Low Back Pain: It's Time for a Different Approach

■ Abstract ■

In spite of great effort, low back pain (LBP) remains a significant burden on society and one of the most common reasons to see a primary care provider. The conventional medical message about acute LBP is inconsistent with its actual clinical course. There is little agreement on the cause or best treatment. Back pain is "over-medicalized." Routine care is fragmented and episodic. We propose shifting to a practical, stratified approach based on rapid clinical recognition of mechanical syndromes with early identification of psychosocial issues and potentially serious pathologies. LBP is a chronic condition; the goal is control, not cure.

Key words: low back pain, LBP, natural history, medicalization, psychosocial issues, routine back care

ow back pain (LBP) is one of the most prevalent and costly complaints in North America.¹ It is among the most common medical reasons to see a family physician and is an enormous burden to society in general and the delivery of health care in particular.^{2,3} Whether it is the failure of our current medical paradigm, the widely accepted misconceptions, or misguided policies of third-party payers, the fact remains that unlike many other debilitating conditions and despite great efforts, the problem of LBP continues to grow.^{3,4} Many patients suffer brief, self-limiting episodes of LBP, but these are not the challenge.^{5,6}

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It is persistent or recurrent LBP that strains the system, disrupts society, and adversely impacts the individual. Just 25% of patients with LBP generate 75% of the financial and social costs.⁷

To better manage these complex patients, we need to distinguish several key aspects of LBP. First, the conventional medical message about acute LBP is inconsistent with its actual presentation.^{8,9} The current guidelines are correct that LBP is a benign condition with a favourable natural history, but this statement is often misinterpreted by patients and providers to mean that every attack will end quickly and all will be well.5 The majority of patients with a favourable course do not seek care from a physician.6 Growing evidence demonstrates that for patients requiring help, the symptoms are likely to return and, in a number of patients, to become chronic.8 Although this is acknowledged in many guidelines, it is not emphasized and no guideline adequately addresses how to deal with the fear and uncertainty of persistent or repeated LBP.5 Not unreasonably, for the patient who has been told, "Don't worry, it will get better," and for the physician who has followed the initial recommendation of current guidelines, continuing or recurring symptoms raise the spectre of an ominous pathology or serious illness.

Second, there is little agreement on the source of pain or the best management for a large number of sufferers of LBP, particularly those who have dominant back pain with minor leg symptoms and no neurological findings. 10 The unhelpful and misleading term non-specific low back pain leads to the initial treatment of acute LBP as a homogeneous entity using simple, standardized, "one size fits all" routines that are frequently ineffective.^{5,10} LBP is a heterogeneous affair, and all

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current research points to significantly better outcomes with a more specific and stratified clinical approach. Although there is no uniform agreement as to the best non-surgical management, it is agreed that doing something active is better than adopting a passive, dependent approach.

This heterogeneity leads to a third problem, the "medicalization" of LBP.4 Medical training and societal expectations dictate that we must establish a cause for the pain and base our therapy on a recognized pathology. This makes sense for diseases for which there are reliable means of diagnosis and an associated remedy. But most patients complaining of LBP experience symptoms from a minor mechanical disturbance, not a disease. The severity of the pain, which can be extreme, does not reflect the seriousness of the underlying problem.

In the majority of cases, the issue is nothing more than the inevitable consequence of "wear and tear," with or without a specific aggravating event. The limited nature of the derangement makes a definitive diagnosis impossible.^{4,10,14,15} Looking for the source of back pain with computed tomography

scans results in a 30% false-positive rate—the identification of genuine findings that are irrelevant to the patient's pain. Magnetic resonance

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imaging carries a lack of specificity that can exceed 80%.14,16 These imaging "abnormalities" generally do not correlate to the specific symptoms, pain severity or degree of disability. Ultimately, for the majority of low back complaints, obtaining spinal imaging does not improve patient outcomes.4,15 The demand for a test that tells us what is wrong is often driven by the patient and directly or indirectly by third-party payers who require a structural diagnosis even when none is available.^{4,17} The physical origins of back dominant pain are well recognized, but pinpointing the pain generator in a particular individual may not be possible.

Spinal imaging does, however, substantially increase resource utilization. 4,14,18 The direct cost of the investigation is compounded by the subsequent unnecessary expense of a specialist consultation or further investigations. Unfounded concerns produce the indirect costs of lost work time and needless restrictions. It is difficult and time consuming to explain to a patient why a reported abnormality is not necessarily abnormal or in need of treatment or even related to the pain. 18

Although current guidelines appropriately recommend a bio-psychosocial approach to LBP, as a result of their training, physicians tend to spend an inordinate amount of time and expense on the "bio" portion, particularly in trying to identify the source of pain.^{4,19} Yet the psychosocial aspects, the yellow flags of maladaptive behaviour and social dysfunction, are the most predictive factors for chronicity.20 Identifying and addressing the vellow flags is labour intensive. These steps may be outside the comfort zone of the primary care provider or seem unfeasible in a busy primary care practice.^{5,21} Unfortunately, the necessary services such as cognitive behavioural therapy are generally not covered by health care systems or insurance companies; as a result, many patients requiring these types of therapy do not get them in a timely manner or at all. It is difficult to resolve well-established maladaptive behaviours and easy to question the efficacy of a treatment applied too late.

The fourth issue is the fragmented and episodic nature of care.²² Patients with back pain receive conflicting information and advice from medical specialists, allied health professionals, family members and friends, and, of course, the Internet.10,19 Optimal patient management is best delivered in a shared-care model with consistent messaging by primary care, specialist and rehabilitation professionals. Patients select what resonates with them or do nothing in the face of so many contradictory opinions. Many continue to search for something that is going to "fix" their back pain.



To better manage complex low back cases, the following key messages apply to the majority of patients;

- Your low back pain does not indicate serious damage even though it may be very painful, recur and, and in some cases, become chronic.
- Not all patients have the same triggers to their low back pain. Your health care professional can help you understand the best activities and exercises for your recovery.
- 3. MRI will show many structural alterations in the spine that are related to common anatomical changes. This information does not help us manage your recovery.
- 4. Low back pain is a common condition and not a disease. It is best managed by reducing pain in order to increase function.

Recognizing the pitfalls in our current medical approach to LBP, we propose a paradigm shift to a more practical, stratified approach that changes the messaging and management of LBP to reflect what LBP is-a chronic human condition.4,11,12 We must be both proactive and preventative. The first step is convincing the patient that LBP is manageable albeit likely to recur. The goal is control, not cure, and control is not only possible, it is readily achievable. It consists of phases of symptomatic treatment while engaging the patient in selfmanagement maintenance and preventative strategies. Most LPB arises from minor mechanical derangements that produce an identifiable compilation of symptoms suggesting a probable anatomical source and, more importantly, an initial patientspecific management strategy.11 Appropriate expectations, a primary focus on the return of function and as well as pain reduction, and longterm, self-directed control should reduce both the chronicity and health

care utilization.^{4,12,23–25} Individuals without a specific mechanical pattern, who fail to respond or become less specific over time, or who have a concurrent non-spinal complaint require further attention. Up to 30% of patients with LBP have associated yellow flag psychosocial issues. 12,20,26 Less commonly, there may be a red flag for non-mechanical causes such as inflammatory disease, infection, or tumour. 27,28,29 Reliably screening for these unusual presentations is possible by through a precise, backspecific history and physical examination. The next three articles provide a practical approach that will enable you to confidently assess and initiate patient-specific management within the continuum of LBP.

References

1. Hoy DG, Bain C, Williams G, et al. A systematic review of the global prevalence of low back pain. Arthritis Rheum 2012;64(6):2028–37. doi: 10.1002/art.34347.

- Power JD, Perruccio AV, Desmeules M, et al. Ambulatory physician care for musculoskeletal disorders in Canada. J Rheumatol 2006;33:1.
- 3. Martin BI, Deyo RA, Mirza SK, et al. Expenditures and health status among adults with back and neck problems. JAMA 2008;299(6):656–64.
- 4. Srinivas SV, Deyo RA, Berger ZD. Application of "less is more" to low back pain [review]. Arch Intern Med 2012;172(13):1016–20.
- 5. Koes BW, van Tulder M, Lin CW, et al. An updated overview of clinical guidelines for the management of non-specific low back pain in primary care. Eur Spine J 2010;19;2075–94.
- 6. Walker BF, Muller R, Grant WD. Low back pain in Australian adults. Health provider utilization and care seeking. J Manipulative Physiol Ther 2004;27(5):327–35.
- Dagenais S, Caro J, Haldeman S. A systematic review of low back pain cost of illness studies in the United States and internationally. Spine J 2008;8:8–20.
- 8. Itz CJ, Geurts JW, van Kleef M, Nelemans P. Clinical course of non-specific low back pain: a systematic review of prospective cohort studies set in primary care. Eur J Pain 2012 May 28. Epub ahead of print.
- 9. Donelson R, McIntosh G, Hall H. Is it time to rethink the typical course of low back pain? PM R 2012;4(6):394–401.
- Fourney DR, Andersson G, Arnold PM, et al. Chronic low back pain: a heterogeneous condition with challenges for an evidence-based approach. Spine (Phila Pa 1976) 2011;36(21 Suppl):S1-9.
- 11. Hall H, McIntosh G, Boyle C. Effectiveness of a low back pain classification system. Spine J 2009;9(8):648–57.
- 12. Hill JC, Whitehurst DG, Lewis M, et al. Comparison of stratified primary care management for low back pain with current best practice (STarT Back): a randomised controlled trial. Lancet 2011;378(9802):1560–71.
- 13. Furlan AD, Yazdi F, Tsertsvadze A, et al. A systematic review and meta-analysis

- of efficacy, cost-effectiveness, and safety of selected complementary and alternative medicine for neck and low-back pain. Evid Based Complement Alternat Med 2012;2012:953139. Epub 2011 Nov 24.
- 14. Chou R, Deyo RA, Jarvik JG. Appropriate use of lumbar imaging for evaluation of low back pain [review]. Radiol Clin North Am 2012;50(4):569–85.
- 15. Chou R, Qaseem A, Owens DK, Shekelle P; Clinical Guidelines Committee of the American College of Physicians. Diagnostic imaging for low back pain: advice for high-value health care from the American College of Physicians. Ann Intern Med 2011;154(3):181–9. Erratum in: Ann Intern Med 2012;156(1 Pt 1):71.
- 16. You JJ, Purdy I, Rothwell DM, et al. Indications for and results of outpatient computed tomography and magnetic resonance imaging in Ontario. Can Assoc Radiol J 2008;59(3):135–43.
- 17. You JJ, Levinson W, Laupacis A. Attitudes of family physicians, specialists, and radiologists about the use of computed tomography and magnetic resonance imaging in Ontario. Healthc Pol 2009;15:54–65.
- 18. You JJ, Bederman SS, Symons S, et al. Patterns of care after magnetic resonance imaging of the spine in primary care. Spine (Phila Pa 1976) 2012 May 30. Epub ahead of print.
- 19. Scott NA, Moga C, Harstall C. Managing low back pain in the primary care setting: the know-do gap. Pain Res Manag 2010;15(6):392–400.
- 20. Chou R, Shekelle P. Will this patient develop persistent disabling low back pain? JAMA 2010;303(13):1295–302.
- 21. Henschke N, Ostelo RW, van Tulder MW, et al. Behavioural treatment for chronic low-back pain. Cochrane Database Syst Rev 2010;(7):CD002014.
- 22. Foster NE, Hartvigsen J, Croft PR. Taking responsibility for the early assessment and treatment of patients with musculoskeletal pain: a review and critical analysis. Arthritis Res Ther 2012;14(1):205.
- 23. Whitehurst DG, Bryan S, Lewis M, et al. Exploring the cost-utility of stratified

- primary care management for low back pain compared with current best practice within risk-defined subgroups. Ann Rheum Dis 2012;71(11):1796–802.
- 24. Lambeek LC, van Mechelen W, Knol DL, et al. Randomised controlled trial of integrated care to reduce disability from chronic low back pain in working and private life. BMJ 2010;340:c1035. doi: 10.1136/bmj.c1035.
- 25. Lambeek LC, Bosmans JE, Van Royen BJ, et al. Effect of integrated care for sick listed patients with chronic low back pain: economic evaluation alongside a randomised controlled trial. BMJ 2010;341:c6414.
- 26. Toward Optimized Practice. Alberta primary care low back pain guideline: updated and revised November 2011.

- Edmonton (AB): Toward Optimized Practice, 2011; http://www.topalbertadoctors.org/cpgs.php?sid=63&cpg_cats=85. Accessed November 9, 2012.
- 27. Henschke N, Maher CG, Refshauge KM. Prevalence of and screening for serious spinal pathology in patients presenting to primary care settings with acute low back pain. Arthritis Rheum 2009;60(10):3072–80.
- 28. Powell G, and the Peterborough Back Rules Working Group. The Peterborough Back Rules chart template. September 1997; http://www.iwh.on.ca/pocket-redyellow-flag-cards. Accessed November 9, 2012.
- 29. Deyo RA, Weinstein JN. Low back pain [review]. N Engl J Med 2001;344(5):363-70.