O'Sullivan K, O'Sullivan PB, O'Keeffe M. The Lancet series on low back pain: reflections and clinical implications. Br J Sports Med. 2019 Apr;53(7):392-393. doi: 10.1136/bjsports-2018-099671. Epub 2018 Aug 31. PMID: 30170998.

The Lancet series on low back pain: reflections and clinical implications

Kieran O'Sullivan,[1,2] Peter B O'Sullivan,[3,4] Mary O'Keeffe[5]

The Lancet series of papers on low back pain (LBP)[1–3] received considerable academic and media attention, and helpfully reinforced key messages from international guidelines. Box 1 highlights some of the series' key messages. The series illustrated international, multidisciplinary consensus on management of LBP. The series provides the reader with a comprehensive review of the most promising solutions, ranging from stratified care according to clinical risk profiling, through integrated health and occupational care, changes to payment systems and legislation, as well as public health and prevention strategies. This is important as all too often, guidelines and systematic reviews focus on the effectiveness, or lack thereof, of particular treatment options in isolation, without considering the broader context within which treatments are delivered. Here, we reflect on three issues from the series and discuss the clinical implications.

REFLECTIONS

1. *Should we really be trying to prevent LBP?* As laudable, and obvious, as aiming to prevent LBP is, this does not seem to be consistent with the concept that LBP is a 'predicament of life'[4] which will happen to most people at some point in time. It may not be useful to spend lots of money trying to prevent episodes of LBP, most of which are short term and not associated with major impact or disability. Furthermore, the drive to prevent LBP may somewhat reinforce the message that LBP is a dangerous, scary thing which indicates something serious might be wrong with your body. Instead, helping patients, and society, reconceptualise LBP as being more like other common

Box 1 Lessons from the Lancet low back series

- Low back pain (LBP) is a major global challenge, and back-related disability is increasing.
- The majority of LBP is not serious and cannot be linked to a specific structure.
- Most red flags have limited diagnostic accuracy.
- Imaging use is often inappropriate for non-specific LBP.
- Non-pharmacological treatments such as advice and activity should be first-line options in the treatment of non-specific LBP.
- Opioids have small effects, but have substantial risks.
- Psychosocial factors are important contributors to LBP and associated disability.
- A systems approach to LBP involving clinical pathway redesign, changes to payment systems and legislation, and integrated health and workplace strategies is needed.
- Advocate the concept of positive health for LBP—the ability to adapt and to self-manage in the face of social, physical and emotional challenges.
- Need to change widespread misconceptions about the causes, prognosis and effectiveness of different treatments for LBP.

[1]Sports Spine Centre, Aspetar Qatar Orthopaedic and Sports Medicine Hospital, Doha, Qatar
[2]School of Allied Health, University of Limerick, Limerick, Ireland
[3]School of Physiotherapy and Exercise Science, Curtin University, Perth, Western Australia, Australia
[4]Bodylogic Physiotherapy, Perth, Western Australia, Australia
[5]School of Public Health, Sydney Medical School, University of Sydney, Sydney, New South Wales, Australia

Correspondence to Dr Kieran O'Sullivan, Sports Spine Centre, Aspetar Orthopaedic and Sports Medicine Hospital, Doha, Qatar; kieran.osullivan@aspetar.com

complaints like tiredness, sadness and constipation may be more useful. Specifically, these are all unpleasant, but typically short-lasting and rarely serious situations. Our efforts might be better focused on helping people deal well, and simply, with acute episodes of these, and help prevent persistent disability, which is the real burden. This approach could still emphasise the importance of factors such as physical activity in protecting against persistent LBP and other health complaints.

2. *Is exercise really that effective?* As physiotherapists, it is satisfying to see the continued emphasis placed on non-pharmacological care for LBP, particularly advice to stay active and do exercise for persistent LBP is pleasing. However, the effect sizes for either being active or exercising are actually modest and not really much better than other treatment options. In other words, the recommendations for exercise and activity are more based on the safety, low cost and other general health benefits rather than due to any major effect on LBP-related pain or disability. Exercise might also have value in offering some support while observing natural history, to avoid rushing to riskier, expensive options. Therefore, we should not rest on our laurels and think exercise alone is the solution to LBP. Indeed, we need to hold exercise to a similar standard of critical appraisal as pharmacological and surgical interventions, where more rigorous placebo-controlled trials with participant blinding are possible. Instead, exercise offers a good foundation on which we might add other effective treatments.
3. *How long do we keep searching for the tissue 'source' of pain?* The proposal statement that it is not *yet* possible to accurately identify 'the specific nociceptive source of LBP' assumes that there actually is a nociceptive source which will explain the problem of LBP—just that we have not found it yet. How does trying to find the 'source' of LBP fit with the evidence/concept of pain as an emergent property of the person, rather than an 'input' from tissues?[5] While there are very few who would argue that tissue nociception plays no role in LBP,[6] or that high-quality aetiological and diagnostic studies could not offer some additional insights, the series itself discusses how tissue 'input' can be modified according to the responsiveness of the central nervous system and that 'the advances with the greatest potential reduce focus on spinal abnormalities'. We are slightly concerned that further attempts to identify pain sources will be further reductionist steps to solve a complex issue. There may be more value in delineating how comorbid health conditions are linked to LBP and whether treatment of LBP needs to be aligned with addressing these other health complaints where possible.

CLINICAL IMPLICATIONS FOR RECOMMENDED TREATMENT OPTIONS

Three key treatment options which are recommended, and relevant to the *BJSM* readership, are exercise, education and psychological therapies. Three further editorials deal specifically with these issues:

- Is exercise really a suitable treatment option for athletes who are already active?
- What could, or should, physiotherapists do about psychosocial factors in LBP?
- What does education for LBP actually mean?

In conclusion, the Lancet series guides us to change the narrative that LBP is a 'bad' condition by focusing attention on effective treatments, and reducing strategies that are inappropriate and frankly harmful.

Contributors All authors listed have made substantial contributions to the conception, design, acquisition, analysis and interpretation of data. All authors have revised it critically for important intellectual content and approved the final version. In doing so, we agree to be accountable for all aspects of the work.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests KOS, PBOS and MOK provide professional development workshops for clinicians, which emphasise multidimensional, individualised rehabilitation. KOS serves in a voluntary capacity as Senior Associate Editor of *BJSM*. MOK is a postdoctoral student working with one of the authors of the Lancet series.

Provenance and peer review Not commissioned; externally peer reviewed.

To cite O'Sullivan K, O'Sullivan PB, O'Keeffe M. *Br J Sports Med* 2019;**53**:392–393.

Accepted 16 August 2018
Published Online First 31 August 2018

Br J Sports Med 2019;**53**:392–393.
doi:10.1136/bjsports-2018-099671

REFERENCES

1 Hartvigsen J, Hancock MJ, Kongsted A, *et al*. What low back pain is and why we need to pay attention. *Lancet* 2018;391:2356–67.
2 Buchbinder R, van Tulder M, Öberg B, *et al*. Low back pain: a call for action. *Lancet* 2018;391:2384–8.
3 Foster NE, Anema JR, Cherkin D, *et al*. Prevention and treatment of low back pain: evidence, challenges, and promising directions. *Lancet* 2018;391:2368–83.
4 Hadler NM. *Stabbed in the back: confronting back pain in an overtreated society*: Univ of North Carolina Press, 2009.
5 Thacker MA, Moseley GL. First-person neuroscience and the understanding of pain. *Med J Aust* 2012;196:410–1.
6 Brinjikji W, Diehn FE, Jarvik JG, *et al*. MRI findings of disc degeneration are more prevalent in adults with low back pain than in asymptomatic controls: a systematic review and meta-analysis. *Am J Neuroradiol* 2015;36:2394–9.