It is time to update Australian clinical care standards and practice recommendations for management of spinal pain: A commentary

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Abstract

The current Australian guidelines and standards for the management of spinal pain (low back and neck) need to be updated to reflect best available evidence and protect the public.

Opioids have been demonstrated to be clinically ineffective in the treatment of acute back and neck pain and have the potential to cause serious harm or even death. Despite this, current Australian guidelines still recommend their use. A recent randomised controlled trial that ran over six years (The OPAL study) found that opioids are less effective than placebo, with patients in the placebo group reporting significantly lower pain scores compared to the opioid group after one year. Additionally, the study revealed a higher risk of misuse among individuals who received opioids in the trial.

This paper argues for urgent action to update Australian standards and guidelines to explicitly prioritise non-pharmacological management of acute and chronic spinal pain, thus aligning with international guidelines and standards. The implications for chiropractors are discussed, emphasising their role in providing drug-free approaches to spinal pain management.

Keywords: *Analgesics, Opioid, Chiropractic, Opioid-Related Disorders, Chronic Pain, Prescriptions*

Background and context

In June 2023, an article appeared in the Australian online media, published by the Australian Broadcasting Commission (ABC), in which Australian researchers called for an end to the use of opioid drugs for the treatment of acute back and neck pain due to their harm profile and lack of clinical effectiveness(1, 2). Current guidelines recommend that for back pain, opioids, which are considered high-risk medicines due to their risk of misuse and dependency, only be used at the lowest dose for the shortest duration possible(3). However, the researchers based at the University of Sydney say the findings of their randomised controlled trial (The OPAL trial), published in *The Lancet*, (June 2023) are evidence that opioids should not be recommended at all(4). The article noted that in Australia about 40% of people get prescribed an opioid for back pain if they go to their General Practitioner (GP)(5) and about 70% receive an opioid if they present to an emergency department in a hospital(1, 6). Commenting on the study, Sullivan and Ballantyne, from the University of Washington in Seattle, noted that current clinical guidelines in the USA also recommend opioids for patients with acute back and neck pain when other drug treatments fail, or are contraindicated(7). Since up to two-thirds of patients in the US might receive an opioid when presenting for care of back or neck pain,(8) they also conclude it is it is time to re-examine their own standard medical prescribing guidelines and practices(7).

A prominent Australian pain expert however, says the study has too many limitations and should not necessarily change how doctors approach treatment(1, 2). Despite the findings, a pain medicine specialist said that the study was not anywhere near strong enough to prompt a change in guidelines, and that opioids still had a place as long as they were used judiciously and for a short period of time. The pain specialist said the study had several limitations, and the drug (*Targin*™) was not a fair comparison to the opioid treatments nine in 10 Australian doctors would actually use to treat acute pain. This assertion is at odds with the authors own rationale in their methodology for the opioid used in the RCT, where they note ‘the use of oxycodone over other opioid choices reflects clinical practice in Australia, where oxycodone is the most common medicine prescribed for acute back pain’(4) (p8)(3).

The OPAL trial ran over six years where 347 participants with acute back or neck pain were provided with guideline consistent care plus either placebo or opioids. Guideline recommended care was reassurance of a positive prognosis, advice to stay active and to avoid bed rest, and if required, other guideline-recommended treatments including non-opioid analgesics.

The drug used in the trial*, Targin*™*,* is oxycodone-with-naloxone controlled-release, usually used for chronic, severe disabling pain not responding to non-opioid analgesics(9). The authors outline and address several limitations such as missing data,

compliance to the medication regimen, and the nature of the guideline care received by participants in both groups (none of which differed between groups) (p7).

During the study, treatment continued until adequate improvement (for three consecutive days) or for a maximum of six weeks. After six weeks the mean pain score was 2.78 (measured on a 0–10 scale by the Brief Pain Inventory Pain Severity Subscale) in the opioid group vs 2.25 in the placebo group. At all time-points, especially from approximately 20 weeks onwards, opioids were less effective until at one year, mean pain scores in the placebo group were still significantly lower than in the opioid group. At one year, 20% of the patients who received opioids were at risk of misuse, as indicated by the Current Opioid Misuse Measure (COMM) scale,(10) compared with 10% of patients in the placebo group. The most common events across both groups were nausea and vomiting, constipation, headache, dizziness, and somnolence (drowsiness); all of these were more frequently reported in the opioid group except headache(4).

The ABC article notes in recent years, there has been a shift in the understanding and management of back pain to encompass not just the physiological aspects of pain, but also the psychological. Back pain can be more effectively addressed through self-management and less-invasive physical and psychological therapies(11). Previous research into the use of opioids and other drugs for chronic pain had found drugs, especially opioids offer at best, modest, short-term pain relief but come with increased risks of harm, and should not be used for long periods(12). There is also evidence from randomised trials (RCTs) that over the counter (OTC) drugs such as paracetamol are also not effective for reducing acute low back pain(13). Non-steroidal anti-inflammatory drugs (NSAIDs), such as *Nurofen*™ and *Voltaren*™, provide only minimal benefits and have high risk of side effects(14). Underscoring these findings was a 2017 systematic review by Machado et al published in the *Annals of the Rheumatic Diseases* that found no analgesics provided clinically important effects for spinal pain over placebo(15).

In the ABC article, co-author Professor Lin said the findings of the study reinforced that first-line management of acute neck and back pain should include staying active, avoiding bed rest, and using non-opioid analgesics if necessary. The pain specialist agreed but is of the opinion there was still a place for opioids in some circumstances, especially when people had ‘tissue-damage-type pain’. *“In acute pain, most medications won't work all that well. That doesn't mean that they never work… It's not humane to stand there and watch someone suffer and just say, ‘off you go back home’. When opioids become a problem is when you're still using them six months to a year down the track.”* he said(1).

The article reiterates the fact that that every day in Australia there are three deaths (~1,095year) and nearly 150 hospitalisations (~55,000/year) from prescription opioid use(16). Both agree urgent action is needed to expand access to non-drug treatments for acute and chronic pain stating, *“There's a very significant awareness that [non-drug treatments] is the right way to go, but that is not being followed with adequate funding”(2).*

In support of the rationale that clinicians need to do something, it has been observed physicians may feel conditioned to believe they must prescribe something to the patient who is uncomfortable(17). Clinicians are sympathetic to the needs of people in distress and try their best to help reduce the patients' symptoms. Medical practitioners may also feel they have insufficient replacements for opioids and lack options. They may lower prescription rates for oxycodone and then suddenly more people are on Gabapentin in the highest doses, diversion rises, and so does its abuse(18). Hambright (2023) notes even those who regularly teach about non-pharmacological approaches such as breathing, mindfulness, discuss trauma, and talk therapy, "*hate the feeling of being trapped, feeling like nothing more than a 'vending machine' for drugs*"(17).

Discussion

The incidence and prevalence of low back pain is growing, with estimates worldwide that by 2050, 843 million people will be affected(19). In Australia, it is estimated there will be a nearly 50% increase in cases by 2050. Over 5 years ago, concerns were raised, and recommendations made about the need for a change in policy on the best way to prevent and manage back pain to mitigate the rise of inappropriate treatments(20). However, there has been little change in official guidelines. Chiropractors could reasonably ask *'why"*?

Non-specific low back pain describes back pain that does not have a specific (pathological) cause, such as fracture, tumour or infection. It may also be called mechanical and/or degenerative low back pain(21). Low back pain (LBP) alone is the leading cause of disability burden in Australia(22). In 2019–20, an estimated $3.4 billion of expenditure in the Australian health system was for back problems, representing 2.4% of total health expenditure(23), some other historical estimates placing healthcare costs for LBP as high as $4.8 billion(24). It is the most common health reason middle-aged Australians retire early(25, 26).

It is thus noteworthy how many commentators, researchers and medical practitioners still give the impression they consider back (and neck) pain to be self-limiting and insignificant(1). While it is true that up to 75% of acute episodes of low back pain resolve within 6 weeks, it is also true that for 30-40% of people, it will recur within one year(27, 28). According to Scandinavian data, if the person has pain in multiple regions the probability of spontaneous resolution is much less likely and approaches zero(29). Studies on the natural history of spinal pain have found for most people, pain does indeed decline rapidly within one month after a new pain episode. However, in that study, pain remained unchanged over the follow-up year for those with equal pain in the neck and low back areas at baseline and for those reporting four or more pain sites at baseline(29). So, for a large proportion of people, acute spinal pain may not spontaneously resolve,

and if it does, there is a good chance it will recur or become chronic. If the pain is present in more than one region, there is a much higher chance it may not resolve spontaneously. This is important since progression to chronic back pain (CBP) constitutes a large proportion of the burden of disease attributed to back pain, and it is closely associated with mental and psychosocial issues(26, 30-32). Recent research also highlights the link between spinal pain and cardiovascular disease, hypertension, diabetes, and obesity(33). A recent multicentre Scandinavian study of people presenting to chiropractors with a new episode of LBP reported associations with chronic conditions, especially hypertension (19%), and osteoarthritis (15%). Almost half (49%, *n*=1024) reported at least one chronic condition and 20% (*n*=421), multi-morbidities (>2 chronic conditions). People with multi-morbidity and co-occurring musculoskeletal pain reported high levels of disability, as well as more mental health problems, physical inactivity, and obesity. The study questioned how comorbidities impacted LBP, and concluded the presence of multimorbidity was associated with increased odds of poor self-rated health, physical fitness, muscular strength, endurance, and balance. It is noteworthy that participants receiving chiropractic care reported improvements in their conditions over time and fewer used pain medication regardless of pain intensity at the onset of care or the presence of other chronic conditions(34).

Early referral for appropriate management of spinal pain is critical to avoid progression to chronicity. Failure to refer first episode musculoskeletal pain patients for passive care in the first few days following injury may result in an eight-fold increase in the number of patients going on to have chronic pain, and a 50% increase in patients who lose more than 10 workdays(35). Studies have clearly demonstrated that for acute low back pain, as for all acute musculoskeletal injuries, early appropriate intervention, to modulate pain, restore normal mobility with manipulation/mobilization and improve biomechanical function, reduces the chance of developing chronic pain from 15% to 2% (35-37).

Good evidence for manual care and against pharmaceuticals for back pain keeps emerging. A recent systematic review in *The Spine Journal* found nonpharmacological interventions such as spinal manipulation provide safer benefits than pharmacological or invasive interventions(38). The lead author, Feise commented, "*numerous high-quality studies support the effectiveness and safety of chiropractic care(39-44), in contrast, there is an absence of quality research to support the use of pharmaceuticals and spinal surgery for patients with (chronic) low back pain"*(45). Guidelines state that spinal fusion should only be offered as part of an RCT and lumbar disc replacement should no longer be performed(21).

An international, multidisciplinary research team conducted this systematic review and meta-analysis to compare the benefits and harms of common treatments for adults with nonspecific chronic low back pain without radiculopathy. Benefit studies were required to be high-quality, placebo-controlled, randomized clinical trials with at least 30 patients per group and a loss to follow-up of less than 20%. The meta-analysis provided 22 summary data points. Overall, the research team found that non-pharmacological interventions

including spinal manipulation were effective in reducing pain intensity. The benefits of the pharmacological and invasive interventions were uncertain due to the absence of trials meeting the eligibility criteria. There was no quality research for any of the pharmacological agents, corticosteroid injections or surgery(38). Since there is an absence of quality research to support the use of pharmaceuticals and spinal surgery for patients with chronic low back pain, the lead author asks *"Do those treatments have any value? Are they more harmful than beneficial? Right now, we cannot be certain, because pharma companies and surgeons have failed to provide quality research"*(45).

The opinion of the pain specialist in the ABC article is noteworthy and concerning. A well-established pillar of EBP includes reference to the best available evidence. Patient preferences are also considered in the context of availability, risk, safety, cost and clinician scope, experience, and expertise. The assertion without supporting evidence, that 90% of Australian doctors are prescribing opioid medications that may result in hospitalisation or even death without evidence of benefit should flag concern. In effect, the position that it is not humane to send people away without an opioid prescription if they have back or neck pain, in the absence of supporting evidence, appears at odds with Australian clinical standards and guidelines(46). In the light of this new evidence(4), one might thus respectfully suggest that medical practitioners who feel powerless to 'do something' for people with spinal pain(17), should consider following standards and guidelines of care and send the person away with a referral to consult a manual care allied health practitioner such as a chiropractor.

International guidelines

There are now consistent recommendations in international guidelines based on evidence in favour of both manual interventions and psychological therapies(31) often combined with physical activity for back pain(47, 48). Even in Australia, 5 years ago Almeida et al (2018) noted that the most recent international guidelines placed an emphasis on non-pharmacological interventions but emphasis varied across jurisdictions(28). US guidelines recommend non-pharmacological treatments should be used first, with pharmacological options reserved for those who do not respond(43). Danish guidelines do not recommend pharmacological treatments at any stage of management(49).

Perhaps readers should not be surprised by the admissions of the pain specialist regarding the prescription practices of nine out of 10 Australian doctors who prescribe opioids for back pain.
Changing guidelines may be insufficient to change the practices of GP's. Prescribing is a fundamental activity of general practice and in the main GPs default to medications to manage all types of pain, with drug company representatives being an important source of information(50, 51). Adherence to clinical practice guidelines in most healthcare sectors is generally poor(52, 53). Judgement on 'non-adherence' should be tempered by

the findings of a recent meta-analysis of Cochrane Systematic Reviews by Howick et al (2022). One in 20 (5%) of 1,567 interventions in the analysis was found to have high-quality evidence supporting their benefits, and harms are under-reported. Less than half are supported even by moderate-quality evidence(54).

Implications for chiropractors

Hawk et al recently (2020) provided general considerations for chronic pain management by chiropractors. In summary, these considerations are, 1) Emphasize the biopsychosocial model, 2) Prioritize self-management and nonpharmacological approaches, 3) Emphasize active interventions and passive interventions, should be combined with active interventions and self-care, 4) Include both physical and mind–body approaches, 5) Identify the neurophysiological type of pain (neuropathic, nociceptive, and central sensitization), because this may affect treatment choices and, 6) Consider risk stratification since people with low risk of a poor outcome may require a less intensive approach, while those with higher risk may require a more intensive approach incorporating multiple therapies, including psychological(55).
Chiropractic management may include active and passive care recognising a biopsychosocial approach in a context of costs and availability(56-62). Chiropractors have always acknowledged the essential components of good health. They emphasise the importance of good diet, adequate rest and relaxation, physical activity, social connectedness, and sound mental health, avoiding smoking, drug use and excessive alcohol consumption(63), and emerging evidence continues to support this non-pharmacological approach.

The incongruity of managing functional, neuro-musculoskeletal disorders, or so-called mechanical syndromes with pharmacology is obvious to chiropractors and other manual therapists. The question is ‘Could chronic pain in the human frame really be a faulty brain model for the body part?’ No amount of chemical intervention or surgical alteration of the anatomy, while potentially playing a role, can substitute for the sensory-based remodelling of the body parts in the brain (64-66).

The so called ‘opioid epidemic’ constitutes an ongoing existential crisis in healthcare. In the best interests of the public, we have previously pointed to a critical role for the chiropractic profession as it becomes increasingly apparent that the optimal way to help people with spinal pain does not include drugs or surgery in the first instance(56). This is advice chiropractors have consistently maintained for over 100 years.

Following initial health history and examination, education and advice, self-management, and physical activity, the most recent clinical care standards for low back pain recommend physical and/or psychological interventions targeted at overcoming identified barriers to recovery(46). This recommendation precedes ‘judicious’ use of medications of any type

in this standard. As chiropractors, we would agree in principle with this recommendation but would also support removal of recommendations of pharmacology from Australian standards as is the case in the Danish guidelines(49). More effort should be devoted in Australian guidelines to include decision making algorithms that better help the gatekeeper medical practitioners target their recommendations and referrals. We note that people presenting to allied health practitioners such as chiropractors have usually experienced episodes of pain in the past(67), thus a recommendation of a trial of non-pharmacological care prior to the use of any class of medications, is both appropriate and defendable(62).

There already exist Australian standards that state for people with back pain (acute or chronic), non-pharmacological treatments (e.g., physical and psychological therapies) should be used before pharmacological therapies, however they do not appear to have been widely adopted or publicised(28). We broadly support these standards since non-pharmacological interventions for back and neck pain such as manual care, and active/education care/advice have superior evidence and better safety profile than all types of medications(28, 31, 68, 69) These are all active and passive components of the chiropractic clinical encounter(56-60). The Jones paper(4) is just the latest from Australian researchers providing good evidence for the de-emphasis of all pharmacological management of spinal pain(12, 13).
Around 1,100 Australians die each year from opioids(16). To find that these medications are less effective than placebo at all time points, especially from six weeks onwards, should come as no surprise to chiropractors, however, these findings should raise grave concerns with health system administrators, regulators, and consumers. How many of those 1,100 deaths were from opioids prescribed for back or neck pain for which they are now known to be less effective than a placebo? Given the design of the OPAL study where both groups received guideline concordant care plus either opioids or placebo, and at all time points those receiving opioids scored lower on the Brief Pain Inventory Pain Severity Subscale, the question could reasonably be asked *“do opioids actually delay recovery for people with low back or neck pain?”*

Conclusions and Recommendations

Australian clinical practice standards and guidelines for spinal pain (neck and lower back) should be updated to remove pharmacological recommendations, especially those for use of opioids. Good evidence indicates that opioids should not be recommended for back and neck pain at all, despite existing current Australian guidelines advising their use at the lowest dose and for the shortest duration possible. High prescription rates of opioids and hospitalisations and deaths in Australia indicate a re-evaluation of clinical guidelines and practices is necessary and urgent.

Allied health practitioners including chiropractors, play a vital role in providing drug-free approaches to spinal pain management. Considering the evidence and to protect the public, we recommended amendment of clinical practice guidelines and standards to remove the advice of using medications for the management of spinal pain in Australia as is the case in Danish guidelines. This may help mitigate the risks associated with opioid use and promote more safe and effective treatment options for consumers. Furthermore, there is a need for increased funding and access to non-pharmacological clinical interventions for acute and chronic pain, as well as continued research in this field to further enhance the understanding and management of spinal pain and its association with other chronic health conditions and quality of life.

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