Low Back Pain: Clinical Practice Guidelines linked to the ICF
Orthopaedic Section of the American Physical Therapy Association

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What we were **NOT** going to do...
• Add to the literature another intervention-only-based guideline

Recognize the importance of classification

Classification, but which classification?
• Mechanical Diagnosis and Treatment (MDT)
• Treatment Based Classification (TBC)
• Pathoanatomic Classification (PBC)
• Movement System Impairment Classification (MSI)
• Movement and Control Impairment Classification (MCI)

Perhaps there is more in common than different...
Perhaps there is more in common than different...

ICF: A common nomenclature
- Advantage: allows for
  - Translation across “systems”
  - Recognition of overlap
- Disadvantage
  - It’s a new language

Acute, Subacute

Roadmap for remainder of presentation
- Begin with classifications
  - Symptoms and impairments of body functions are listed in context of classifications
    - e.g., how you recognize the classification
    - Diagnostic value of tests for impairments are included in a separate section
  - Interventions are listed that match classifications

Recommendations
- Pathoanatomical Features
- Risk Factors
- Diagnosis/Classification
- Differential Diagnosis
- Examination
  - Outcome Measures
  - Impairment Measures
  - Activity Limitation and Participation Restriction Measures
- Interventions

Diagnostic Classifications
- Low back pain with mobility deficits (b7101 Mobility of several joints)
- Low back pain with movement coordination impairments (b7601 Control of complex voluntary movements)
- Low back pain with related lower extremity pain (28013 Pain in back, 28015 Pain in lower limb)
- Low back pain with radiating pain (b2804 Radiating pain in a segment or region)
- Low back pain with related generalized pain (b2800 Generalized pain, b1520 Appropriateness of emotion, b1602 Content of thought)
Example 1

- Low back pain with mobility deficits and the associated ICD categories of lumbosacral segmental/somatic dysfunction. (Recommendation based on strong evidence.)
  - Restricted lumbar range of motion and segmental mobility
  - Acute low back and low back-related lower extremity symptoms reproduced with provocation of the involved lower thoracic, lumbar or sacroiliac segments

Example 2

- Low back pain with movement coordination impairments and the associated ICD categories of spinal instabilities. (Recommendation based on weak evidence.)
  - Recurring lumbosacral pain with mid-range motion that worsens with end range movements or positions
  - Low back and low back-related lower extremity pain reproduced with provocation of the involved lumbar segment(s)
  - Strength, endurance, and coordination deficits of the trunk muscles

Example 3

- Low back pain with related lower extremity pain and the associated ICD category of flatback syndrome, or lumbago due to displacement of intervertebral disc. (Recommendation based on strong evidence.)
  - Low back pain and associated (referred) lower extremity pain that worsened with flexion activities and sitting
  - Low back and lower extremity pain that can be centralized and diminished with specific postures and/or repeated movements
  - Strength, endurance, and coordination deficits of the trunk muscles

Example 4

- Low back pain with radiating pain and the associated ICD category of lumbago with sciatica. (Recommendation based on moderate evidence.)
  - Lower extremity symptoms, usually radicular or referred pain, that are produced or aggravated with slump maneuvers and lower limb tension tests
  - Signs of nerve root compression

Example 5

- Low back pain with related generalized pain and the associated ICD categories of low back pain/low back strain/lumbago. (Recommendation based on strong evidence.)
  - Chronic low back pain and generalized pain that is not consistent with common physical impairment classification criteria
  - Presence of depression, fear-avoidance beliefs, and/or pain catastrophizing

Example 6

- Low back pain with mobility deficits and the associated ICD categories of lumbosacral segmental/somatic dysfunction. (Recommendation based on strong evidence.)
  - Restricted lumbar range of motion and segmental mobility
**PAIN PROVOCATION WITH SEGMENTAL MOBILITY TESTING**

**ICF category:** Measurement of impairment of body function – mobility of several joints

**Description:** Pain provocation during mobility testing

**Measurement method:** Patient is prone and examiner palpates lumbar spinous process and pushes with an anterior directed force to elicit pain

**Nature of variable:** Categorical

**Units of measurement:** Present/absent

**Measurement properties:** Kappa values are moderate to good for pain provocation during spring testing of the lumbar vertebrae (k=.25-.55)(Hicks et al. 1858-64; Schneider et al. 465-73)

**Instrument variations:** None

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**Activity Measures and Outcome**

- Not really different than previous Guideline publications
  - Clinician-judged activity measures re reviewed (e.g., Functional Capacity Indices)
  - Self-reported outcome Roland and Morris Index (RMI) or Oswestry Low Back Pain Disability Questionnaire (ODI)
  - Psychometrics are included

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**Interventions**

- **Spinal Mobilization/ Manipulation:** Clinicians should consider utilizing thoracic, lumbar, and pelvic girdle mobilization and manipulative procedures, non-thrust and thrust, to reduce low back pain and disability, particularly in patients whose duration is relatively short-term (<15 days). (Recommendation based on strong evidence.)

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**Example 3**

- Low back pain with related lower extremity pain and the associated ICD category of flatback syndrome, or lumbago due to displacement of intervertebral disc. (Recommendation based on strong evidence.)
  - Low back pain and associated (referred) lower extremity pain that worsened with flexion activities and sitting
  - Low back and lower extremity pain that can be centralised and diminished with specific postures and/or repeated movements
  - Strength, endurance, and coordination deficits of the trunk muscles

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**JUDGMENTS OF CENTRALIZATION DURING MOVEMENT TESTING**

**ICF category:** Measurement of impairment of body function – mobility of several joints

**Description:** Clinician judges the behavior of symptoms in response to movement testing to assess whether “centralization” or “peripheralization” has occurred.

**Measurement method:** Patient is asked to flex and extend in standing, supine and prone with single and repeated movements in a systematic fashion. Judgments are made with regard to a directional preference related to either flexion or extension depending on centralization (symptoms either disappearing from the periphery or moving axially from the periphery)

**Nature of variable:** Categorical

**Units of measurement:** Present/absent

**Measurement properties:** Kappa 0.70-0.90 for novice and experienced physical therapists(Fritz et al. 57-61; Kilpikoski et al. E207-E214)

**Instrument variations:** None

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**Interventions**

- **Centralization Procedures and Exercises:** Clinicians should consider utilizing specific repeated movements, exercises, or procedures to promote centralization to reduce low back and low back-related lower extremity pain, particularly in patients who demonstrate a directional preference. (Recommendation based on moderate evidence.)
### Interventions

- **Patient Education:** Clinicians should not utilize patient education strategies that potentially increase the perceived threat or fear associated with low back pain.
  - Extended rest and anatomical/structural explanations for low back pain are not recommended.
  - Instead, clinicians should utilize patient education strategies that encourage early resumption of normal or vocational activities even when still experience pain.
  - For example, clinicians should emphasize
    - The overall favorable prognosis of low back pain
    - Encourage positive and active coping strategies,
    - Increasing activity levels.
  - *(Recommendation based on strong evidence.)*

### Questions and comments