

# Low Back Pain: Do the Right Thing and Do It Now

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There is a plethora of clinical practice guidelines (CPGs) related to low back pain (LBP). Searching PEDro alone yields 96 related hits. Therefore, it is reasonable to ask why we need yet another one.<sup>5</sup> The enormity of the problem and our inability to effectively manage it is one reason. LBP alone accounts for 2.5% to 3% of all physician visits annually in the United States,<sup>6</sup> with direct healthcare costs in the United States estimated to be over

85 billion dollars annually in 2005, representing a 65% increase from 1997 estimates.<sup>22</sup> Furthermore, indirect costs from lost work productivity due to LBP in the United States exceed a staggering 7 billion dollars annually.<sup>29</sup> Despite increasing medical expenditures dedicated to its management, the prevalence of chronic, disabling LBP continues to increase.<sup>22</sup>

The majority of patients with LBP initially access healthcare through a primary care provider.<sup>8</sup> In fact, next to the common cold, LBP is the most common symptomatic reason for a primary care visit in the United States.<sup>19</sup> Given the volume of patients with LBP managed in primary care, decisions in this setting have substantial implications for process

of care and overall healthcare cost.<sup>8</sup> Nevertheless, defining optimal primary care management of patients with LBP has proven elusive, and wide variations in primary care practice have been observed for decisions such as prescribing medication, ordering imaging, and referral to specialists.<sup>21,26</sup> Therefore, CPGs for LBP have been developed in part to decrease variability by narrowing the range of care that is provided.

There continues to be some resistance to CPGs in physical therapy practice, based on the misplaced criticism that they represent “cookbook medicine” used as a substitute for sound clinical judgment and clinical reasoning. We believe that this criticism stems from a misun-

derstanding of a guideline’s purpose. By definition, in addition to current best evidence, CPGs also explicitly include societal, cultural, and patient perspectives, in addition to incorporating subgroup considerations and clinical expertise. This is another reason why the CPGs published by Delitto and colleagues<sup>5</sup> in this month’s issue of *JOSPT* represent an important addition to the literature. The authors have done an excellent job of synthesizing the literature, with physical therapists’ perspectives and concerns in mind, particularly with regard to the subgrouping process, which attempts to apply guideline recommendations to clinical practice by matching the right patient to the right treatment at the right time, based on the available evidence. Other salient contributions of these CPGs are an emphasis on the prominent role of psychosocial considerations and how these factors can interfere with recovery.

To understand how CPGs should best be utilized to influence decision making, an “altitude” analogy can be helpful. Practice guidelines are best utilized

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to inform the highest or “30-thousand-foot” perspective of clinical management. By that, we mean that CPGs help to define boundaries around a set of tests and interventions that should be commonly utilized in clinical practice, based on supporting evidence in the literature, versus others that should be utilized less frequently because of a lack of evidence. However, because of the treatment variation that exists within the clinical trials that inform the ultimate recommendations, practice guidelines are generally unable to match treatments to specific subgroups of patients, which is where a “15-thousand-foot” perspective comes into play. At this altitude, the clinician can lean on individual studies that consider which subgroups of patients benefit from a particular intervention. However, even at this altitude, it is still too high to see the individual patient with adequate acuity and precision. Continuing with the altitude analogy, this is where clinical reasoning can be considered the “ground-level” perspective, which informs the specific technique and dose that might be needed for the individual patient sitting in front of you. Clinical reasoning will, therefore, always be a necessary ingredient for evidence-based practice and can never be (nor was it ever intended to be) replaced by a CPG. For example, spinal manipulation is a supported intervention for acute LBP; however, guidelines are frequently unable to make a recommendation as to the specific technique or dose that should be utilized, because of the lack of precision within the clinical trials that comprise the practice guideline recommendations. Another criticism we have heard of guidelines is that they limit an individual physical therapist’s “autonomy.” We believe that medical practice requires a commitment to “best practice” over “individual practice.” It is interesting to note that in the areas of medicine with higher risk of death from poor decision making (eg, anesthesiology, cardiology), guidelines are more prevalent. Guidelines have improved care and saved lives in these areas largely because the collec-

tive knowledge better informs an individual provider. We do not believe that anesthesiologists and cardiologists lack autonomy for using guidelines.

Most LBP practice guidelines attempt to encapsulate the broader classification of “nonsurgical” or “conservative” interventions for LBP. An example would be the American Pain Society (APS)/American College of Physicians (ACP) CPG on nonpharmacologic therapies for acute and chronic LBP.<sup>3</sup> Organizations that sponsor the development of practice guidelines are, therefore, typically careful to use intervention-specific rather than profession-specific nomenclature, which is the case with the APS/ACP LBP guideline.<sup>3</sup> Refraining from using profession-specific labels avoids the tendency to imply that certain professions are more associated with guideline-based care than others, particularly because many interventions are used by multiple healthcare professionals. Nevertheless, any astute reader of the APS/ACP guideline would acknowledge that the vast majority of the interventions supported by the guideline are within a physical therapist’s scope of practice and widely utilized by physical therapists. For example, the APS/ACP LBP guideline<sup>3</sup> found good evidence that cognitive-behavioral therapy, exercise, spinal manipulation, and interdisciplinary rehabilitation are all moderately effective for chronic or subacute (greater than 4 weeks’ duration) LBP. The guideline further stipulates that fair evidence exists to suggest that acupuncture, massage, yoga (viniyoga), and functional restoration are also effective for chronic LBP. For acute LBP (less than 4 weeks’ duration), the only nonpharmacologic therapies with evidence of efficacy are superficial heat (good evidence for moderate benefits) and spinal manipulation (fair evidence for small to moderate benefits). Each of these interventions generally falls within a physical therapist’s scope of practice, hence there is a compelling need to examine these interventions at a 15-thousand-foot, profession-specific view to better inform how, given a speci-

fied set of effective interventions, physical therapists might more specifically utilize these interventions in an evidence-based manner. That is precisely what the CPGs by Delitto and colleagues<sup>5</sup> in this issue of *JOSPT* do, and it is this 15-thousand-foot perspective that contributes to the variation in the strength of recommendations for selected interventions made by these guidelines when compared to others.

An aspect of primary care management with a high degree of variation in the United States is referral of patients to physical therapy.<sup>10,12,14</sup> CPGs for LBP recommend an active approach to physical therapy care with the focus on exercise interventions and other strategies to help patients maintain and improve their overall activity levels.<sup>2,3,20</sup> Despite this recommended approach and the fact that various interventions within the scope of practice of physical therapists (eg, exercise, spinal manipulation, education) are recommended as effective,<sup>3</sup> current CPGs for LBP mostly recommend delaying referral to physical therapists for at least 4 weeks following initial primary care consultation.<sup>20,25</sup> This “wait and see” approach is based on the belief that most patients with LBP will recover rapidly, and intervening quickly would not be cost-effective.<sup>1</sup> Furthermore, it is believed by some that early intervention may impede recovery for some patients by excessively “medicalizing” the condition.<sup>24,30,31</sup> However, the evidence clearly indicates that this belief and approach to managing LBP must be challenged. Despite current guidelines’ recommendations to the contrary,<sup>3</sup> the current approach has yielded high rates of initial use of imaging, nonsteroidal anti-inflammatory drugs, and opioid medications in the initial management of patients with LBP, in lieu of recommended advice and simple analgesics.<sup>32</sup> Despite increasingly aggressive treatments contrary to recommendations, there is no evidence that clinical outcomes are improving; in fact, rates of chronicity related to an episode of LBP are increasing.<sup>13,22</sup> Furthermore, excess unendorsed care may

contribute to the high costs of managing LBP and carries with it a higher risk of adverse effects.<sup>32</sup> Currently, there remains a wide variation in the care provided for patients with LBP,<sup>23,28</sup> and suboptimal primary care management for patients with an acute episode of LBP frequently leads to use of increasingly invasive and costly interventions.<sup>7</sup> The current “wait and see” approach is clearly not working, as evidenced by studies indicating that a majority of patients go on to experience persistent and/or recurrent symptoms, and that up to one-third report moderate to severe pain 1 year following the initial primary care encounter.<sup>4,9,31</sup>

However, the alternative perspective asserts that the implementation of evidence-based interventions by a physical therapist earlier in the course of care may prove more cost-effective by promoting recovery and reducing the need for more invasive and costly interventions.<sup>15,18,27</sup>

Gellhorn and colleagues<sup>18</sup> reported a lower risk of subsequent use of lumbosacral injections, lumbar spine surgery, and frequent physician office visits among patients who received physical therapy soon after an episode of acute LBP compared to those who received physical therapy at later times. Furthermore, Fritz and colleagues<sup>15</sup> noted that early physical therapy (within 14 days of primary care) was associated with decreased use of advanced imaging, additional physician visits, lumbar surgery, lumbar injections, and opioid medications, as compared to delayed physical therapy. In addition to the timing of care, recent evidence suggests that optimal outcomes and cost-effectiveness for managing LBP in physical therapy are dependent on the content of the care delivered, specifically, whether that care is consistent with current practice guideline recommendations. Adherence to guideline-based recommendations for LBP has been associated with improved clinical outcomes and reductions in subsequent healthcare utilization and costs.<sup>16,17</sup> For example, in a retrospective review of 1190 patients (aged 18 to 60 years) with acute LBP (less

than 90 days since onset) receiving physical therapy, Fritz and colleagues<sup>16</sup> examined the association between adherent care, according to the practice guideline recommendation to use active (as opposed to passive) treatments, and clinical outcomes and costs. Patients receiving adherent care had fewer visits and lower charges and showed significantly greater improvement in disability and pain. Patients receiving adherent care were also more likely to experience an overall successful physical therapy outcome.<sup>16</sup> A follow-up study demonstrated that adherence to the recommendation for active care was associated with decreased healthcare utilization and subsequent use of prescription medication, magnetic resonance imaging, and injections.<sup>17</sup> During the year after discharge, receiving adherent care was associated with a lower likelihood of receiving prescription medication (46.2% versus 57.2%,  $P < .05$ ), magnetic resonance imaging (8.3% versus 15.9%,  $P < .05$ ), or epidural injections (5.3% versus 12.1%,  $P < .05$ ).<sup>17</sup>

In summary, there is a growing body of evidence supporting the appropriate content and timing of physical therapist care in managing low back disorders, which is reflected in the recommendations of the “Clinical Guidelines for Low Back Pain” published by Delitto and colleagues<sup>5</sup> in this issue of *JOSPT*. However, the ever-evolving evidence base will necessitate frequent updates to these guidelines, along with practitioner integration of emerging evidence on an ongoing basis. In the meantime, when it comes to managing patients with LBP, we should “do the right thing and do it now.” ●

## REFERENCES

1. Atlas SJ, Deyo RA. Evaluating and managing acute low back pain in the primary care setting. *J Gen Intern Med.* 2001;16:120-131.
2. Bekkering GE, Engers AJ, Wensing M, et al. Development of an implementation strategy for physiotherapy guidelines on low back pain. *Aust J Physiother.* 2003;49:208-214.
3. Chou R, Huffman LH. Nonpharmacologic

- therapies for acute and chronic low back pain: a review of the evidence for an American Pain Society/American College of Physicians clinical practice guideline. *Ann Intern Med.* 2007;147:492-504.
4. Croft PR, Macfarlane GJ, Papageorgiou AC, Thomas E, Silman AJ. Outcome of low back pain in general practice: a prospective study. *BMJ.* 1998;316:1356-1359.
5. Delitto A, George SZ, Van Dillen L, et al. Low back pain: clinical practice guidelines linked to the international classification of functioning, disability, and health from the Orthopaedic Section of the American Physical Therapy Association. *J Orthop Sports Phys Ther.* 2012;42:A1-A57. <http://dx.doi.org/10.2519/jospt.2012.0301>
6. Deyo RA, Mirza SK, Martin BI. Back pain prevalence and visit rates: estimates from U.S. national surveys, 2002. *Spine (Phila Pa 1976).* 2006;31:2724-2727. <http://dx.doi.org/10.1097/01.brs.0000244618.06877.cd>
7. Deyo RA, Mirza SK, Turner JA, Martin BI. Over-treating chronic back pain: time to back off? *J Am Board Fam Med.* 2009;22:62-68. <http://dx.doi.org/10.3122/jabfm.2009.01.080102>
8. Deyo RA, Phillips WR. Low back pain. A primary care challenge. *Spine (Phila Pa 1976).* 1996;21:2826-2832.
9. Dunn KM, Jordan K, Croft PR. Characterizing the course of low back pain: a latent class analysis. *Am J Epidemiol.* 2006;163:754-761. <http://dx.doi.org/10.1093/aje/kwj100>
10. Ehrmann-Feldman D, Rossignol M, Abenheim L, Gobeille D. Physician referral to physical therapy in a cohort of workers compensated for low back pain. *Phys Ther.* 1996;76:150-156; discussion 156-157.
11. Feuerstein M, Hartzell M, Rogers HL, Marcus SC. Evidence-based practice for acute low back pain in primary care: patient outcomes and cost of care. *Pain.* 2006;124:140-149. <http://dx.doi.org/10.1016/j.pain.2006.04.007>
12. Freburger JK, Carey TS, Holmes GM. Physician referrals to physical therapists for the treatment of spine disorders. *Spine J.* 2005;5:530-541. <http://dx.doi.org/10.1016/j.spinee.2005.03.008>
13. Freburger JK, Holmes GM, Agans RP, et al. The rising prevalence of chronic low back pain. *Arch Intern Med.* 2009;169:251-258. <http://dx.doi.org/10.1001/archinternmed.2008.543>
14. Freburger JK, Holmes GM, Carey TS. Physician referrals to physical therapy for the treatment of musculoskeletal conditions. *Arch Phys Med Rehabil.* 2003;84:1839-1849.
15. Fritz JM, Childs JD, Flynn TW. Primary care referral of patients with a new consultation for LBP to physical therapy: the impact of the timing and content of care on healthcare costs. *Spine (Phila Pa 1976).* In review.
16. Fritz JM, Cleland JA, Brennan GP. Does adherence to the guideline recommendation for active treatments improve the quality of care for patients with acute low back pain delivered by physical therapists? *Med Care.* 2007;45:973-980. <http://dx.doi.org/10.1097/>

MLR.0b013e318070c6cd

17. Fritz JM, Cleland JA, Speckman M, Brennan GP, Hunter SJ. Physical therapy for acute low back pain: associations with subsequent healthcare costs. *Spine (Phila Pa 1976)*. 2008;33:1800-1805. <http://dx.doi.org/10.1097/BRS.0b013e31817bd853>
18. Gellhorn AC, Chan L, Martin B, Friedly J. Management patterns in acute low back pain: the role of physical therapy. *Spine (Phila Pa 1976)*. Epub ahead of print. <http://dx.doi.org/10.1097/BRS.0b013e3181d79a09>
19. Hart LG, Deyo RA, Cherkin DC. Physician office visits for low back pain. Frequency, clinical evaluation, and treatment patterns from a U.S. national survey. *Spine (Phila Pa 1976)*. 1995;20:11-19.
20. Koes BW, van Tulder M, Lin CW, Macedo LG, McAuley J, Maher C. An updated overview of clinical guidelines for the management of non-specific low back pain in primary care. *Eur Spine J*. 2010;19:2075-2094. <http://dx.doi.org/10.1007/s00586-010-1502-y>
21. Luo X, Pietrobon R, Hey L. Patterns and trends in opioid use among individuals with back pain in the United States. *Spine (Phila Pa 1976)*. 2004;29:884-890; discussion 891.
22. Martin BI, Deyo RA, Mirza SK, et al. Expenditures and health status among adults with back and neck problems. *JAMA*. 2008;299:656-664. <http://dx.doi.org/10.1001/jama.299.6.656>
23. Mikhail C, Korner-Bitensky N, Rossignol M, Dumas JP. Physical therapists' use of interventions with high evidence of effectiveness in the management of a hypothetical typical patient with acute low back pain. *Phys Ther*. 2005;85:1151-1167.
24. Moffett JK, Jackson DA, Gardiner ED, et al. Randomized trial of two physiotherapy interventions for primary care neck and back pain patients: 'McKenzie' vs brief physiotherapy pain management. *Rheumatology (Oxford)*. 2006;45:1514-1521. <http://dx.doi.org/10.1093/rheumatology/ kel339>
25. Murphy AY, van Teijlingen ER, Gobbi MO. Inconsistent grading of evidence across countries: a review of low back pain guidelines. *J Manipulative Physiol Ther*. 2006;29:576-581.e2. <http://dx.doi.org/10.1016/j.jmpt.2006.07.005>
26. Nelson CF, Metz RD, LaBrot T. Effects of a managed chiropractic benefit on the use of specific diagnostic and therapeutic procedures in the treatment of low back and neck pain. *J Manipulative Physiol Ther*. 2005;28:564-569. <http://dx.doi.org/10.1016/j.jmpt.2005.08.010>
27. Pinnington MA, Miller J, Stanley I. An evaluation of prompt access to physiotherapy in the management of low back pain in primary care. *Fam Pract*. 2004;21:372-380. <http://dx.doi.org/10.1093/fampra/cmh406>
28. Poitras S, Blais R, Swaine B, Rossignol M. Management of work-related low back pain: a population-based survey of physical therapists. *Phys Ther*. 2005;85:1168-1181.
29. Ricci JA, Stewart WF, Chee E, Leotta C, Foley K, Hochberg MC. Back pain exacerbations and lost productive time costs in United States workers. *Spine (Phila Pa 1976)*. 2006;31:3052-3060. <http://dx.doi.org/10.1097/01.brs.0000249521.61813.aa>
30. Von Korff M, Moore JC. Stepped care for back pain: activating approaches for primary care. *Ann Intern Med*. 2001;134:911-917.
31. Von Korff M, Saunders K. The course of back pain in primary care. *Spine (Phila Pa 1976)*. 1996;21:2833-2837; discussion 2838-2839.
32. Williams CM, Maher CG, Hancock MJ, et al. Low back pain and best practice care: a survey of general practice physicians. *Arch Intern Med*. 2010;170:271-277. <http://dx.doi.org/10.1001/archinternmed.2009.507>

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