Luminis Health℠

Low Back Pain

An Integrated Care Pathway of the

Collaborative Care Network

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First, a Friendly Reminder…

This Integrated Care Pathway was developed by and for members of the AAMC CCN.

These materials will refer to some resources available only to CCN members and their patients.

Not a CCN Member?

We invite you to join the CCN! Please contact the CCN: aamccollaborativecarenetwork@aahs.org

Intended Audience and Scope

- Intended Audience for this Pathway
  - Primary care clinicians, including those working in urgent care centers and emergency departments

- Scope of Pathway
  - Adult patients experiencing acute or subacute low back pain (12 weeks or less in duration)
  - Includes patients with a history of cancer, trauma and those with non-traumatic low back pain

Disclaimer

No CME program, Tool Kit, algorithm, or recipe will address every scenario you encounter.

Use clinical judgment and call subject matter experts when you sense you need guidance!

We are here to help.

These materials reference a Toolkit

This is provided to you by the CCN Field Operations Team

It will include larger versions of the overview slides, plus screening tools, patient pamphlets, and phone numbers to call.

AGENDA

- Introduction
- History & Physical
- Imaging
- Management
- Conclusion

Introduction

Learning Objectives

This CME material was designed to help you to:

- Evaluate acute Low Back Pain (LBP)
- Create a differential diagnosis of LBP
- Identify those patients who require urgent imaging and order the most appropriate study
- Identify when to refer to a specialist
- Identify treatment options for LBP
- Recognize and manage patients who may be at risk for chronic low back pain

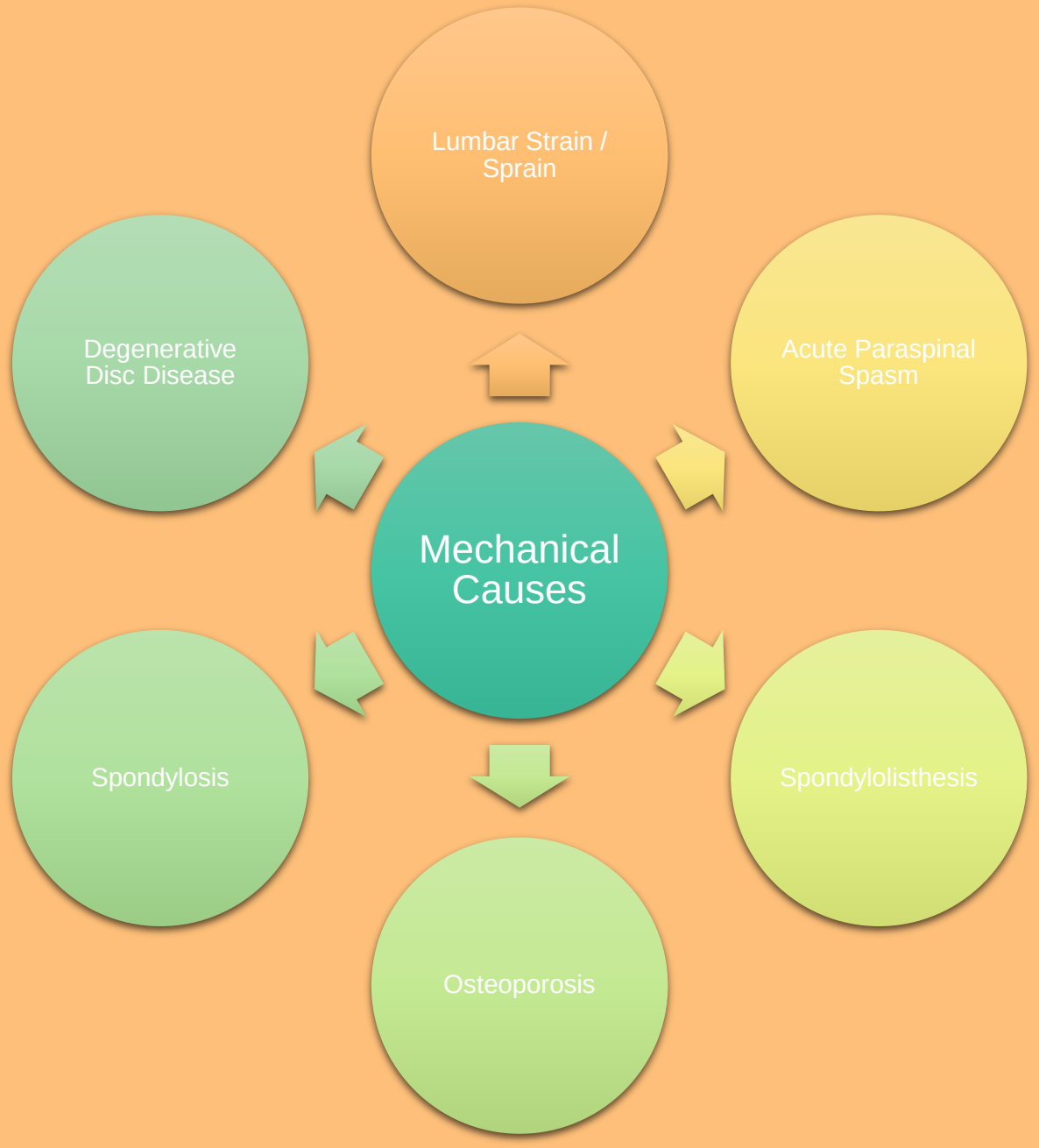
Some statistics on Low Back Pain (LBP)

- Annual prevalence 15-20%
- Lifetime prevalence 80%
- Costs
  - Direct: missed work days and income
  - Indirect in decreased productivity and efficiency, time lost from work

$100 Billion

Not All LBP is Created Equal

- Acute, mechanical LBP has a good prognosis
  - 50% of patients are improved by 2 weeks, 80% by 6 weeks
- When evaluating LBP, the basic goal is to differentiate acute mechanical LBP from other causes:
  - Neurogenic pain
  - fragility fractures
  - worrisome red flag causes
- … And to recognize risk factors for chronic pain
- This drives the decision for treatment, early imaging, and referrals

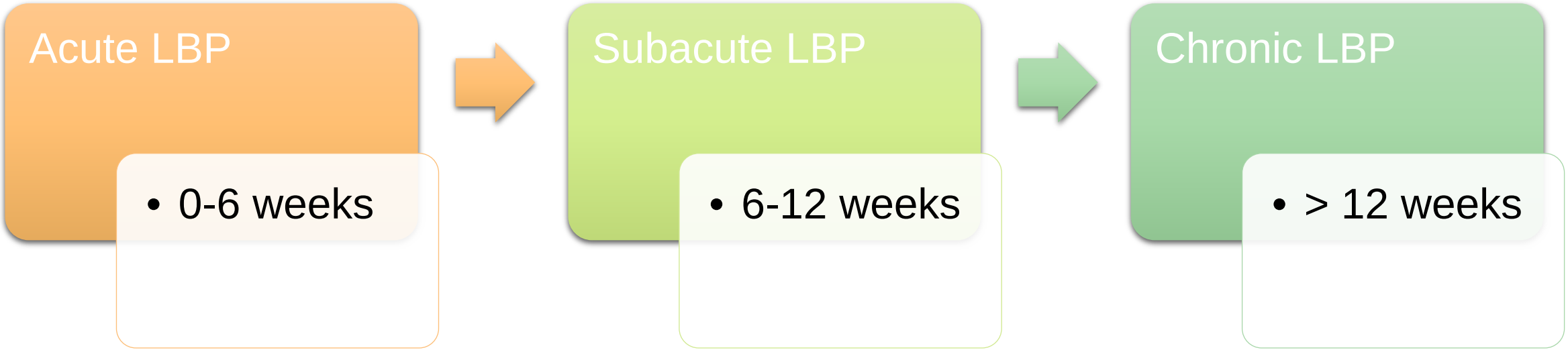

Lumbar Strain / Sprain
Degenerative Disc Disease
Acute Paraspinal Spasm
Mechanical Causes
Spondylosis
Spondylolisthesis
Osteoporosis

Differentiate from other causes of LBP

- Neurogenic causes:
  - Lumbar disc herniation
  - Spinal stenosis with neurogenic claudication
- Compression fracture / fragility fracture
- Worrisome causes
  - Spinal instability
  - Cauda equina syndrome
  - Neoplasm
  - Infection/Discitis

History & Physical

Duration


Acute LBP
• 0-6 weeks
Subacute LBP
• 6-12 weeks
Chronic LBP
• > 12 weeks

Initial Evaluation - History

- Age > 50 years, Corticosteroid use, Impact of activity, Duration of symptoms < or > 4 weeks
- Psychosocial factors suggesting YELLOW FLAGS
  - Associated depression / anxiety
  - Pain behaviors or avoidance of activity for fear of pain
  - Belief that work likely to cause further injury
  - Expectation of poor treatment outcome
  - Waddell sign: over-reaction to stimuli or nonanatomic pain on palpation
- Look for RED FLAGS

Initial Evaluation – History (cont.)

Red Flag symptoms of infection, tumor:

- Severe, unrelenting despite position or activity
- Fevers, chills, flu-like symptoms, loss of appetite
- Weight loss, fatigue
- History of cancer or metastatic disease

Red Flag symptoms of cauda equina syndrome:

- Severe LBP
- Bilateral leg pain, weakness, and/or numbness
- Difficulty walking
- Saddle numbness, changes in urinary function

Initial Evaluation – Physical Exam

- Assess hip for ROM: painful in hip OA
- Radiculopathy: drop foot, numbness or pain in distribution of nerve root, loss of DTR
- Disc herniation (+)SLR
- Spinal stenosis: pain with extension, loss of DTR bl
- Cauda equina: Decreased cutaneous sensation, saddle numbness, bilateral leg weakness, distended bladder/Post void residual

Initial Evaluation – Physical Exam (cont.)

- Radiating pain *above* knee is usually referred pain, would check hip
- Radiating pain *below* knee is usually radicular pain
- Back or buttock pain worse with walking (claudicatory), relieved with sitting can be neurogenic / spinal stenosis

Imaging

Indications for Diagnostic Imaging

- If nontraumatic, wait until >4 weeks unless red flags
  - Recent cancer history - breast, prostate, lung, thyroid, multiple myeloma, kidney, lymphoma
  - Progressive neurologic deficit
  - New urinary retention, fecal incontinence or saddle anesthesia
- Trauma/Evidence of contusion
- Suspect vertebral fracture if older age or prolonged use of corticosteroids as in autoimmune disorders

Algorithm for Imaging

1. Signs of cauda equina or Significant neurologic deficit
   - Emergent MRI w/o contrast
2. Discitis or Infection
   - Emergent MRI with contrast
3. Current or recent cancer history
   - Urgent MRI with contrast
4. Risk for vertebral compression fracture
   - Urgent Plain film -AP/Lateral

Algorithm for Imaging

5	Mechanical LBP < 4-6 weeks, no red flags
	No imaging
6	Mechanical LBP >4-6 weeks, worsening, no red flags
	Plain films, AP/Lat
7	Pain below the knee/radiculopathy
	MRI w/o contrast to r/o disc herniation
8	Claudicatory back and leg pain
	MRI w/o contrast to r/o spinal stenosis

Management

Management of non-worrisome acute LBP

Good Evidence	Limited Evidence
Active strategies – limit bedrest	Low level laser therapy
Superficial heat	Ultrasound
Massage	Shortwave diathermy
Spinal manipulation	Traction/Inversion techniques
Muscle strengthening/Stretching	TENS/PENS
Manual therapy: AP and PA mobilization of the hip	Acupuncture
NSAIDs	Lumbar supports

Management of non-worrisome subacute and chronic LBP

- Physical therapy is first line
- Exercise --core strengthening, yoga, pilates, TaiChi
- Pharm - NSAIDS, SSRI
- Spinal manipulation
- Combined exercise and psychological rehab (CBT) programs
- Skeletal muscle relaxants-- insufficient evidence compared to placebo

LBP in Adolescents

- Management is generally
  - Exercise
  - Back education- posture/body awareness
  - Manual therapy- manipulation/massage
  - Therapeutic physical conditioning: Walking, running, cycling, swimming
- Exception: **Pars Stress Fracture**
  - Occurs during peak growth
  - Pain with repeated hyperextension, usually in athletes
  - Treatment is rest from sports for up to 12 weeks

Conclusion

Goals of treatment for chronic LBP

- Decrease disability and improve function
- Improve outcomes to reduce pain
- Broaden the focus of exercise therapy
- Improve patient education
- When Yellow Flags present, employ ancillary services such as pain psychology

TRIAGE OF LOW BACK PAIN

Worrisome LBP **<1%**	HX Cancer/Tumor	**IMAGING IS NECESSARY.** INFECTION→ STAT MRI WITH CONTRAST CAUDA EQUINA→ STAT MRI W/O CONTRAST CANCER HX/METS→ URGENT MRI WITH CONTRAST FRACTURE → URGENT PLAIN FILM *then refer to spine surgeon (HIGH URGENCY)
Radicular Pain **5-10 %**	look for +SLR, claudication	**IMAGING IS NOT URGENT.** If <4-6 weeks and no red flags or focal weakness→ Reassurance,Exercise, NSAIDs, PT If >4-6 weeks and worsening →plain films. Consider Spine Surgeon or Nurse Navigator Consult. If pain below the knee or pain with SLR → MRI w/o contrast. If claudicatory LBP and leg pain, MRI w/o contrast
Non-worrisome LBP **90-95%**		

What, Where, and When to Refer

What to Refer	Where to Refer
Acute, mechanical LBP not responding to 4-6 weeks usual care	Physiatry or spine-specialist clinic (low urgency)
Chronic, mechanical LBP not responding to usual care	Physiatry or spine-specialist clinic (low urgency)
Diagnosis or suspicion of neurogenic causes (e.g. disc herniation, spinal stenosis)	Spine surgeon or spine-specialist clinic (moderate urgency)
Diagnosis of vertebral compression fracture related to osteoporosis	Physiatry, spine surgeon, or spine-specialist clinic (moderate urgency)
Diagnosis or clinical suspicion of tumor / discitis / infection	STAT imaging, consult spine surgeon (high urgency)
Diagnosis or clinical suspicion of cauda equina syndrome	STAT imaging, consult spine surgeon (high urgency)
Acute, mechanical LBP not responding to 4-6 weeks usual care	Physiatry or spine-specialist clinic (low urgency)

Putting it all together…

Patient Scenarios

Scenario 1

49 yo female, admin assistant who has had chronic LBP. She has used NSAIDs and muscle relaxers for past 3 months. Exam reveals no radiculopathy or referred pain. BMI 29. Strength exam reveals mild decrease in LE, nonfocal.

Management?

PT eval, continue NSAIDs, Xrays to r/o pathologic/structural process. If no improvement, consider referral to specialty clinic.

Scenario 2

63-year-old female who woke up with new onset of LBP. She goes to ED. No referred pain and strength of LE is 4/5, limited by back pain.

Management?

PT eval, NSAIDs, core and muscle strengthening. Needs follow up evaluation to make sure associated pain-related weakness is improving. If focal, refer for imaging.

Scenario 3

35-year-old male was bent over brushing his teeth. He sneezed and had acute onset of LBP. As day went on, pain progressed down right leg into the calf. Exam reveals decreased left Achilles DTRs and weakness in left ankle.

Management?

PT, NSAIDS for 4 weeks. Re-evaluate. If no improvement, then MRI and refer to specialty clinic / spine surgeon.

Defining Impact of this Integrated Care Pathway

- Decrease costs, both direct and indirect
- Decrease overutilization of pharmacotherapy
- Appropriate referrals
- Prudent use of healthcare dollars

How Did We Do in Helping You Achieve These Learning Objectives?

This CME material will help you to:

- Streamline screening for and addressing behavioral health issues commonly encountered in ambulatory practice
- Engage CCN people, processes, and tools to enhance patient safety and health outcomes
- Let us know by taking the post-test, which will allow you to receive free CME credit

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