

Foundation Doctors' Knowledge of Radiation Legislation and Exposure : A Completed Audit Cycle

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Introduction

Radiological investigations provide clinical benefit as well as radiation risks. Junior doctors are duty-bound by Ionising Radiation (Medical Exposure) Regulations 2000 (IR(ME)R), yet it has been shown that they have limited understanding and appreciation of radiation legislation and exposure.

Aims

Our audit looked to evaluate the awareness and knowledge of legislation surrounding radiation, as well as knowledge of dosages associated with common radiological investigations amongst junior doctors.

Standard:

- All foundation doctors should be aware of IR(ME)R.

Target:

- 100% knowledge of radiation legislation and iRefer.
- 90% should have appropriate knowledge of common radiation doses.

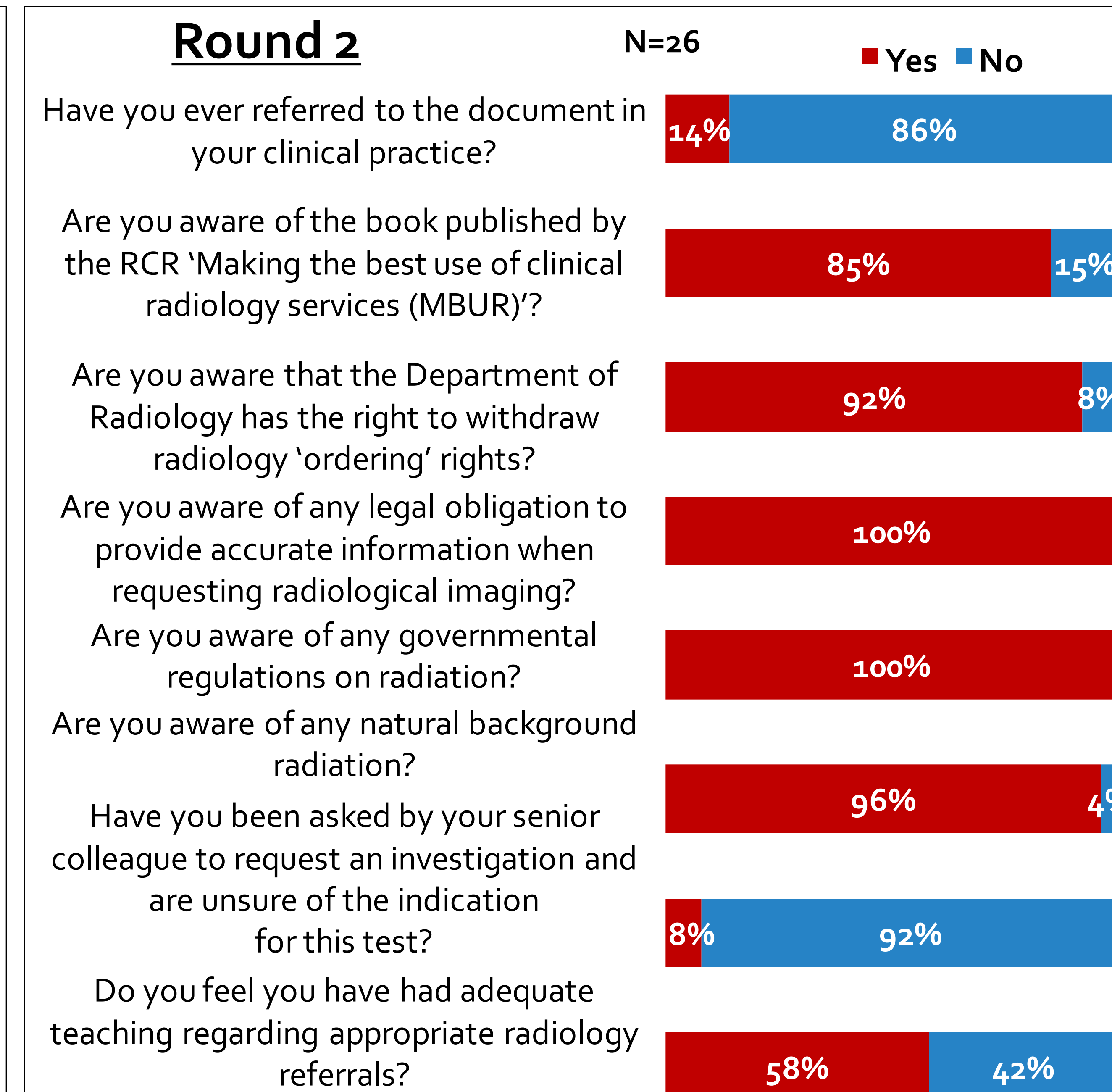
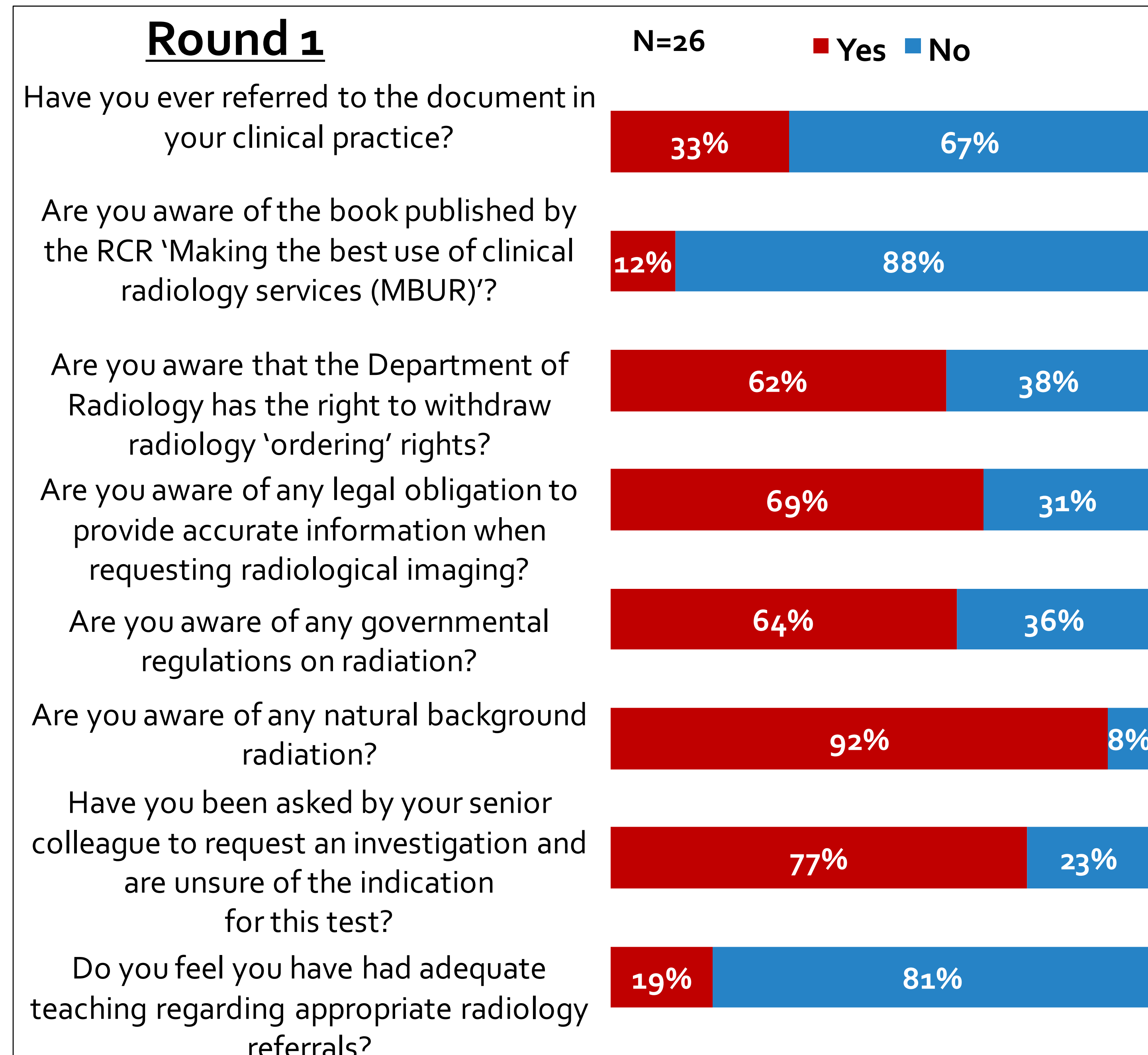
Methodology

- Population: Foundation Year (FY) 1 doctors working at University Hospital of North Tees.
- Data Collection: Questionnaire study using the "Foundation Doctors –Radiation Legislation Awareness Questionnaire" produced by the Royal College of Radiologists distributed during FY1 teaching in October 2016.
- Re-audit: April 2017 following an IR(ME)R-based teaching session delivered during FY1 weekly teaching.

References

- iRefer. Making the best use of clinical radiology. Royal College of Radiologists. London. 2012. <http://guidelines.irefer.org.uk/>
- Shiralkar, S., Rennie, A., Snow, M., Galland, R. B., Lewis, M. H., & Gower-Thomas, K. (2003). Doctors' knowledge of radiation exposure: questionnaire study. *BMJ*, 327(7411), 371–372. <https://doi.org/10.1136/bmj.327.7411.371>
- The Ionising Radiation (Medical Exposure) (Amendment) Regulations 2011. <http://www.legislation.gov.uk/ukksi/2011/1567/contents/made> (accessed 1 September 2016)

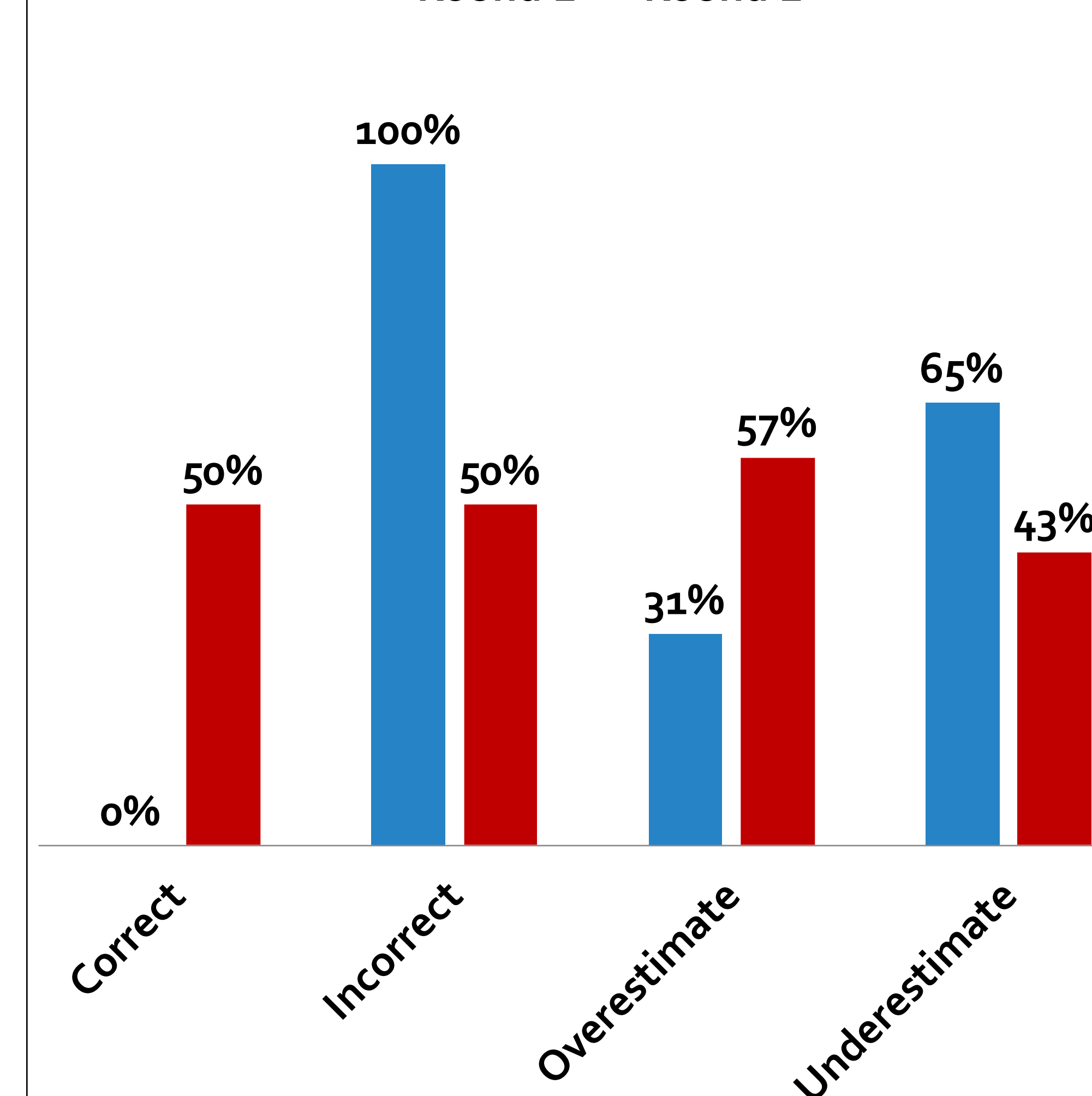
Results



Estimating Radiation Doses

% of Responses

■ Round 1 ■ Round 2



Discussion

Our audit demonstrated a substantial deficit in awareness and understanding of the IR(ME)R legislation and radiation doses amongst foundation year 1 trainees, with significant improvement following an IR(ME)R-based teaching session. We believe that the deficit is likely a consequence of limited or absent relevant education at undergraduate and foundation levels. With this in mind, we have now implemented a teaching session on IR(ME)R regulations into the foundation programme teaching curriculum in our trust for subsequent foundation trainees.

Conclusion

The IR(ME)R legislation exists to ensure all aspects of patient safety surrounding radiation exposure. Doctors should be aware of and have a legal obligation to comply with IR(ME)R. Having adequate awareness and knowledge of legislation surrounding radiation and knowledge of dosages associated with common radiological investigations motivates a safe and responsible referral pattern.

Recommendation

- IR(ME)R training should be incorporated into the undergraduate and foundation programme teaching curriculum as well as at trust induction.
- Mandatory IR(ME)R e-learning modules for all referrers.
- Regular re-audits to ensure up-to-date knowledge and improved patient care.