Evidence to inform practice: General practice registrars' imaging for non-specific low back pain

Tobias Morgan, Parker Magin

Registrar Clinical Encounters in Training (ReCEnT) is an educational and research program in general practice vocational training. Since its inception in 2010, general practice registrars in a number of Australian training regions have collected information on their in-consultation clinical and educational experience. The ReCEnT study protocol is available online (https://bmcprimcare.biomedcentral.com/articles/10.1186/s12875-022-01920-7).

For the full report of the article summarized here, refer to:

Morgan T, Sheather A, Ralston A, et al. Imaging in low back pain: A cross-sectional analysis of Australian early-career general practitioners' ordering of imaging for non-specific low back pain. J Prim Health Care 2025;17(3):224–32. doi: 10.1071/HC25056.

Practice points

- Most low back pain seen by general practitioners (GPs) will have a non-specific and non-serious aetiology and be self-limited.
- Serious pathology is rare in patients presenting to GPs with low back pain in primary care. Practice guidelines recommend imaging only when certain 'red flag' or 'alerting' features are present.
- Analyses of ReCEnT data suggest Australian general practice registrars are taking a considered approach to imaging for non-specific low back pain, but imaging likely exceeds optimal levels.
- Refinement in guidelines regarding appropriate red flags for imaging might be indicated to better target imaging.

Using ReCEnT project data, we sought to establish the prevalence and associations of Australian general practice registrars' requests for imaging for first presentations of non-specific low back pain (NSLBP). We performed a cross-sectional analysis of 2010–18 ReCEnT data.

Of all problems/diagnoses seen by general practice registrars, 0.6% were NSLBP. Of these, 15% had imaging ordered. On multivariable analyses adjusted for multiple potential confounders, imaging was associated with patients aged 35–64 years (odds ratio [OR] 1.55) or aged >65 years (OR 2.32) (compared to patients aged 15–34 years), with seeking in-consultation advice from their supervisor (OR 1.74), scheduling follow-up with themselves (OR 3.61) and 'generation of learning goals' (an intent to learn more about NSLBP post-consultation; OR 1.96).

Associations of imaging with general practice registrars seeking supervisory advice, organising personal continuity of care, intending to learn more about the topic and with older patient age (consistent with most guideline recommendations) suggest that general practice registrars are engaging with care of patients with NSLBP and taking a considered approach to imaging rather than reflex ordering of imaging tests. However, although benchmarking is difficult, the prevalence of imaging likely exceeds optimal levels. This has implications for poorer patient outcomes as well as significant cost implications.

An issue identified in the literature is that some guideline red flags and alerting features might not be supported by evidence. Refinement in guidelines regarding appropriate red flags for imaging might have potential for better targeting imaging for NSLBP.

Ethical approval

For the research reported in the original article, ethics approval was obtained from The University of Newcastle Human Research Ethics Committee (reference: H-2009-0323) and The Royal Australian College of General Practitioners National Research and Evaluation Ethics Committee (reference: NREEC 23-161).

Authors

Tobias Morgan BMed, MD, Medical student, Faculty of Medicine and Health, The University of New South Wales, Sydney, NSW

Parker Magin PhD, FRACGP, Conjoint Professor, School of Medicine and Public Health, The University of Newcastle, Newcastle, NSW; Adjunct Professor, School of Population Health, The University of New South Wales, Sydney, NSW; Senior Academic Advisor, The Royal Australian College of General Practitioners General Practice GP Training Research Unit, Newcastle, NSW

Competing interests: None.

Funding: None.

Provenance and peer review: Commissioned, externally peer reviewed.

AI declaration: The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

Correspondence to:

parker.magin@newcastle.edu.au

correspondence **ajgp@racgp.org.au**

© The Royal Australian College of General Practitioners 2026