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## Providing services for acute low-back pain: A survey of Australian physiotherapists



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#### ABSTRACT

*Objective*: To determine whether physiotherapists avoid lumbar X-rays for acute non-specific low back pain and advise people to stay active.

Methods: We conducted a cross sectional survey of Australian physiotherapists. 880 physiotherapists were randomly sampled from Victoria (495), South Australia (158), and Western Australia (227). Physiotherapists were asked which investigations they would order and interventions they would provide for five acute low back pain (LBP) presentations described in vignettes. Four of the five vignettes represented people who would not require a plain lumbar X-ray and would benefit from advice to stay active; one described a patient with a suspected vertebral fracture and would require a plain X-ray. Participants selected from a list of response options or provided free text responses.

*Results*: Questionnaires were completed by 203 of 567 potentially eligible physiotherapists (response rate 36%). Across the four vignettes where an X-ray was not indicated, 75% (95%CI 71–78%) of physiotherapists reported they would practice concordant with the guidelines and not order an X-ray, and 62% (95%CI 57–66%) provided advice to stay active.

Conclusions: Most physiotherapists report intended compliance with recommendations in Australian clinical practice guidelines (CPGs) regarding avoiding the use of X-rays and providing advice to stay active for people with simple acute low back pain, given a vignette based scenario. The majority of respondents reported that they would not advise bed rest. Possible opportunities to further enhance compliance need to be developed and tested to reinforce the role of CPGs in informing physiotherapy practice.

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#### Significance and innovations

- Guideline dissemination does not guarantee compliance.
- Vignettes provide a strategy for examining clinicians' concordance with guideline recommendations.
- The majority of surveyed physiotherapists intended to manage acute low back pain in a way that was concordant with guideline recommendations.
- There are opportunities to further enhance guideline concordant management, and strategies need to be developed and tested.

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#### 1. Introduction

Evidence-based clinical practice guidelines (CPGs) aim to support decision-makers in selecting and implementing best practices. They are typically constructed to provide advice to practitioners regarding practices that are recommended based on reliable research and, in the absence of evidence, they may also include expert opinion regarding sensible options.

In 2003, a CPG for treatment of acute low back pain (LBP) (Australian Acute Musculos, 2003) was endorsed by Australia's National Health and Medical Research Council (NHMRC). This CPG covered management of many acute musculoskeletal conditions, including acute LBP. The guideline defined acute pain as an episode of pain (regardless of severity), with an absence of sciatica or red flags<sup>1</sup> present for less than three months (Australian Acute Musculos, 2003). It was developed by a multidisciplinary team and endorsed by eight professional bodies including the Australian Physiotherapy Association. The guideline was constructed based on evidence for best practice in the diagnosis and treatment of acute non-specific LBP by primary care providers and distributed to all primary healthcare providers in Australia.

Dissemination of guidelines however, does not automatically result in their uptake. Many guidelines include generic advice regarding their implementation. Measuring and understanding current practice, and barriers and enablers to recommended practice, has a key role in the development of strategies to engage practitioners in adopting CPG recommendations (Bekkering et al., 2005).

This study of the current practices of Australian physiotherapists with respect to clinical behaviours recommended by the CPG for acute LBP was conducted as part of a larger study, 'Improving the care for people with acute low-back pain by allied health professionals (the ALIGN trial)' (McKenzie et al., 2010). The ALIGN study was designed to gather data on barriers and enablers to the uptake of the guideline using a theoretical approach, develop a targeted, theory-informed implementation strategy to address identified barriers and enablers and subsequently test its effect in a cluster randomised controlled trial (McKenzie et al., 2010).

In the component of the study reported here, we investigated the uptake of two key guideline recommendations by primary care physiotherapists: (i) that plain X-rays of the lumbar spine are not routinely recommended for people with acute non-specific LBP as they are of limited diagnostic value and provide no benefits in improving pain, function or quality of life, and (ii) that people with acute non-specific LBP should be advised to stay active as it produces a beneficial effect on pain, rate of recovery and function. These key recommendations are further supported in evidence reviews published subsequent to the guideline release (Liddle et al., 2007; Chou et al., 2009; Dagenais et al., 2010; Dahm et al., 2010; Koes et al., 2010).

This paper reports the conduct and results of a survey that aimed to determine if physiotherapists' practices were aligned with these two recommendations and to review how physiotherapists intended to support people in their management of acute LBP. A parallel study involving Australian chiropractors was concurrently conducted by the research team and is reported elsewhere (Walker et al., 2011). The work was approved by the Monash University Human Research Ethics Committee (Approval number CF07/1060-2007/0274).

#### 2. Method

#### 2.1. Design

This study was a cross sectional survey of physiotherapists in three states of Australia.

#### 2.2. Sample size

The sample size was calculated to identify factors (e.g. knowledge, beliefs about consequences) that were predictive of intention to perform a particular guideline-recommended behaviour (to avoid X-ray use and recommend physical activity), with the aim of using this information to develop the ALIGN implementation strategy (reported elsewhere). The sample size was calculated to detect a 0.5 difference in intention to perform a particular behaviour (measured on a 7-point Likert scale), between dichotomised factors (e.g. adequate knowledge vs inadequate knowledge), assuming an equal distribution of participants in each dichotomy, with 90% power. To detect this difference, a sample of 440 physiotherapists was required, assuming a standard deviation of 1.6 Likert scale points (based on results of a similar survey our research team had undertaken with general medical practitioners (O'Connor et al., 2007)) and a 5% significance level. We assumed that contacting double (i.e. 880) the number of physiotherapists would be sufficient to recruit the required number of physiotherapists, allowing for non-eligibility, non-contact, and nonresponse.

#### 2.3. Participants

Physiotherapists were randomly sampled from three strata, defined by states in Australia (Victoria, South Australia, and Western Australia), with the same proportion of physiotherapists approached in each state. These states were chosen as other Australian State Registration Boards would not release contact details of their registrants for research purposes. The entire sample frame of 8493 (4913 Victoria, 1464 South Australia, 2116, Western Australia) was obtained from the relevant Physiotherapy Registration Boards. The numbers approached in Victoria, South Australia, and Western Australia were, respectively, 495, 158, and 227 (approximately 11% of the sampling frame). To be eligible to participate, physiotherapists had to provide services to people with acute LBP and be currently practising. No eligibility restrictions were placed on the type of specialist training the physiotherapist had undertaken.

#### 2.4. Survey instrument

Five patient vignettes (Box. 1) were adapted from another study of acute LBP in a general medical practice setting (French et al., 2013). The vignettes were designed to represent people with acute LBP who would typically present to physiotherapists. Vignettes for patients were based on the clinical presentation of acute LBP derived from the guideline, the Victorian evaluation of a media campaign for LBP (Buchbinder et al., 2001) and from the North-East X-ray Utilisation (NEXUS) study in the UK, that evaluated the effectiveness of audit, feedback and educational reminders on ordering of lumbar spine and knee X-rays by GPs (Bonetti et al., 2005). The physiotherapist and patient roles were designed to contextualise the vignettes.

Four of the five vignettes represented people who would not require a plain lumbar X-ray and would benefit from advice to stay active as per guideline recommendations; one vignette described a person with a suspected vertebral fracture who represented

<sup>&</sup>lt;sup>1</sup> In the Guidelines, 'red flags' refers to physical features that may indicate serious but relatively uncommon conditions or diseases requiring urgent evaluation. Examples provided were tumours, infection, fractures and neurological damage.

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