

## *Practical Pain Management*

# **Self-Management of Chronic Pain in Primary Care**

By Barbara J. Turner, MD, MSED and Stacy Ogbeide, PsyD, ABPP

December 2018

Opioid overuse has led to federal, state, and local initiatives to reduce its serious consequences on health and healthcare costs.<sup>1</sup> Yet, patients with chronic pain face an immense burden. Given the adverse effects on their mental, physical, and social wellbeing, they often live with a diminished quality of life, functional limitations, and loss of productivity.<sup>2,3</sup>

Despite the complexity of chronic pain, at least half of all patients receive their healthcare from a primary care clinician. This raises a striking conundrum since primary care practitioners (PCPs) have been found to harbor negative attitudes toward patients with chronic pain, driven by a sense of insufficiency in addressing this patient complaint;<sup>4-6</sup> this hesitancy may be explained at least in part by limited training in pain management.<sup>6</sup>

The challenge faced by PCPs in managing chronic pain has been hampered further by limited resources, especially among low-income patients who are under- or uninsured. As shown in recent studies led by Turner, et al, managing these patients has been made all the more difficult because their families and friends have a limited understanding of chronic pain conditions.<sup>7</sup>

In one study, a representative sample of Hispanics who did not have a diagnosis of chronic pain were surveyed from five southwestern states; only 12% of respondents said they “knew a lot” about chronic pain.<sup>8</sup> This small group was more likely to endorse the need for pain medications to manage pain at increasing doses. This belief reflects a common acceptance of relying on opioids and other prescription medications to treat chronic pain conditions that may respond at least as well to multimodal, non-pharmacologic interventions to control pain and reduce the myriad negative effects on daily living.

## **Turning to Biopsychosocial Approaches to Manage Chronic Pain**

Employing a biopsychosocial model to pain management in the primary care setting would introduce PCPs to a valuable conceptual framework that captures biological, somatic, cognitive, and affective dimensions of chronic pain. This approach has the ability to positively address “central pain processes” and amplify its negative effects on activities of daily living, interpersonal relationships, social expectations, work history, and social support/isolation.<sup>9,10</sup>

To effectively address the multidimensional effects of chronic pain, patients need self-management training about behaviors, strategies, and activities that may help to control the destructive effects of pain on their quality of life. Use of self-management methods have proven highly effective for people with diabetes mellitus, a similarly complex condition, and has become a well-accepted component of diabetes care, covered by

insurance.<sup>11</sup> Diabetes self-management training, for example, typically involves certified trainers and a team-based approach.<sup>11-15</sup> To date, this disease approach has not been implemented broadly to assist patients with chronic pain to more effectively manage this severely disabling condition, even as its value has been recognized by the Institute of Medicine, which defines self-management of chronic pain as involving the following:<sup>16</sup>

- Adhering to medical treatment
- Managing personal, family, and social roles and responsibilities through cognitive and behavioral strategies
- Managing emotional consequences of conditions associated with chronic pain.

Successful self-management requires the patient to develop a mastery of transferable skills and strategies for many aspects of living with chronic pain, such as: goal setting, activity pacing, relaxation, thought challenging, positive self-reinforcement, self-monitoring, problem-solving, decision-making, and resource identification.<sup>17-30</sup>

A review of 46 randomized controlled trials of pain self-management education identified these common components: psychological training, lifestyle modification, pain education, physical activity, and mind-body therapy.<sup>31</sup> Each component has the potential to transform primary care pain management by providing efficient, affordable approaches that can be integrated into clinical practice. Further, recent guidelines from the Centers for Disease Control and Prevention and the US Department of Health and Human Services' National Pain Strategy endorse multimodal, non-pharmacologic interventions as first-line treatment for chronic pain.<sup>32,33</sup> The following hypothetical case demonstrates the challenges patients may face without this training.

### **Patient Case: “I’m stuck, what else can I do?”**

John D is a 44-year-old Hispanic male married for 15 years to Violet. They have two teenage sons. John and Violet own a busy restaurant. However, John injured his lower back in an accident at home. After three months on acetaminophen and ibuprofen, he visited his PCP who found no neurologic impairment upon examination. The PCP prescribed cyclobenzaprine and Tylenol with codeine (60 mg every 4 to 6 hours). The PCP also referred John for physical therapy (PT). He returned to the office one month later for a follow-up appointment. He reported running out of the prescribed medications and being “too busy” to go for a PT consultation. His PCP administered a steroid injection in the lumbar spine that provided temporary relief, renewed his opioid prescription, and ordered an MRI, which revealed no abnormalities. Over time, however, John continued to report disabling pain, and asked for stronger medication for pain relief, which the PCP refused. John exhibited frustration, as did his wife, who accompanied him on visits and complained about her husband’s inability to function at work or to help with the children. When the PCP suggested that John see a pain specialist, both he and his wife indicated that they did not have the financial means for this type of care and needed to continue to receive their care at the primary care practice.

## Discussion

This hypothetical case demonstrates the limited options available to manage common cases of chronic pain in the primary care setting. Until recently, the usual solution has been to continue to prescribe opioids.<sup>34</sup> However, John's situation makes an excellent case for offering multimodal, self-management chronic pain training in primary care.

Primary care providers faced with a growing number of chronic pain patients often report feeling “stuck,” with limited options for their patients. Ideally, education and training could be made accessible in the primary care setting to help patients like John learn to function better with their pain and to reduce the cycle of complaining and reliance on increasing medication as the only solution.

## Sources

1. Institute for Clinical Systems Improvement. Assessment and Management of Chronic Pain. Bloomington: Inst for Clinical Systems Improvement (ICSI); 2009.
2. Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain – United States. *MMWR Recomm Rep*. 2016;65(1):1-49.
3. Nahin R. Estimates of pain prevalence and severity in adults: United States. *J Pain*. 2015;16(8):769-780.
4. Evans L, Whitham J, Trotter D, Filtz K. An evaluation of family medicine residents' attitudes before and after a PCMH innovation for patients with chronic pain. *Fam Med*. 2011;43(10):702-711.
5. Jamison RN, Sheehan KA, Scanlan E, et al. Beliefs and attitudes about opioid prescribing and chronic pain management: survey of primary care providers. *J Opioid Manag*. 2014;10(6):375-382.
6. Upshur CC, Luckmann RS, Savageau JA. Primary care provider concerns about management of chronic pain in community clinic populations. *J Gen Intern Med*. 2006;21(6):652-655.
7. Turner BJ, Liang Y, Simmonds MJ, et al. Randomized Trial of Chronic Pain Self-Management Program in the Community or Clinic for Low-Income Primary Care Patients. *J Gen Intern Med*. 2018;33(5):668-677.
8. Turner BJ, Liang Y, Rodriguez N, et al. Gaps in the public's knowledge about chronic pain: Representative sample of Hispanic residents from five states. *J Pain*. 2017;18(6):628-36.
9. Kamper SJ, Apeldoorn AT, Chiarotto A, et al. Multidisciplinary biopsychosocial rehabilitation for chronic low back pain: Cochrane systematic review and meta-analysis. *BMJ*. 2015;350:h444.
10. Flor H, Fydrich T, Turk DC. Efficacy of multidisciplinary pain treatment centers: a meta-analytic review. *Pain*. 1992;49(2):221-230.
11. Beck J, Greenwood DA, et al. 2017 National Standards for Diabetes Self-Management Education and Support. *Diabetes Spectr*. 2017;30(4):301-314.
12. Loveman E, Frampton GK, Clegg AJ. The clinical effectiveness of diabetes education models for Type 2 diabetes: a systematic review. *Health Technol Assess*. 2008;12(9):1-116, iii.
13. Chrvala CA, Sherr D, Lipman RD. Diabetes self-management education for adults with type 2 diabetes mellitus: A systematic review of the effect on glycemic control. *Patient Educ Couns*. 2016;99(6):926-943.
14. Gucciardi E, Chan VW, Manuel L, Sidani S. A systematic literature review of diabetes self-management education features to improve diabetes education in women of Black African/Caribbean and Hispanic/Latin American ethnicity. *Patient Educ Couns*. 2013;92(2):235-245.
15. Rutledge SA, Masalovich S, Blacher RJ, Saunders MM. Diabetes Self-Management Education Programs in Non-metropolitan Counties—United States, 2016. *MMWR Surveill Summ*. 2017;66(10):1-6.

16. IOM (US) Committee on Advancing Pain Research Care, and Education. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research*. Washington, DC: National Academy of Sciences; 2011.
17. Hayden JA, van Tulder MW, Malmivaara A, Koes BW. Exercise therapy for treatment of non-specific low back pain. *Cochrane Database Syst Rev*. 2005;(3):CD000335.
18. Furlan AD, Yazdi F, et al. Complementary and alternative therapies for back pain II. *Evid Rep Technol Assess (Full Rep)*. 2010;(194):1-764.
19. Lee C, Crawford C, Schoemaker E. Movement therapies for the self-management of chronic pain symptoms. *Pain Med*. 2014;15 Suppl 1:S40-53.
20. Crawford C, Lee C, May T. Physically oriented therapies for the self-management of chronic pain symptoms. *Pain Med*. 2014;15 Suppl 1:S54-65.
21. Lee C, Crawford C, Hickey A. Mind-body therapies for the self-management of chronic pain symptoms. *Pain Med*. 2014;15 Suppl 1:S21-39.
22. Kroenke K, Cheville A. Management of Chronic Pain in the Aftermath of the Opioid Backlash. *JAMA*. 2017;317(23):2365-2366.
23. Mann EG, Lefort S, Vandenkerkhof EG. Self-management interventions for chronic pain. *Pain Manag*. 2013;3(3):211-222.
24. Carnes D, Homer KE, Miles CL, et al. Effective delivery styles and content for self-management interventions for chronic musculoskeletal pain: a systematic literature review. *Clin J Pain*. 2012;28(4):344-354.
25. Taylor SJC. *Improving the Self-Management of Chronic Pain: Coping with Persistent Pain, Effectiveness Research in Self-Management (COPERS)*. Southampton, UK: Journals Library;2016.
26. Kroon FP, van der Burg LR, Buchbinder R, et al. Self-management education programmes for osteoarthritis. *Cochrane Database Syst Rev*. 2014;(1):CD008963.
27. Nicholas MK, Asghari A, Blyth FM, et al. Long-term outcomes from training in self-management of chronic pain in an elderly population: a randomized controlled trial. *Pain*. 2017;158(1):86-95.
28. Kroenke K, Bair MJ, Damush TM, et al. Optimized antidepressant therapy and pain self-management in primary care patients with depression and musculoskeletal pain: a randomized controlled trial. *JAMA*. 2009;301(20):2099-2110.
29. Broderick JE, Keefe FJ, Bruckenthal P, et al. Nurse practitioners can effectively deliver pain coping skills training to osteoarthritis patients with chronic pain: A randomized, controlled trial. *Pain*. 2014;155(9):1743-1754.
30. Ersek M, Turner JA, Cain KC, Kemp CA. Results of a randomized controlled trial to examine the efficacy of a chronic pain self-management group for older adults [ISRCTN11899548]. *Pain*. 2008;138(1):29-40.
31. Persson AL, Veenhuizen H, Zachrisson L, Gard G. Relaxation as treatment for chronic musculoskeletal pain: a systematic review of randomised controlled studies. *Physical Therapy Reviews*. 2008;13(5):355-365.
32. Hunter C, Goodie J, Oordt M, Dobbmeyer A. *Integrated behavioral health in primary care: Step-by-step guidance for assessment and intervention*, 2nd ed. Washington, DC: American Psychological Association;2016.
33. Steglitz J, Buscemi J, Ferguson MJ. The future of pain research, education, and treatment: a summary of the IOM report "Relieving pain in America: a blueprint for transforming prevention, care, education, and research. *Transl Behav Med*. 2012;2(1):6-8.
34. Mojtabai R. National trends in long-term use of prescription opioids. *Pharmacoepidemiol Drug Saf*. 2018;27(5):526-534.
35. Geneen LJ, Moore RA, Clarke C, et al. Physical activity and exercise for chronic pain in adults: an overview of Cochrane Reviews. *Cochrane Database Syst Rev*. 2017;4:CD011279.
36. Ferreira ML, Smeets RJ, Kamper SJ, et al. Can we explain heterogeneity among randomized clinical trials of exercise for chronic back pain? A meta-regression analysis of randomized controlled trials. *Phys Ther*. 2010;90(10):1383-1403.
37. Mansi S, Milosavljevic S, Baxter GD, et al. A systematic review of studies using pedometers as an intervention for musculoskeletal diseases. *BMC Musculoskelet Disord*. 2014;15:231.

38. 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;953139.
39. Kelley GA, Kelley KS. Meditative Movement Therapies and Health-Related Quality-of-Life in Adults: A Systematic Review of Meta-Analyses. *PLoS One*. 2015;10(6):e0129181.
40. Burton AK, Balagué F, Cardon G, et al. Chapter 2. European guidelines for prevention in low back pain. *Eur Spine J*. 2006;15 Suppl 2:S136-68.
41. IOM (US) Committee on the Crossing the Quality Chasm: Next Steps Toward a New Health Care System. 1st Annual Crossing the Quality Chasm Summit: A Focus on Communities. In: Adams K, Greiner AC, Corrigan JM, eds. Washington, DC: National Academies Press; 2004.
42. Richards DA, Ekers D, et al. Cost and Outcome of Behavioural Activation versus Cognitive Behavioural Therapy for Depression (COBRA): a randomised, controlled, non-inferiority trial. *Lancet*. 2016;388(10047):871-880.
43. Richmond H, Hall AM, Copsey B, et al. The Effectiveness of Cognitive Behavioural Treatment for Non-Specific Low Back Pain: A Systematic Review and Meta-Analysis. *PLoS One*. 2015;10(8):e0134192.
44. Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016. *JAMA*. 2016;315(15):1624-1645.
45. Ringwalt C, Roberts AW, Gugelmann H, Skinner AC. Racial disparities across provider specialties in opioid prescriptions dispensed to medicaid beneficiaries with chronic noncancer pain. *Pain Med*. 2015;16(4):633-640.
46. Nicholas MK. The pain self-efficacy questionnaire: Taking pain into account. *Eur J Pain*. 2007;11(2):153-163.
47. Turner BJ, Liang Y, Rodriguez N, et al. Randomized trial of a low literacy chronic pain self-management program: Analysis of secondary pain and psychological outcome measures. *J Pain*. 2018. In press.
48. Alperstein D, Sharpe L. The Efficacy of Motivational Interviewing in Adults with Chronic Pain: A Meta-Analysis and Systematic Review. *J Pain*. 2016;17(4):393-403.
49. Geneen L, Moore R, Clarke C, Martin D, et al. Physical activity and exercise for chronic pain in adults: an overview of Cochrane Reviews. *Cochrane Database Syst Rev*. 2017;4:CD011279.
50. Vachon-Preseau E, Martel M, Roy M, et al. Acute stress contributes to individual differences in pain and pain-related brain activity in healthy and chronic pain patients. *J Neurosci*. 2013;33(16):6826-6833.
51. Strosahl K, Robinson P, Gustavsson T. Brief interventions for radical change: Principles and practice of Focused Acceptance and Commitment Therapy. Oakland, CA: New Harbinger Publications, 2012.
52. Robinson P, Reiter J. Behavioral consultation and primary care: A guide to integrating services (Second Ed). New York, NY: Springer; 2016.
53. McGeary, D. Primary care pain management algorithm, 2017. Unpublished.