



**VA/DoD Low Back Pain  
2007 Clinical Practice Guideline  
Clinical Champion Brief**

**Primary Care Sports Medicine  
Family Medicine  
Naval Medical Center San Diego**

# Objectives

- Define “Clinical Practice Guidelines”
- Discuss the source of the 2007 VA/DoD Low Back Pain Clinical Practice Guidelines
- Summarize the 2007 Low Back Pain Clinical Practice Guideline (2007 LBP CPG)
- List available resources in the online “toolkit” associated with the VA/DoD 2007 Low Back Pain Clinical Practice Guideline

# What are “Clinical Practice Guidelines” (CPGs)?

- “Systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.”
  - Institute of Medicine, 1992

# What are “Clinical Practice Guidelines” (CPGs)?

- As defined by the Veterans’ Health Administration and Department of Defense (VA/DoD):
  - Recommendations for the performance or exclusion of specific procedures or services derived through a rigorous methodological approach

# How was the 2007 VA/DoD LBP CPG formulated?

- Direct adoption of the 2007 American College of Physicians and American Pain Society Low Back Pain Joint Clinical Practice Guideline
- Replaces the 1999 VA/DoD Low Back Pain CPG

# How was the 2007 VA/DoD LBP CPG formulated?

- American College of Physicians and American Pain Society joint CPG formulation
  - Literature search was conducted
  - Expert panel gathered multiple times to review evidence and author guideline

# How was the 2007 VA/DoD LBP CPG formulated?

- Literature Search:
  - The evidence review was conducted at the Oregon Evidence-based Practice Center
  - Funding from American Pain Society
  - None of the investigators conducting this review had any known or potential conflicts of interest to disclose

# How was the 2007 VA/DoD LBP CPG formulated?

## Literature search:

- Electronic databases: MEDLINE, EMBASE, Cochrane Central Registrar of Controlled Trials
- Intervention databases – CINAHL (nursing and allied health), PsycINFO (psychological), PERro (physiotherapy)
- Reference lists
- Hand searches (Spine, European Spine Journal, Annals, NEJM, Lancet, BMJ)
- Expert suggestions

# How was the 2007 VA/DoD LBP CPG formulated?

- Expert panel gathered to review evidence and author guideline through consensus process
- Panel Members
  - American Pain Society (APS)
  - American College of Physicians (ACP)
  - Consumer advocate, American Chronic Pain Association
  - Invited panel guests – VA/DoD

# How was the 2007 VA/DoD LBP CPG formulated?

## Levels of Evidence

- Good quality: Multiple consistent higher quality RCTs, or 1 definitive RCT
- Fair quality: 1 higher quality RCT; multiple consistent lower quality RCTs, multiple consistent higher-quality controlled observational studies
- Poor quality: Does not meet criteria for fair or good

\*\*\*Note absence of “PANEL” opinion from 2007 guidelines

# 2007 LBP CPG

## Components of Guideline

- 7 Recommendations
- Algorithm for Evaluation of LBP
  - Summary Table Diagnostic Workup
  - Summary Table Interventions
- Glossary
- 6 Appendixes
  - Grading systems and methodology
  - Level of Evidence and Summary Grades for Interventions

# 2007 LBP CPG: Recommendation #1

- Clinicians should conduct a focused history and physical examination to help place patients with low back pain into one of three broad categories: non-specific low back pain, back pain potentially associated with radiculopathy (nerve disorders) or spinal stenosis (narrowing), or back pain associated with another specific cause.

*(strong recommendation, moderate-quality evidence)*

# 2007 LBP CPG: Recommendation #1

- The history should include assessment of psychosocial risk factors, which predict risk for chronic disabling back pain.

*(strong recommendation, moderate-quality evidence)*

# 2007 LBP CPG: Recommendation #1

- *Psychosocial risk factors:*
  - *No one tool endorsed*
  - *Factors that may predict listed:*
    - *Depression, passive coping strategies, job dissatisfaction, higher disability levels, disputed compensation claims, somatization*

# 2007 LBP CPG:

## Recommendation #1 vs. 1999 VA/DoD CPG

- *Psychosocial risk factors:*
  - 1999 VA/DoD CPG: six “tools” for psychosocial screening included appendix.
    - Waddell's signs
    - Fear Avoidance Behavior Questionnaire
    - Modified Work APGAR Score
    - DSMIV Screening Checklist for Depression
    - Zung's Self-Rating Depression Scale
    - CAGE Alcoholism Screening
  - 2007 CPG: no evidence-based indication for one over the others.

# 2007 LBP CPG: Recommendation #1

- *Diagnostic categories: non-specific LBP, radiculopathy or spinal stenosis, or associated with specific cause*
  - *Specific diagnoses mentioned in discussion:*
    - *Cancer, vertebral infection, ankylosing spondylitis*

# 1999 VA/DoD LBP CPG

Condition	“Red Flag”	Action
Cancer	<ul style="list-style-type: none"> <li>• History of cancer</li> <li>• Unexplained weight loss</li> <li>• Age greater than 50</li> <li>• Failure to improve with therapy</li> <li>• Pain for more than 4 to 6 weeks</li> <li>• Night/rest pain</li> </ul>	If malignant disease of the spine is suspected, imaging is indicated and CBC, ESR, should be considered. Identification of possible primary malignancy should be investigated, e.g., PSA, mammogram, UPEP/SPEP/IPEP
Infection	<ul style="list-style-type: none"> <li>• Fever</li> <li>• History of intravenous drug use</li> <li>• Recent bacterial infection: UTI, skin, pneumonia</li> <li>• Immunocompromised states (steroid, organ transplants, diabetes, HIV)</li> <li>• Rest pain</li> </ul>	If infection in the spine is suspected, MRI, CBC, ESR and/or U/A are indicated
Cauda equina syndrome	<ul style="list-style-type: none"> <li>• Urinary retention or incontinence</li> <li>• Saddle anesthesia</li> <li>• Anal sphincter tone decrease/fecal incontinence</li> <li>• Bilateral lower extremity weakness/numbness or progressive neurological deficit</li> </ul>	Request immediate surgical consultation
Fracture	<ul style="list-style-type: none"> <li>• Use of corticosteroids</li> <li>• Age greater than 70 or history of osteoporosis</li> <li>• Recent significant trauma</li> </ul>	Appropriate imaging and surgical consultation
Acute abdominal aneurysm	<ul style="list-style-type: none"> <li>• Abdominal pulsating mass</li> <li>• Other atherosclerotic vascular disease</li> <li>• Resting or night pain</li> <li>• Age greater than 60</li> </ul>	Appropriate imaging (ultrasound) and surgical consultation
Significant herniated nucleus pulposus	<ul style="list-style-type: none"> <li>• Major muscle weakness</li> </ul>	Appropriate imaging and surgical consultation

# 2007 LBP CPG

## Diagnostic Work-up

Possible cause	Key features on history or physical examination	Imaging*	Additional studies*
Cancer	History of cancer with new onset of LBP	MRI	ESR
	Unexplained weight loss Failure to improve after 1 month Age >50 years	Lumbosacral plain radiography	
	Multiple risk factors present	Plain radiography or MRI	
Vertebral infection	Fever Intravenous drug use Recent infection	MRI	ESR and/or CRP
Cauda equina syndrome	Urinary retention Motor deficits at multiple levels Fecal incontinence Saddle anesthesia	MRI	None
Vertebral compression fracture	History of osteoporosis Use of corticosteroids Older age	Lumbosacral plain radiography	None
Ankylosing spondylitis	Morning stiffness Improvement with exercise Alternating buttock pain Awakening due to back pain during the second part of the night Younger age	Anterior-posterior pelvis plain radiography	ESR and/or CRP, HLA-B27
Severe/progressive neurologic deficits	Progressive motor weakness	MRI	Consider EMG/ NCV
Herniated disc (Recommendation 4)	Back pain with leg pain in an L4, L5, or S1 nerve root distribution Positive straight leg raise or crossed straight leg raise	None	None
	Symptoms present >1 month	MRI	
Spinal stenosis (Recommendation 4)	Radiating leg pain Older age (Pseudoclaudication a weak predictor)	None	None
	Symptoms present >1 month	MRI	

\* Level of evidence for diagnostic evaluation is variable.

MRI = magnetic resonance imaging; ESR = erythrocyte sedimentation rate; CRP = c-reactive protein; HLA = human leukocyte antigen; EMG = electromyography; NCV = nerve conduction velocity

# 2007 LBP CPG: Recommendation #2

- Clinicians should not routinely obtain imaging or other diagnostic tests in patients with non-specific low-back pain.

*(strong recommendation, moderate-quality evidence)*

# 2007 LBP CPG: Recommendation #2

- The amount of radiation from obtaining a single plain radiograph (2 views) of the lumbar spine is equivalent to being exposed to a daily chest radiograph for more than 1 year

# 2007 LBP CPG: Recommendation #2

- **MRI is not associated with improved outcomes— identifies abnormalities poorly correlated with symptoms and could lead to additional, unnecessary interventions.**

# 2007 LBP CPG: Recommendation #2

- **No evidence to guide imaging of low back pain persisting 1-2 months despite standard therapy (when no symptoms for spinal stenosis or radiculopathy).**

# 2007 LBP CPG: 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.

*(strong recommendation, moderate-quality evidence)*

# 2007 LBP CPG: Recommendation #4

- Clinicians should evaluate patients with persistent low-back pain and signs or symptoms of radiculopathy or spinal stenosis with MRI (preferred) or CT only if they are potential candidates for surgery or epidural steroid injection (for suspected radiculopathy).

*(strong recommendation, moderate-quality evidence)*

# 2007 LBP CPG: Recommendation #5

- Clinicians should provide patients with low-back pain evidence-based information about their expected course, advise patients to remain active, and provide information about effective self-care options.

*(strong recommendation, moderate-quality evidence)*

# 2007 LBP CPG: Recommendation #6

- Clinicians should consider the use of medications with proven benefits in conjunction with back care information and self care.
- For most patients, first-line medication options are acetaminophen or NSAIDs.

*(strong recommendation, moderate-quality evidence)*

# 2007 LBP CPG: Recommendation #6

- Clinicians should assess the 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)*

# 2007 LBP CPG: Recommendation #7

- For patients who do not improve with self-care options, clinicians should consider the addition of non-pharmacologic therapy with proven benefits for low back pain.

*(weak recommendation, moderate-quality evidence)*

# 2007 LBP CPG: Recommendation #7

- **Non-pharmacologic therapy with proven benefits**
  - **Acute LBP**
    - Spinal manipulation for acute low back pain
  - **Chronic or sub-acute 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)*

# 2007 LBP CPG

## Interventions (Recommendations 5, 6, 7)

	Low Back Pain Duration	Acute < 4 Weeks	Subacute or Chronic > 4 Weeks
Self-care	Advice to remain active	♦	♦
	Books, handout	♦	♦
	Application of superficial heat	♦	
Pharmacologic therapy	Acetaminophen	♦	♦
	NSAIDs	♦	♦
	Skeletal muscle relaxants	♦	
	Antidepressants (TCA)		♦
	Benzodiazepines	♦	♦
	Tramadol, opioids	♦	♦
Nonpharmacologic therapy	Spinal manipulation	♦	♦
	Exercise therapy		♦
	Massage		♦
	Acupuncture		♦
	Yoga		♦
	Cognitive-behavioral therapy		♦
	Progressive relaxation		♦
	Intensive interdisciplinary rehabilitation		♦

♦ Interventions supported by grade B evidence (at least fair-quality evidence of moderate benefit, or small benefit but no significant harms, costs, or burdens). No intervention was supported by grade A evidence (good-quality evidence of substantial benefit).

# 2007 LBP CPG VA/DoD “Toolkit”

- Online “Toolkit” of Resources and References
  - U.S. Army Medical Department, Office of Quality Management website
    - Go to: <https://www.qmo.amedd.army.mil/>
    - Click on “clinical practice guidelines”
    - Click on “low back pain”

# 2007 LBP CPG VA/DoD “Toolkit”

- Online “Toolkit” of Resources and References
  - Contains the 2007 LBP CPG full document
  - Additional documents, brochures, and videos to assist in the use of the CPG and in overall disease management
  - \*\*\*Some supplemental materials are not evidence-based but authored and/or selected by VA/DoD LBP CPG working group

# 2007 LBP CPG VA/DoD “Toolkit”

- Online “Toolkit” of Resources and References
  - Provider information
    - 2007 LBP CPG – Complete Guideline
    - Nonpharmacologic Therapies for Acute and Chronic Low Back Pain: A Review of the Evidence
    - Medications for Acute and Chronic Low Back Pain: A Review of the Evidence
    - History and physical examination videos and outline
    - AHLTA template
    - Clinical champion brief
  - Patient information
    - Booklet “Managing Low Back Pain”
    - Pamphlet “Low Back Pain and MRIs”
    - Online Program “Back on Track” from CEMM

# 2007 LBP CPG

## VA/DoD “Toolkit”

- Online “Toolkit” of Resources and References
  - “Shopping Cart” order option
    - CDs containing all documents/videos
      - Ideal for deploying providers with limited internet access
  - Paper copies of provider and patient materials
    - For office use and distribution

# 2007 LBP CPG

## Summary

- More than 85% of patients who present to primary care have low back pain that cannot be reliably attributed to a specific disease or spinal abnormality
- Specific disease or spinal abnormality are rare
  - In patients presenting with low back pain to primary care provider:
    - 0.01% spinal infection
    - 0.04% cauda equina syndrome
    - 0.7% malignancy
    - 3-5% ankylosing spondylitis
    - 4% compression fracture

# 2007 LBP CPG

## Summary

- The 2007 CPG and its “toolkit” can assist primary care providers in:
  - completing the relevant history and physical
    - finding rare conditions
    - identifying serious neurologic signs and symptoms in need of immediate referral
  - evidence-based management of acute and chronic low back pain
  - reassuring patients that appropriate evaluation and treatment is being completed

# 2007 LBP CPG

## Summary

- Online “Toolkit” of Resources and References
  - U.S. Army Medical Department, Office of Quality Management website
    - Go to: <https://www.qmo.amedd.army.mil/>
    - Click on “clinical practice guidelines”
    - Click on “low back pain”
  - Online resources will be maintained by the VA/DoD working group with updates as they become available