



Six things you need to know about low back pain

G. David Baxter PhD;^{1,4} Cathy Chapple PhD;¹ Richard Ellis PhD;² Julia Hill PhD;² Lizhou Liu PhD;¹ Ramakrishnan Mani PhD;¹

Duncan Reid PhD;² Tim Stokes  PhD;³ Steve Tumilty PhD¹

¹ Centre for Health, Activity and Rehabilitation Research, School of Physiotherapy, University of Otago, PO Box 56, Dunedin 9054, New Zealand

² School of Clinical Sciences, Faculty of Health and Environmental Sciences, Auckland University of Technology, Auckland, New Zealand

³ Department of General Practice and Rural Health, Dunedin School of Medicine, University of Otago, Dunedin, New Zealand

⁴ Corresponding author. Email: david.baxter@otago.ac.nz

ABSTRACT

Low back pain (LBP) is the leading contributor to years lived with disability, and imposes an enormous burden on individuals and on health-care systems. General practitioners and physiotherapists are generally the front-line health professionals dealing with patients with LBP, and have a key role in minimising its effect. Here we review six key issues associated with LBP including its effects, diagnosis and management in primary care, and highlight the importance of the biopsychosocial model and matched care for patients with LBP.

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Introduction

Low back pain (LBP) is the leading contributor to years lived with disability, and imposes an enormous burden on individuals and on health-care systems. General practitioners (GPs) and physiotherapists are generally the front-line health professionals dealing with patients with LBP, and have a key role in minimising its effect. In this article, we review six key issues associated with LBP including its effects; diagnosis and management in primary care; and highlighted the importance of the biopsychosocial model and matched care for patients with LBP. This paper provides a succinct overview of LBP, to support LBP knowledge of primary care professionals.

beyond the lumbar region into the legs and be associated with neurological symptoms of paraesthesia and numbness.¹ The natural history is varied. However, in most cases, symptoms resolve within 6 weeks, but symptoms may linger for up to 12 months.¹ Chronic LBP is not uncommon and neither is recurrent LBP, which is episodic for individuals over an extended period of time.¹

Although most episodes of LBP are self-limiting and not serious, there are instances (5–15%) where potentially serious pathologies (such as malignancies, infections and fractures) are the cause of pain and must be identified.^{1,3} These are considered during initial assessment as ‘red flags’ requiring referral for immediate medical opinion.

Low back pain is not associated with injury

Low back pain is often misinterpreted as signalling a disease or injury. Rather, LBP is a symptom with a specific cause that is often poorly understood or unidentifiable.^{1,2} LBP is defined by pain in and around the lumbar spine region: the area bordered by the ribs and pelvis.^{1,3} Pain may also extend

Low back pain can become a chronic problem

Low back pain is influenced by a range of social, psychological, economic and health factors of an individual, along with other wider societal, cultural and legislative factors relevant to the individual’s environment.^{1,2} Such factors can provide barriers to recovery from an episode of LBP, and increase the

Box 1. Key tenets of acute low back pain management

- Acute low back pain (LBP) is common and episodes are nearly always short-lived: reassurance is very helpful.
- Investigations in the first 4–6 weeks are not indicated unless there are Red Flags present. There are risks and costs associated with unnecessary radiology (X-rays and CT scans).
- The evidence for the benefits of activity has strengthened. This means it is important to stay or become physically active and resume usual activities, including work, as soon as possible.
- Analgesia and spinal manipulation may provide short-term symptom control.
- Some clinical interventions may be harmful, especially extended bed rest and the use of opiates or diazepam.
- Advice on early return to work is helpful.

risk of chronicity. Contemporary understanding regarding the biopsychosocial underpinnings of LBP has been critical for the identification of a broader and more encompassing set of both risk (ie risk for developing chronic pain) and prognostic factors.²

Chronic LBP (>3 months) is a highly disabling health condition with poor prognosis.³ Following an episode of LBP, up to one-third of people continue to experience LBP of varying intensity and disability.⁴ LBP can also be a recurrent issue for some groups of individuals.⁵ People with chronic LBP have been found to have unhelpful beliefs and behavioural attributes such as avoidance of activities of daily living.⁶

Costs and associated disability

In the 2010 Global Burden of Disease study, LBP was estimated to be the top-ranked single condition in terms of years lived with disability, and sixth highest in terms of overall burden.⁷ Years lived with disability caused by LBP increased by 54% between 1990 and 2015 and is predicted to increase, especially in low- and middle-income countries with poorly funded health systems.¹ In New Zealand, back disorders are the leading specific cause of health loss, as measured by disability-adjusted life years, for people aged 15–64 years.⁸

Care for people with LBP in New Zealand is primarily funded by the public sector: through Accident Compensation Corporation (ACC)

claims and Ministry of Health ‘Vote Health’ funding of District Health Boards (DHBs). Of the total direct public expenditure on LBP in 2012–13 (NZ \$326.8 million), ~34% was through ACC and 66% through Vote Health.⁹ Of this total expenditure, ~20% related to acute LBP and 80% to chronic LBP (including cases requiring hospitalisation and surgery). However, these cost estimates do not include indirect costs from loss of income and productivity, which have been estimated to be much larger, at approximately NZ\$2.6 billion.⁹ The costs of chronic LBP far exceed costs of acute episodes in terms of financial impact and long-term suffering.

Current management: acute LBP

Recommended management of acute LBP in New Zealand is guided by the ACC Acute LBP Guidelines.¹⁰ This evidence-based document was initially produced in the mid 1990s to guide health professionals and the public in managing acute LBP effectively, and reduce the risk of people developing more chronic, recurrent LBP and the need to have time off work. The key tenets of these guidelines (and others worldwide) are well accepted and have remained unchanged since their original publication (Box 1).

Although these tenets have remained unchanged over time, there is limited evidence that they are routinely used by all professional providers managing care for people presenting with LBP.¹¹

Current management: chronic LBP

Unlike acute LBP, there is no equivalent pathway for the management of chronic LBP in New Zealand and there is variability in service provision across the country.¹² There appears to be general acknowledgment of the importance of addressing psychosocial factors and promoting physical activity especially for people with chronic LBP, although GPs have expressed uncertainty about conflicting messages given to patients regarding activity or rest.¹¹

In New Zealand, GPs are frequently the first point of contact for people with LBP, with conservative management of chronic LBP (non-injury-related) also available through GPs and private providers

(physiotherapists, osteopaths, chiropractors and others). Co-payment costs for consultations and full costs for treatment are likely to be a barrier for accessing care. However, getting access to free conservative care within the public system (in DHBs, when ACC does not cover the costs) requires a GP referral and can be affected by long waiting times for outpatient services. Patients with chronic LBP in general receive less physiotherapy or specialised pain services, before being referred for surgical opinion.¹² Additionally, there may be delays in accessing surgical specialist review or lack of appropriate referrals for review.

In one DHB, there are over 1700 referrals to the Orthopaedic Department for surgical opinions related to LBP each year.¹³ The criteria for accepted referrals are that a person has been in the community complaining of LBP for >3 months without symptom resolution. After assessment in the Orthopaedic Department, it was determined that only 5% met the criteria for surgery. This suggests that although there is access to services under the ACC, there are improvements to be made in streamlining public services. These data also suggest that few people require surgery to manage their LBP, and most need clearer management strategies at the community level.

Assessment and management of LBP is a primary care problem

Given the high prevalence of LBP in primary care, GPs and physiotherapists have a key role in assessing and managing LBP, with the possibility of intervening early in LBP to reduce the risk of long-term pain and disability.

Despite evidence-based clinical guidelines being available in many countries, disability related to LBP continues to increase.¹⁴ A review of 15 clinical guidelines from 15 countries found the common recommendations were physical and psychological therapies, self-management and less emphasis on surgery or drug treatments. Despite these recommendations being widely known, the burden of LBP grows.¹⁵ A search of the literature indicates a growing interest in this area as publications about LBP increased from 617 in 2010 to 1534 in 2018 (Scopus). The *Lancet* dedicated a series of articles in 2018 to this issue, identifying

the challenges in managing LBP and strategies to address these.¹⁶

Recent ACC statistics (2017) indicate that physiotherapy provides most services for people with LBP funded by the ACC (25% compared to 7% by GPs and Accident and Emergency Departments). This reflects the opportunity for direct access to physiotherapy services for acute LBP. Current evidence suggests that New Zealand physiotherapists follow acute LBP guidelines in clinical practice.¹⁷

However, chronic LBP requires a different approach. Multidisciplinary interventions targeting biopsychosocial factors in chronic LBP are more effective than usual care or physical treatments.¹⁸ As chronic LBP is highly individualised and multidimensional in nature, studies have identified subgroups of patients presenting with similar characteristics within each biopsychosocial dimension.¹⁹ Identification of chronic LBP subgroups would allow interventions to be tailored towards each subgroup's attributes to improve clinical outcomes. In contrast, early identification of individuals at risk of developing chronicity is an important secondary prevention strategy. Screening tools such as the *STarT Back Screening Tool*, *Örebro Musculoskeletal Pain Screening Questionnaire* and the *Preventing the Inception of Chronic Pain* tool have been developed to estimate an individual's risk of developing chronic LBP.²⁰ Health professionals could use screening tools for predicting a patient's risk of chronic LBP, which may result in more targeted allocation of timely, appropriate interventions.²⁰

One of the most promising developments for better LBP management in primary care has been the *STarT Back Screening Tool*, which allows triage of patients to matched treatments based on a simple tool to determine risk (low, medium, high) of developing persistent pain and disability.²¹ Using a risk stratification approach by GPs and physiotherapists in their assessment of LBP is now recommended in the UK's NICE clinical guidelines on the assessment and management of LBP;²² this approach has been shown in the UK to be both clinically and cost-effective in reducing disability associated with LBP.²³ Using this stratification tool may also offer benefits for better management of people with LBP in New Zealand if used by GPs and primary care physiotherapists.

Summary

Despite well-evidenced guidelines for managing LBP, the burden continues to grow. Surgery is an expensive option and rarely indicated, and outcomes may not meet patient expectations. There are currently new tools available that more easily identify the risks for developing chronic LBP, based on a more biopsychosocial model. These tools and matched care have great potential to be used in New Zealand primary care.

Competing interests

The authors declare that they have no competing interests. The team has been involved in developing training opportunities for stratified care, and is currently undertaking a preliminary evaluation of the training at clinic level.

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