

Best practice care for acute low back pain:

A new clinical standard to assist general practitioners

Marie Pirotta, Michael Yelland,
Chris G Maher, Elizabeth Marles,
Christina Lane, Alice Bhasale

Background

Low back pain is one of the most common presentations in general practice. Although there is excellent evidence regarding best management of the condition, in primary care there is often overuse of less effective and expensive options, whereas effective, inexpensive options are underused. After broad consultation and evidence review, the Australian Commission on Safety and Quality in Health Care has developed a clinical care standard in response to this identified gap between best and actual practice. A clinical care standard focuses only on key areas of care where the need for quality improvement is greatest.

Objective

We explore the new standard using a typical patient scenario in primary care to highlight evidence-based approaches for challenging aspects of management, such as imaging and pain management.

Discussion

General practitioners (GPs) might find the practical GP 'quick guide' resource from the standard useful to support their care of patients with low back pain.

LOW BACK PAIN (LBP) is the second most common cause for seeking help from general practitioners (GPs).¹ With one in six Australians reporting back pain,² it is the leading cause of disability burden in Australia³ and the main reason for lost work productivity and lost work years due to premature retirement.^{4,5}

People with acute LBP worry that pain means damage, about the effects of their injury on their work and daily life and whether they will recover.^{6,7} These consultations can be challenging for GPs to manage within tight time frames; however, it is important to effectively assess each patient and address any misconceptions about natural history and approaches to investigations and management from the outset.

Although there is evidence as to how LBP should be managed, naturally GPs vary in their expertise and experience and there is evidence that initial management of LBP could be improved.⁸⁻¹⁰ There is underuse of low-cost and effective approaches, such as education, advice to remain active and choosing non-drug therapies as first choice, whereas the inappropriate use of imaging and the prescribing of opioids and other medications to manage pain are more common. Research finds that underuse of appropriate care and overuse of low-value care (eg imaging) are actually associated with worse health and return-to-work outcomes for patients with LBP.¹¹⁻¹³

Aim

This paper explores the *Low Back Pain Clinical Care Standard*¹⁴ (the Standard) developed by the Australian Commission on Safety and Quality in Health Care in response to the identified gap between best and actual practice. We use a brief case study to illustrate key management steps outlined in the Standard, focusing on areas where the need for quality improvement is greatest.

Figure 1 outlines the extensive process undertaken in the Standard's development. Eight quality statements are addressed in detail in the Standard and are used to structure this paper. Sections most relevant to GPs have been summarised in a practical guide, with evidence summaries, clinical tips and suggested ways to communicate challenging concepts. Box 1 has links to this GP guide, as well as to many resources for clinicians and patients to assist in shared decision making.

The Low Back Pain Clinical Care Standard

We highlight useful evidence, concepts and practical management advice of the Standard, using an abbreviated case study of a patient named John:

John, aged 40 years, is a self-employed plumber who presents with a recurrent episode of LBP that began slowly while digging a trench. He has constant ache over his lower

lumbar regions and buttocks, rated at 5/10, becoming sharp and 8/10 with movements such as bending. Hot packs and ibuprofen give partial relief. John mentions that his apprentice hurt his back last year and was never able to return to work. John reports that two similar episodes of LBP in recent years both lasted three days. This episode is worse.

John is worried about his ability to continue working and, among other things, asks if it is time to do a scan.

examination is necessary when the back pain is accompanied by leg pain and/or neurological symptoms.

After a targeted history and examination, you decide John is experiencing another episode of non-specific LBP with no suspicious features.

Here is a communication tip from the Standard to inform John:

We've done a good assessment here today and there is no indication that your back pain is associated with a serious underlying condition. While the pain can be severe, the good news is that most acute episodes of LBP settle within a couple of weeks. In the meantime, there are a lot of things you can do to help reduce and manage your LBP.¹⁴

Psychosocial assessment

John still looks worried. He is concerned any activity that hurts him now is further damaging his back.

Some psychosocial factors and emotional responses to pain are linked to delayed recovery from back pain. Identifying these risk factors is often overlooked in practice. GPs can use a biopsychosocial approach in the history and/or brief online risk assessment tools to find patients at such risk. Actively listen to the patient and identify harmful misconceptions, including fear avoidance (Box 2).

You enquire further about his concerns and John confides that he is ‘worried sick’ about his business, his poor sleep and his relationship with his wife. Acknowledging his fears and that his pain is real, you provide reassurance about the nature of his pain.

Communication tip:

Back pain does not usually mean your back is badly damaged. The brain acts as an amplifier: the more you worry and think about your pain, the worse it can get.¹⁴

Given the psychosocial factors John has described, you suggest further follow up.

Reserve imaging for suspected serious pathology

John again requests at least an X-ray if not magnetic resonance imaging ‘just in case’.

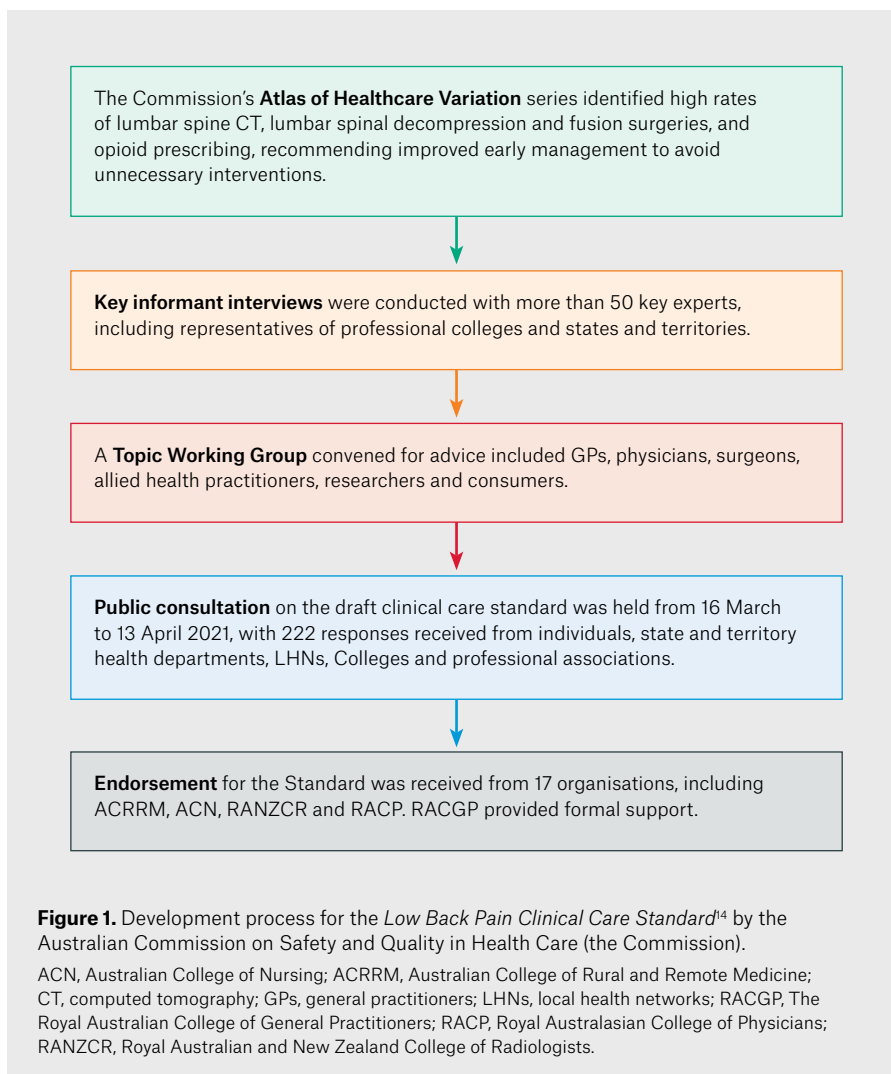
Investigations are rarely indicated for non-specific LBP. Inappropriate imaging can create unnecessary concerns, and incidental findings with no clinical significance can lead to further unnecessary tests (Table 1). Radicular leg pain alone is not considered a serious pathology in the absence of severe or progressive neurological deficits.¹⁸ Although imaging can sometimes identify the cause of neuropathic pain, it should only be done if it will change management.¹⁹

Communication tip:

Imaging is used mainly to rule out anything serious, but otherwise it is not very good for identifying the cause of your pain. I’m not concerned that you have a serious cause of LBP, so there is no need for any scans at this stage.

Conduct an initial clinical assessment

Patients need to be assessed early in each new presentation of LBP, with targeted history and examination to exclude serious pathology and differential diagnoses. A focused neurological



In fact, imaging shows up changes that occur normally with age, even in people without back pain, so the findings are often not very helpful.¹⁴

Education and advice

The key issues are to reassure patients about the benign nature of LBP, the low risk of serious underlying disease and the likelihood of recurrence.²⁰ Many educational

materials are available to reinforce key messages (Box 1).^{18,19,21} It is important to address any unhelpful beliefs and thoughts identified in the psychosocial assessment that might affect how the patient manages their symptoms, including anxiety or fear about their condition.^{16,18,19} Explain the evidence for treatment options so the patient can understand why some strategies are, or are not, being recommended.¹⁹

Communication tip:

Most back pain is caused by a simple strain of the back, and for most people it does not indicate serious disease or long-term disability. Most people with acute LBP will feel much better or will have recovered within two weeks, if they follow some simple advice.¹⁴

Encourage self-management and physical activity

John explains that he is scared to keep working but cannot afford to rest his back as friends are advising him to do.

Box 1. Useful resources

For clinicians

- Resources for the *Low Back Pain Clinical Care Standard*¹⁴ (the Standard) include a quick guide for general practitioners (GPs) and fact sheets for clinicians and healthcare services (www.safetyandquality.gov.au/sites/default/files/2022-09/low_back_pain_ccs_-_quick_guide_for_general_practitioners.pdf)
- To support the release of the Standard, a GP learning activity is available to members of The Royal Australian College of General Practitioners (RACGP) providing further detail on the early management of low back pain and additional case studies. Link to GP learning activity: <https://mycpd.racgp.org.au/activity/433843>
- Validated tools to aid assessment include the Brief Pain Inventory (short form: www.mdanderson.org/research/departments-labs-institutes/departments-divisions/symptom-research/symptom-assessment-tools/brief-pain-inventory.html) and the Clinically Organized Relevant Exam (CORE) Back Tool (see https://cep.health/media/uploaded/CEP_CORE_Back_2016.pdf)
- Risk assessment tools to identify patients at risk of poor functional outcomes include the Örebro Musculoskeletal Pain Screening Questionnaire (10-item version; <https://orthotoolkit.com/ompsq-sf/>) and the STarT Back screening tool (<https://startback.hfac.keele.ac.uk/>)
- The Royal College of Australian and New Zealand Radiologists provides an imaging decision flow chart for acute presentations of low back pain (www.safetyandquality.gov.au/sites/default/files/2022-08/low_back_pain_clinical_care_standard.pdf#page=29)
- The Standard outlines psychosocial factors associated with delayed recovery (www.safetyandquality.gov.au/sites/default/files/2022-08/low_back_pain_clinical_care_standard.pdf#page=24),¹⁴ adapted from the New South Wales Agency for Clinical Innovation¹⁵

For patients

- The Commission has produced fact sheets for patients outlining key information about back pain (www.safetyandquality.gov.au/publications-and-resources/resource-library/common-questions-about-low-back-pain-information-patients) and self-management strategies (www.safetyandquality.gov.au/sites/default/files/2022-08/low_back_pain_ccs_-_how_to_manage_your_low_back_pain_-_final_accessible_version.pdf)
- NPS MedicineWise developed information for patients, including *10 things you need to know about low back pain* (www.nps.org.au/consumers/10-things-you-need-to-know-about-low-back-pain) and *Do you need a scan?* (www.nps.org.au/assets/81ab7562891245b2-5948693db67c-NPS2060_LBP_FactSheet_v7-as-accessible.pdf)
- The RACGP Handbook of Non-Drug Interventions (HANDI) includes patient resources on *Staying active for acute low back pain* (www.racgp.org.au/clinical-resources/clinical-guidelines/handi/patient-resources/managing-back-pain/staying-active-for-acute-low-back-pain) and *Exercise for ongoing low back pain* (www.racgp.org.au/clinical-resources/clinical-guidelines/handi/patient-resources/musculoskeletal/exercise-for-ongoing-low-back-pain)
- Websites providing evidence-based information and advice include MyBackPain (www.mybackpain.org.au) and painHEALTH (<https://painhealth.csse.uwa.edu.au>)
- Helplines and support groups are available through Musculoskeletal Australia (<https://msk.org.au/peer-support-groups>) and PainAustralia (www.painaustralia.org.au/find-support)

It is important to actively involve patients in the management of their pain and encourage self-confidence to stay active, avoid bed rest and continue or quickly return to usual activities, including work.⁹

Communication tip:

Pain does not mean serious damage. Remember that your back is strong. Movements might be painful at first, like an ankle sprain, but they will get better as you gradually get active again. It is likely that you will experience some pain with activity, but that does not mean that your back is getting worse or that your spine is damaged.^{14,18}

Offer physical and/or psychological interventions

Offer the patient physical and/or psychological interventions, using their clinical and psychosocial assessment findings to determine the complexity and intensity of support the patient might need. These therapies, such as cognitive behavioural therapy, aim to help address psychosocial factors that contribute to pain; prevent chronic pain and restore and maintain physical activity and function; and reduce the need for medicines or surgery.

You talk with John about possible interventions for his psychosocial and physical concerns, their costs and his preferences. He agrees to see a physiotherapist to address his work activities and strengthen his back. You also suggest he explore free websites such as MyBackPain (<https://mybackpain.org.au>) or PainHEALTH (<https://painhealth.csse.uwa.edu.au>) to receive tailored information to support his self-management and inform discussion at a subsequent consultation.

Judicious use of pain medicines

Although the non-steroidal anti-inflammatory drugs give John some relief, he wonders whether it is time for something stronger.

to help improve function and mobility. Patients should be prescribed the lowest effective dose for the shortest possible time, in line with current *Therapeutic Guidelines*,^{18,19} with clear stopping goals.

*potential significant side effects, so it would be best not to use them routinely. If we need to use them, we must do so very carefully and on a short-term trial basis only. If the pain becomes unbearable, we can discuss other options.*¹⁴

The goal of pain medicines is to reduce pain to support continuation of usual activities, rather than to eliminate pain completely. Pain medicines should be combined with physical activity and self-management strategies

Communication tip:

For most of the medicines used for managing LBP (including drugs for nerve pain and opioid analgesics), there is not strong evidence that they are effective. All of these medicines have

Review and referral

A patient with persisting or worsening symptoms, signs or function is reassessed at an early stage to determine the barriers to improvement. Referral for a multidisciplinary approach is considered. If the patient's pain is persisting or worsening on review, assess whether the lack of improvement relates to progression of their condition or to physical, functional or psychosocial factors.¹⁸ Psychosocial factors should be reassessed and addressed at each review.

Given John is at risk of poorer outcomes based on your psychosocial assessment, you ask him to return for follow up after two weeks, when he will have seen a physiotherapist for further advice and explored the online pain self-management program.

Box 2. Useful questions to identify psychosocial issues

Do you think your pain will improve or become worse?

- What to listen for: a belief that the back pain is damaging or potentially severely disabling

Do you think you would benefit from activity, movement or exercise?

- What to listen for: fear and avoidance of activity or movement-related pain

How are you coping emotionally with your back pain?

- What to listen for: signs of low mood, distress or withdrawal from social interaction

What treatments or activities do you think will help you recover?

- What to listen for: expectations of passive treatment, rather than expectations that active participation will help

Are you worried that something has been missed?

- What to listen for: concerns that there is serious pathology that has been missed.

Adapted from Health Quality Ontario. Quality standards. Low back pain. Care for adults with acute low back pain. Health Quality Ontario, 2019, with permission from Health Quality Ontario.¹⁶

Conclusion

The *Low Back Pain Clinical Care Standard* provides support for GPs to better manage LBP through a focus on self-management, appropriate messaging and avoidance of unnecessary interventions. The Standard should assist GPs to better manage these often challenging clinical presentations.

Key points

- Principles of management include tailoring a plan to the individual, encouraging self-management and physical activity and identifying barriers to improvement.
- A targeted history and examination should be performed to exclude serious pathology.
- Some psychosocial factors and emotional responses play a major role in the experience of LBP and are linked to delayed recovery from back pain.
- Primary care clinicians should not request imaging if there are no indicators of a serious cause for LBP.
- The goal of pain medicines is to reduce pain to support the continuation of usual activities, including physical activity and work, rather than to eliminate pain completely.

Table 1. Age-specific prevalence estimates (%) of degenerative spine imaging findings in patients asymptomatic for low back pain

| Imaging finding | Age group (years) | | | | | | |
|--------------------|-------------------|----|----|----|----|----|----|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| Disc degeneration | 37 | 52 | 68 | 80 | 88 | 93 | 96 |
| Disc signal loss | 17 | 33 | 54 | 73 | 86 | 94 | 97 |
| Disc height loss | 24 | 34 | 45 | 56 | 67 | 76 | 84 |
| Disc bulge | 30 | 40 | 50 | 60 | 69 | 77 | 84 |
| Disc protrusion | 29 | 31 | 33 | 36 | 38 | 40 | 43 |
| Annular fissure | 19 | 20 | 22 | 23 | 25 | 27 | 29 |
| Facet degeneration | 4 | 9 | 18 | 32 | 50 | 69 | 83 |
| Spondylolisthesis | 3 | 5 | 8 | 14 | 23 | 35 | 50 |

Prevalence rates are estimated with a generalised linear mixed-effects model for the age-specific prevalence estimate (binomial outcome) clustering on study and adjusting for the midpoint of each reported age interval of the study.

Reproduced from Brinjikji W, Luetmer PH, Comstock B, et al. Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. *Am J Neuroradiol* 2015;36(4):811-16. doi: 10.3174%2Fajnr.A4173, with permission from the American Society of Neuroradiology.¹⁷

Authors

Marie Pirotta MBBS, FRACGP, MMed, PhD, General Practitioner, Department of General Practice, The University of Melbourne, Melbourne, Vic

Michael Yelland MBBS, PhD, FRACGP, FAFMM, GradDipMusMed, General Practitioner, Arana Hills, Qld; Associate Professor, School of Medicine, Griffith University, Gold Coast, Qld

Chris G Maher BAppSc (Phy), PhD, DMedSc, FACP, FAHMS, Physiotherapist, Director, Institute for Musculoskeletal Health, The University of Sydney, Sydney, NSW

Elizabeth Marles BMed (Hons), BSc (Hons), FRACGP, DipEd, General Practitioner, Director, Hornsby-Brooklyn GP Unit, Sydney, NSW

Christina Lane BA (English), Senior Project Officer, Clinical Care Standards, Australian Commission on Safety and Quality in Health Care, Sydney, NSW

Alice Bhasale BSc (Psychol), MSc (Med), PhD, Director, Clinical Care Standards, Australian Commission on Safety and Quality in Health Care, Sydney, NSW

Competing interests: AB and CL declare employment by the Australian Commission on Safety and Quality in Health Care (ACSQHC), which funded the development of the *Low Back Pain Clinical Care Standard*. EM declares support from the ACSQHC; consulting fees from the ACSQHC; leadership and fiduciary roles as Director, Therapeutic Guidelines (unpaid), Director, GPSynergy (paid) and a member of the RACGP NSW Council (unpaid), AMA NSW Council (unpaid), Medicare Review Advisory Committee (paid), Pharmaceutical Benefits Advisory Committee (paid) and Cancer Australia Advisory Council (paid); and shares in CSL and Ramsay Healthcare (SMSF management Pitcher Partners). MY declares payment from the Australian Association of Musculoskeletal Medicine (AAMM) as convenor and tutor organising and teaching the learning modules of the AAMM Certificate in Musculoskeletal Medicine. CGM and MP have no competing interests to declare.

Funding: None

Provenance and peer review: Not commissioned, externally peer reviewed.

Correspondence to:

ccs@safetyandquality.gov.au

References

1. Britt H, Miller G, Henderson J, et al. General practice activity in Australia 2015–16. Sydney University Press, 2016.
2. Australian Institute of Health and Welfare. Chronic musculoskeletal conditions: Back problems. Australian Government, 2023. Available at www.aihw.gov.au/reports/chronic-musculoskeletal-conditions/back-problems [Accessed 21 November 2023].
3. Vos T, Barber RM, Bell B, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: A systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2015;386(9995):743–800. doi: 10.1016/S0140-6736(15)60692-4.
4. Schofield DJ, Callander EJ, Shrestha RN, Percival R, Kelly SJ, Passey ME. Labor force participation and the influence of having back problems on income poverty in Australia. *Spine* 2012;37(13):1156–63. doi: 10.1097/BRS.0b013e31824481ee.
5. Schofield DJ, Shrestha RN, Cunich M, Tanton R, Kelly S, Passey ME, et al. Lost productive life years caused by chronic conditions in Australians aged 45–64 years, 2010–2030. *Med J Aust* 2015;203(6):260 e1–6.
6. Hoffmann TC, Del Mar CB, Strong J, Mai J. Patients' expectations of acute low back pain management: Implications for evidence uptake. *BMC Fam Pract* 2013;14(1):7. doi: 10.1186/1471-2296-14-7.
7. Darlow B, Perry M, Dean S, Mathieson F, Baxter GD, Dowell A. Putting physical activity while experiencing low back pain in context: Balancing the risks and benefits. *Arch Phys Med Rehabil* 2016;97(2):245–51.e7. doi: 10.1016/j.apmr.2015.09.020.
8. Buchbinder R, van Tulder M, Öberg B, et al. Low back pain: A call for action. *Lancet* 2018;391(10137):2384–88. doi: 10.1016/S0140-6736(18)30488-4.
9. Foster NE, Anema JR, Cherkin D, et al. Prevention and treatment of low back pain: Evidence, challenges, and promising directions. *Lancet* 2018;391(10137):2368–83. doi: 10.1016/S0140-6736(18)30489-6.
10. Hartvigsen J, Hancock MJ, Kongsted A, et al. What low back pain is and why we need to pay attention. *Lancet* 2018;391(10137):2356–67. doi: 10.1016/S0140-6736(18)30480-X.
11. Shraim M, Cifuentes M, Willetts JL, Marucci-Wellman HR, Pransky G. Why does the adverse effect of inappropriate MRI for LBP vary by geographic location? An exploratory analysis. *BMC Musculoskelet Disord* 2019;20(1):574. doi: 10.1186/s12891-019-2964-7.
12. Webster BS, Bauer AZ, Choi Y, Cifuentes M, Pransky GS. Iatrogenic consequences of early magnetic resonance imaging in acute, work-related, disabling low back pain. *Spine* 2013;38(22):1939–46. doi: 10.1097/BRS.0b013e3182a42eb6.
13. Webster BS, Choi Y, Bauer AZ, Cifuentes M, Pransky G. The cascade of medical services and associated longitudinal costs due to nonadherent magnetic resonance imaging for low back pain. *Spine* 2014;39(17):1433–40. doi: 10.1097/BRS.0000000000000408.
14. Australian Commission on Safety and Quality in Health Care (ACSQHC). *Low Back Pain Clinical Care Standard*. ACSQHC, 2022. Available at www.safetyandquality.gov.au/publications-and-resources/resource-library/low-back-pain-clinical-care-standard-2022 [Accessed 8 November 2023].
15. NSW Agency for Clinical Innovation (ACI). Management of people with acute low back pain: Model of care. ACI, 2016. Available at https://aci.health.nsw.gov.au/_data/assets/pdf_file/0007/336688/acute-low-back-pain-moc.pdf [Accessed 8 November 2023].
16. Health Quality Ontario. Quality standards. Low back pain. Care for adults with acute low back pain. Health Quality Ontario, 2019.
17. Brinjikji W, Luetmer PH, Comstock B, et al. Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. *AJNR Am J Neuroradiol* 2015;36(4):811–16. doi: 10.3174%2Fajnr.A4173.
18. Rheumatology Expert Group. Rheumatology, version 3. Therapeutic Guidelines. Therapeutic Guidelines Limited, 2017. Available at <https://tgldcdp.tg.org.au/viewTopic?etgAccess=true&guidelinePage=Pain%20and%20Analgesia&topicfile=general-principles-chronic-pain-management> [Accessed 21 November 2023].
19. Pain and Analgesia Expert Group. Pain and analgesia, version 7. Therapeutic Guidelines. Therapeutic Guidelines Limited, 2020. Available at <https://tgldcdp.tg.org.au/topicTeaser?guidelinePage=Rheumatology&am;etgAccess=true> [Accessed 21 November 2023].
20. National Institute for Health and Care Excellence (NICE). Low back pain and sciatica in over 16s: Assessment and management. NICE, 2020. Available at www.nice.org.uk/guidance/ng59 [Accessed 8 November 2023].
21. Toward Optimized Practice (TOP). Guideline for the evidence-informed primary care management of low back pain. TOP, 2009. Available at www.cfpc.ca/CFPC/media/Resources/Pain-Management/Low_Back_Pain_Guidelines_Oct19.pdf [Accessed 8 November 2023].

correspondence ajgp@racgp.org.au