload, work type and working hours should maximise such expertise with huge benefits for the individual practitioner, radiology departments and patients alike.[2]

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The Royal College of Radiologists. *Sustainable future for diagnostic radiology: the older radiologist*. London: The Royal College of Radiologists, 2015.
Ref No. BFCR(15)11

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