PALMER College of Chiropractic

Critical Appraisal of a Clinical Practice Guideline

Goal:
To critically evaluate a guideline, using the "Users' Guides (reference below)."

Objectives:
1. Assess the validity of a guideline
2. Understand the basics of GRADE
3. Describe concepts of effect size
4. Appreciate the elements that contribute to the quality of a guideline

Reference (Further Reading):
Guyatt GH, Rennie D, Meade M, Cook DJ. Editors. Users' Guides to the Medical Literature: A Manual for Evidence Based Clinical Practice, 3rd Edition, New York, NY: The McGraw-Hill Companies, Inc.

Available here:
http://jamaevidence.mhmedical.com/book.aspx?bookID=847

- Chapter 26: How to Use a Patient Management Recommendation: Clinical Practice Guidelines and Decision Analyses
- Chapter 27: Decision Making and the Patient
- Chapter 28.1: Assessing the Strength of Recommendations: The GRADE Approach

Educational Exercise:
1. Read the Users' Guides to the Medical Literature reference chapters (listed above)
2. Read the Clinical Scenario (below)
3. Read the article "Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American College of Physicians and the American Pain Society"
4. Complete the critical appraisal form
5. Return to the scenario and indicate how you would use the resource
6. Potential teaching topics might include: magnitude of effect, GRADE process, determining level of evidence, minimizing bias in guideline development, usability of guidelines

Clinical Scenario:
You are a chiropractor who has just been hired into a large multidisciplinary practice. You are pleased that you will have the opportunity to work with primary care providers, physical therapists, a massage therapist and even an acupuncturist. The CEO who hired you has charged you with developing in-house protocols for managing patients with low back pain.

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CRITICAL REVIEW FORM: CLINICAL PRACTICE GUIDELINE

Identify and outline your question in plain language:

Databases Searched:

Resource Acquired:

Are the recommendations valid?	
Did the recommendations consider all relevant patient groups, management options, and possible outcomes?	
Is there a systematic review linking options to outcomes for each relevant question?	
Is there an appropriate specification of values associated with each of the outcomes?	
Do the authors indicate the strength of their recommendations?	
What are the results?	

Adapted by John Stites DC and Amy Minkalis DC from: Walsh M, Perkovic V, Manns B, Srinathan S, Meade MO, Devereaux P, Guyatt G. How to Use a Patient Management Recommendation. In: Guyatt G, Rennie D, Meade MO, Cook DJ. eds. *Users' Guides to the Medical Literature.* New York, NY: McGraw-Hill; 2014.

What are the key recommendations?	
Will the results help you in caring for your patients?	
Do the recommendations make sense in your practice setting?	

Strength of Evidence:

|----------|

Low Quality High Quality

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CRITICAL REVIEW FORM: CLINICAL PRACTICE GUIDELINE

Identify and outline your question in plain language:

Is there a guideline incorporating both diagnosis and treatment for low back pain (LBP)?

Databases Searched:	National Guideline Clearinghouse; PubMed
Resource Acquired:	Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American College of Physicians and the American Pain Society

Are the recommendations valid?	
Did the recommendations consider all relevant patient groups, management options, and possible outcomes?	The purpose of this guideline is to present the available evidence for evaluation and management of LBP in primary care settings. The target patient population is adults with acute and chronic LBP not associated with trauma. Children or adolescents with LBP; pregnant women; and patients with low back pain from sources outside the back are not included. For evaluation of LBP - History and physical examination place patients into 1 of 3 broad categories: nonspecific LBP, back pain associated with radiculopathy or stenosis back pain associated with another specific spinal cause. Therapies considered: self-care, pharmacologic therapy, and non-pharmacologic therapy. Outcomes considered: back-specific function, generic health status, pain, work disability, and patient satisfaction. This guideline considered interventions to have benefits only when they were supported by at least fair-quality evidence and were associated with at least moderate benefits (or small benefits but no significant harms, costs, or burdens).

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Is there a systematic review linking options to outcomes for each relevant question?	These recommendations are based on a systematic evidence review summarized in 2 background papers by Chou and colleagues: • 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 • Chou R, Huffman LH. Medications 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; 147:505-14.
Is there an appropriate specification of values associated with each of the outcomes?	Although not explicitly stated, attempts were made to have broad representation from a variety of providers who care for back pain patients. The American Pain Society partnered with the American College of Physicians and used an independent group, the Oregon Evidence-based Practice Center, for many of their processes. An expert panel had broad representation from general internists/primary care physicians, back surgeons, physical therapists, rheumatologists, neurologists, rehabilitation physicians, nurses, pain specialists, a social scientists expert in back pain, osteopathy, and chiropractic. This information is available when reviewing source documents. There was no clear indication that patient values were included in the development of these guidelines. Each intervention is rated for magnitude of effect as "Small, Moderate or Large." Definitions for these effects are included in Appendix- Table 3.
Do the authors indicate the strength of their recommendations?	The strength of recommendations was adapted from the classification developed by the GRADE work group. Grading criteria were explicit and outlined in tables in the paper (Appendix Table 2 and 4).
What are the results?	

What are the key recommendations?	**Recommendation 1:** Clinicians should conduct a focused history and physical examination to help place patients with low back pain into 1 of 3 broad categories: nonspecific low back pain, back pain potentially associated with radiculopathy or spinal stenosis, or back pain potentially associated with another specific spinal cause. The history should include assessment of psychosocial risk factors, which predict risk for chronic disabling back pain (strong recommendation, moderate-quality evidence). **Recommendation 2:** Clinicians should not routinely obtain imaging or other diagnostic tests in patients with nonspecific low back pain (strong recommendation, moderate-quality evidence). **Recommendation 3:** Clinicians should perform diagnostic imaging and testing for patients with low back pain when severe or progressive neurologic deficits are present or when serious underlying conditions are suspected on the basis of history and physical examination (strong recommendation, moderate-quality evidence). **Recommendation 4:** Clinicians should evaluate patients with persistent low back pain and signs or symptoms of radiculopathy or spinal stenosis with magnetic resonance imaging (preferred) or computed tomography only if they are potential candidates for surgery or epidural steroid injection (for suspected radiculopathy) (strong recommendation, moderate-quality evidence). **Recommendation 5:** Clinicians should provide patients with evidence-based information on low back pain with regard to their expected course, advise patients to remain active, and provide information about effective self-care options (strong recommendation, moderate-quality evidence). **Recommendation 6:** For patients with low back pain, clinicians should consider the use of medications with proven benefits in conjunction with back care information and self-care. Clinicians should assess severity of baseline pain and functional deficits, potential benefits, risks, and relative lack of long-term efficacy and safety data before initiating therapy (strong recommendation, moderate-quality evidence). For most patients, first-line medication options are acetaminophen or nonsteroidal anti-inflammatory drugs. **Recommendation 7:** For patients who do not improve with self-care options, clinicians should consider the addition of nonpharmacologic therapy with proven benefits for acute low back pain, spinal manipulation; for chronic or subacute low back pain, intensive interdisciplinary rehabilitation, exercise therapy, acupuncture, massage therapy, spinal manipulation, yoga, cognitive-behavioral therapy, or progressive relaxation (weak recommendation, moderate-quality evidence).
Will the results help you in caring for your patients?	

Do the recommendations make sense in your practice setting?	These guidelines would be useful in developing care pathways for low back pain patients in a multidisciplinary primary care practice.

Strength of Evidence:

|----------X--------|

Low Quality High Quality

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