IMAGING FOR ACUTE LOW BACK PAIN

A Healthcare Provider Educational Manual Based on the Choosing Wisely® Campaign

Prepared by
Better Health Greater Cleveland’s Choosing Wisely Education Committee

INSTRUCTOR MANUAL
**Overview of Choosing Wisely®**

Better Health Greater Cleveland and its partners are leading regional efforts to promote Choosing Wisely®, an initiative of the ABIM Foundation to encourage physicians and patients to engage in conversations about tests, treatments and procedures that commonly are overused.

In Ohio, Better Health is focusing on five health care situations that are familiar to thousands of Ohioans, along with the associated tests and treatments that often can be avoided. The tests and treatments are among more than 150 that are included in evidence-based lists of “Five Things Physicians and Patients Should Question” produced by medical societies as part of the national Choosing Wisely program and supported by Consumer Reports.

Our aim is to help provide consumers, physicians, and physician trainees with the information they need to have these conversations. Nearly 30% of health care spending is duplicative or unnecessary, so we have a lot to talk about. Choosing Wisely aims to promote conversations between physicians and patients by helping patients choose care that is:

- Supported by evidence
- Not duplicative of other tests or procedures already received
- Free from harm
- Truly necessary

In response to this challenge, national organizations representing medical specialists have been asked to “choose wisely” by identifying five tests or procedures commonly used in their field whose necessity should be questioned and discussed. The resulting lists of “Five Things Physicians and Patients Should Question” will spark discussion about the need -- or lack thereof -- for many frequently ordered tests or treatments.

Recognizing that providers need to communicate effectively about what care patients truly need, Better Health developed educational manuals for each of the recommendations we endorsed. They include:

- Imaging for acute low back pain
- Screening for cervical cancer
- Imaging for acute headaches
- Imaging and antibiotics for sinusitis
- Cardiac imaging

This manual provides educational tools and assessments for recommendations about imaging for acute low back pain.
All tools also are available for download at: betterhealthcleveland.org/choosingwisely

About the Instructors’ Manual

Overview and Objective

- Choosing Wisely slides
- Video (10 minutes) on Choosing Wisely recommendation on imaging acute low back pain

(Contact Aleece Caron, PhD, Co-Director, Choosing Wisely Ohio: acaron@metrohealth.org)

Knowledge Assessment

Learners complete after viewing videos and/or slides

Standardized Patient for Simulation/Role Play:

- Detailed Instructions for Provider
- Physical Exam
- Patient Script
- Documenting Encounter
- Milestone-based Evaluation

Scenarios for Small-Group Discussion

- Probing questions for facilitated discussion
- Scenarios for short small group discussion

Preceptor Milestone Evaluation Tool

Learner Self-Reflection Tool

Additional resource

Video on Collaborative Decision-Making (5:46 minutes)
http://www.health.org.uk/areas-of-work/programmes/shared-decision-making/
The tools in this manual are designed to create an interactive learning environment that will allow participants to demonstrate and practice their communication and collaborative decision-making skills. Each educational tool has at least one evaluation measure paired with it.

Based on the skill level of your learner, your choice of educational methods and objectives may vary. The tools in this manual can be used to create up to a two-hour workshop to assess knowledge of the recommendation and collaborative decision-making, simulation, role play, assessment of critical thinking skills, and self-reflection. You may also opt to use pieces of this manual to create your own workshop or independent learning experience for your providers.

All of these tools are also available for download at betterhealthcleveland.org/choosingwisely

GOAL FOR MEDICAL STUDENTS
Learners will understand when to use radiographic imaging in the initial evaluation of acute uncomplicated low back pain and how to effectively communicate this decision to patients using collaborative decision making.

Objectives
Learners will:
1. Define acute and uncomplicated low back pain.
2. Compare and contrast complicated versus uncomplicated low back pain by listing the “red flags” that distinguish them from one another.
3. Learners will describe the value of collaborative decision-making and how it affects patient outcomes.
4. Learners will compare the different models of doctor/patient communication including paternalism, arrogance, bargaining and collaborative decision making.

GOALS FOR RESIDENTS AND ATTENDINGS
Learners will review the indications for use of radiographic imaging for the initial evaluation of acute uncomplicated low back pain and simulate collaborative decision-making.

Objectives
Learners will:
1. Define acute and uncomplicated low back pain.
2. Compare and contrast complicated versus uncomplicated low back pain by listing the “red flags” that distinguish them from one another.
3. Learners will describe the value of collaborative decision-making and how it affects patient outcomes.
4. Learners will compare different models of doctor/patient communication including paternalism, arrogance, bargaining and collaborative decision-making.
5. Describe the potential dangers of under-use bias.

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Instructors may choose among several ways to deliver the material on imaging for acute low back pain:

**Note:** The interactive video on imaging for low back pain is designed for independent learning prior to attending the workshop. The knowledge assessment tests learners’ understanding of content of video and/or the ‘Topic Overview’ slides (pages 7 – 12).

- Conduct a workshop to complete the knowledge assessments and participate in a simulation exercise with a milestone-based evaluation.
- Conduct a workshop to complete the knowledge assessment, participate in a simulation exercise, and review the different communication models with a milestone-based evaluation.

For your convenience, we have created two example workshops with detailed instructions of how to work through each tool.

### Example 1
60-Minute Workshop

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
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<tbody>
<tr>
<td>1. Overview of Choosing Wisely and Workshop Agenda</td>
<td>5 minutes</td>
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<tr>
<td>2. Knowledge Assessment of Imaging for Acute Low Back Pain and Collaborative Decision-Making</td>
<td>5 minutes</td>
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<tr>
<td>3. Speed Simulation Exercise</td>
<td>50 minutes</td>
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<td>a. Assign half the group to be the provider; the other half to be the patient.</td>
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<td>b. Assign observers to each dyad (if available).</td>
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<td>c. Give provider and patient 3 minutes to read the case and script, respectively.</td>
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<td>d. Work through the case (10 minutes).</td>
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<tr>
<td>e. Patient completes evaluation form and provider documents assessment and plan (2 minutes).</td>
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<tr>
<td>f. Allow 2 minutes for patient to give provider feedback using a nomogram to stimulate discussion</td>
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<td>g. Have each dyad switch roles and repeat</td>
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<td>h. Each learner completes self-reflection tool; each observer completes milestone evaluation of learners they observed (5 minutes).</td>
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<tr>
<td>i. Faculty lead discussion for group feedback. (5 minutes).</td>
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### 1. Overview of Choosing Wisely and Workshop Agenda

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### 2. Standardized Patient Simulation Exercise

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- **a.** Assign half the group to be the provider; the other half to be the patient.
- **b.** Assign observers to each dyad (if available).
- **c.** Give provider and patient 5 minutes to read the case and script, respectively.
- **d.** Work through the case (10 minutes).
- **e.** Patient completes evaluation form and provider documents assessment and plan (5 minutes).
- **f.** Patients give provider feedback (5 minutes).
- **g.** Have each dyad switch roles and repeat.
- **h.** Each learner completes self-reflection tool; each observer completes milestone evaluation of learners they observed (2 minutes).
- **i.** Faculty lead discussion for group feedback. (5 minutes).

### 3. Speed Scenario Simulation Exercise

**Setting up:** One way to set this up is to arrange chairs into two concentric rings, with inner-ring chairs facing outer ring. Learners face each other, work through the scenario, and rotate. Have the scenarios pre-printed on flashcards and labeled 1 - 4.

#### Part 1

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- **a.** Facilitators assign each pair to one of the 4 scenarios and distribute flashcards to identify role (patient/provider) in the exercise.
- **b.** Provide each pair with the scenario evaluation, and instruct them to use this as discussion aid. Allow 5 minutes to work through the scenario.
- **c.** Next, instruct the “patient” from each group to move to the next group and have the pair switch roles and repeat the exercise. Continue until everyone has reviewed each scenario.

#### Part 2

Faculty facilitated group feedback and discussion. See enclosed facilitator questions for each scenario.

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### 4. Have each learner complete self-reflection exercise and each observer complete milestone exercise.

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Low Back Pain

Dalal M. Chenouda, MD
Assistant Professor of Clinical Medicine
Case Western Reserve University
Louis Stokes VA Medical Center

Low Back Pain - Background

- The fifth leading cause of outpatient visits
- About one in four Americans has experienced low back pain within the past three months
- Leading cause of absenteeism from work
- Billions of healthcare dollars are spent each year on unnecessary imaging and the interventions they trigger

Contact Aleece Caron, PhD, acaron@metrohealth.org for link to synced interactive video
### Differential Diagnosis

- Non specific low back pain (most common)
- Degenerative joint disease of the spine
- Vertebral compression fracture
- Spondylosis
- Vertebral osteomyelitis
- Metastatic cancer or myeloma
- Ankylosing Spondylitis
- Cauda Equina

### Clinical Pearl

Don’t do imaging for low back pain within the first six weeks of onset, **unless** red flags are present
WHY?

- Imaging will not expedite healing
- Increases risk of cancer because of significant radiation exposure
- Unnecessary procedures, testing and surgical intervention which can be harmful and unnecessary
- Waste of time and money

**Imaging will not expedite healing**

- A study of 1800 people with back pain found that those who had initial imaging fared no better than those that didn’t and in some cases did worse than those treated with conservative care

- Another study found that back pain sufferers who had an MRI in the first month were 8X more likely to have surgery but did not recover faster
Imaging poses risks

- Radiation exposure
- In 2007, one study projected 1200 new cancers based on 2.2 million CT scans of the lower back performed in US
- Radiation exposure to men and women of child bearing age is harmful
- “incidentalomas” One study found that 90 percent of older people who had no back pain had spinal abnormalities on MRI. These findings cause unnecessary anxiety, procedures and surgeries

Imaging is Expensive

- X ray $200-$300
- MRI $1,000-$1,200
- CT $1,000-$1,500
**When to Image - “Red Flags”**

- Physical exam suggestive of neurological deficits (loss of reflexes; muscle atrophy; weakness)
- Symptoms suggestive of severe or worsening nerve damage (loss of feeling or power in legs)
- Personal history of cancer or immune suppression
- Spinal infection
- Unexplained weight loss
- Fever
- Loss of bladder or bowel function
- Osteoporosis
- New back pain in a person > 50 years of age
- Bladder or bowel incontinence
- Progressive pain not improving after 6 weeks of conservative therapy

**Conservative Treatment**

- Applying heat/ice
- Staying active
- Over the counter pain medication (NSAIDS, acetaminophen, )
- Physical Therapy
- Low back strengthening Exercises
- Proper posture (lifting, bending, sleep)
Case Study

- Mr. Smith is a 45 year old male presents with one week history of low back pain after shoveling snow and moving furniture this past weekend.
- ROS: Denies fevers, chills, weight loss, incontinence, sudden weakness or fall, no prior back problems, employed part time as a mechanic.
- PMH: Hypertension, dyslipidemia
- PSH: None
- Social Hx: employed as a mechanic; non-smoker or drinker; never used illicit drugs
- PE: T 98  P 90 regular  R 16  140/80  BMI 28
- Pleasant overweight male appears in moderate distress rubbing his lower back
- HEENT: non focal
- CV: S1S2; no murmurs; clicks or gallops
- Lungs: CTA bilaterally
- ABD: soft non tender; normo active BS in all four quadrants
- Ext: no edema
- Neuro: normal strength, reflexes; walking with a limp because of back pain; negative straight leg raising; no muscle atrophy; moderate para spinal muscle tenderness; no pain over palpation of the vertebrae; no saddle anesthesia

Recommendations for Treatment

- Conservative treatment (No Red Flags)
- Reassurance that symptoms will improve over the next 5 weeks
- NSAIDS, Tylenol, heat or ice for pain
- Stay active
- Educate regarding posture (lifting, bending, sleeping)
- Consider physical therapy
1. Which of the following accurately describes the *Choosing Wisely* ® recommendation for acute low back pain?
   a. Imaging for low back pain should never be performed because it is harmful to patients
   b. **Do not perform imaging for low back pain within first six weeks of onset, unless red flags are present**
   c. Avoid imaging for low back pain, unless your patient insists upon it.
   d. Imaging should be done regularly for all patients with acute low back pain to screen for a serious pathology.

2. Which of the following is a reason for the *Choosing Wisely* acute low back pain recommendation?
   a. Imaging will not expedite healing
   b. Imaging increases risk of cancer because of significant radiation exposure
   c. Imaging can lead to unnecessary procedures and harmful interventions
   d. Imaging can be a waste of time and money
   e. B and C only
   f. **All of the above**

3. Which of the following is NOT a ‘red flag’ that would suggest a serious pathology that may require imaging for acute low back pain?
   a. **Progressive pain not improving after a week of conservative therapy**
   b. Physical exam suggestive of neurological deficits
   c. Personal history of cancer
   d. Bladder or bowel incontinence
   e. Unexplained weight loss

4. **True** or False: For a patient with no ‘red flags,’ conservative treatment including non-steroidal anti-inflammatory drugs and physical therapy is sufficient.

5. **True** or False: Most people with acute lower-back pain feel better in about a month’s time.

6. Which of the following ideas is NOT central to shared-decision making?
   a. Shared-decision making recognizes that there are two experts, the physician and the patient
   b. Engaging patients with clinicians to come to a joint decision when there are realistic alternative treatments.
   c. Providing patients with comprehensive information regarding the various treatments that are available
   d. **Shared decision-making is less about the relationship between physician and patient and more about lowering costs.**

[link to website: betterhealthcleveland.org/choosingwisely]
GOAL
Learners will improve communication skills and ability to have conversations regarding imaging for uncomplicated lower back pain with patients.

Objectives
1. Assist learners in listening to the patient’s concerns with respect and thoughtfulness
2. Describe how learners should inquire about ‘red flags’ that may require imaging
3. Describe how to create partnership with patients
4. List and describe the risks, benefits and costs of imaging for low back pain

▶ ▶ Problem Scenario # 1 | Arrogance/Paternalism
You are a primary care provider and your next patient comes in for low back pain.
You walk in, introduce yourself and ask her, "What brings you in today?"
She responds, "I'm here to get an x-ray because I have back pain."
You explain that the evidence is clear. Imaging tests for new onset low back pain are never useful, costly and risky. You go on to say that you would like to complete a history and physical exam but you want to let her know right away that an x-ray is not going to happen.

Probing Questions
1. What might the patient’s reaction be to your recommendations?
2. Have you established a mutual sense of partnership with the patient? How might you do this?
3. In this scenario, was your conclusion to deny an x-ray before examination warranted?
4. How might a history and physical examination alter your decision?

Provide additional information
The patient is adamant about obtaining an x-ray for her lower back pain.

Probing Question
5. Why might not the patient be receptive to your professional opinion? How can you move forward at this point?

▶▶ Problem Scenario # 2 | Bargaining
You are a primary care provider evaluating the patient for new onset low back pain. You completed the history, which included pain quality, associated symptoms, location, duration, onset, and exacerbating and alleviating factors. The patient put on a gown and you completed an examination of her spine, musculature/soft tissues and nervous system.
The patient says, "Dr., I really need to have an x-ray of my back so that I know I am okay."
You respond, "I completed a thorough history and physical exam. I recognize that you are in pain and it is my assessment that the symptoms come from the muscles and soft tissues of your

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back. I am confident that we can get you feeling better with the combination of non-steroidal anti-inflammatory medication and physical therapy."

The patient responds, "I really need an x-ray to feel comfortable."

You offer, "I don't think it is needed, but I will order an x-ray if you promise to do the physical therapy."

Probing Questions
1. Have you explained your initial recommendation against an x-ray? How would you explain it?
2. When is bargaining useful, and when is it a hindrance to a patient-physician relationship?
3. Do you understand the patient’s underlying feelings? How can you initiate this conversation?

►►Problem Scenario # 3  |  Rigid Application of Guidelines/Underuse Bias

You are a primary care provider evaluating the patient for new onset low back pain. The patient is a 60-year-old male. While taking the history, you learn that he has a past medical history of prostate cancer treated with radiation therapy 10 years ago. His low back pain started three weeks ago without any clear inciting event. It is a deep boring pain located in the center of his lower spine. The pain is worse when he tries to sleep at night and wakes him up. It does not change with activity and nothing clearly makes it better. He does not have any changes in his strength, gait, bowel/bladder function or sensation.

After completing a history and a thorough physical exam, you tell him, "The guidelines are very clear in this issue. With new onset low back pain, x-rays are not useful. I recommend anti-inflammatory medication and physical therapy. If you're no better in six weeks, we will explore other options."

Probing Questions
1. What are the ‘red flags’ that would suggest a serious pathology that may require imaging?
2. How would you educate the patient about these signs?
3. Is there potential for under use?

►►Problem Scenario # 4  |  Collaborative Decision-Making

You are a primary care provider and your next patient comes in for low back pain. You walk in, introduce yourself and ask her, "What brings you in today?"

She responds, "I know my body and something is wrong. I'm here to get an x-ray because I have back pain."

You respond, "I agree, you are the expert of your body and I need your help to figure out what is going on. It seems that you have something very specific in your mind that you are worried about. What do you fear is the cause of this pain?"

She responds, "My neighbor was recently diagnosed with lung cancer. I am a smoker, too. He had a lot of back pain."
“I am glad that you let me know about this. I will do a thorough assessment and we will specifically address this concern about cancer,” you respond.

You complete a thorough history and physical exam. You share your conclusions with her. “I can see that you are uncomfortable and your pain is real. I have done a complete history and physical exam and the cause of your pain is a strain of the ligaments, muscles and soft tissues of your low back. I do not believe that you have cancer or something serious causing this pain. X-ray tests are not helpful in this kind of back pain. They simply add cost and expose you to radiation. I recommend aggressive regimen using non-steroidal anti-inflammatory drugs and physical therapy in order to get you feeling better. I will follow you closely and I encourage you to let me know if there is a change in your symptoms.”

“I also want to directly address your concerns about cancer and what happened to your neighbor. I think watching your neighbor and experiencing this pain may help us move you into a place where you feel that you can address your cigarette smoking. If you really want to decrease your risk of developing cancers the most important thing you can do is quit smoking. I would like to help you with this.”

**Probing Questions**

1. What are the risks and benefits of imaging for low back pain?
2. With what information might you want to educate your patient to address future concerns?
3. How was a partnership successfully developed in this scenario?
# Learning Scenarios for Learner

Instructions: Read the scenario, then use the table to evaluate it. After each scenario, be prepared to share your scores with the other learners.

## Scenario #1

You are a primary care provider and your next patient comes in for low back pain. You walk in, introduce yourself and ask her, "What brings you in today?"

She responds, "I'm here to get an x-ray because I have back pain."

You explain that the evidence is clear. Imaging tests for new onset low back pain are never useful, costly and risky. You go on to say that you would like to complete a history and physical exam but you want to let her know right away that an x-ray is not going to happen.

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**SCENARIO #2**

You are a primary care provider evaluating the patient for new onset low back pain. You completed the history which included pain quality, associated symptoms, location, duration, onset, and exacerbating and alleviating factors. The patient put on a gown and you completed an examination of her spine, musculature/soft tissues and nervous system.

The patient says, "Dr., I really need to have an x-ray of my back so that I know I am okay."

You respond, "I completed a thorough history and physical exam. I recognize that you are in pain and it is my assessment that the symptoms come from the muscles and soft tissues of your back. I am confident that we can get you feeling better with the combination of non-steroidal anti-inflammatory medication and physical therapy."

The patient responds, "I really need an x-ray to feel comfortable."

You offer, "I don't think it is needed, but I will order an x-ray if you promise to do the physical therapy."

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SCENARIO #3

You are a primary care provider evaluating the patient for new onset low back pain. The patient is a 60-year-old male. While taking the history, you learn that he has a past medical history of prostate cancer treated with radiation therapy 10 years ago. His low back pain started three weeks ago without any clear inciting event. It is a deep boring pain located in the center of his lower spine. The pain is worse when he tries to sleep at night and wakes him up. It does not change with activity and nothing clearly makes it better. He does not have any changes in his strength, gate, bowel/bladder function or sensation.

After completing a history and a thorough physical exam, you tell him, "The guidelines are very clear in this issue. With new onset low back pain, x-rays are not useful. I recommend anti-inflammatory medication and physical therapy. If you're no better in six weeks, we will explore other options."

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**SCENARIO #4**

You are a primary care provider and your next patient comes in for low back pain. You walk in, introduce yourself and ask her, "What brings you in today?"

She responds, "I know my body and something is wrong. I'm here for an x-ray because I have back pain."

You respond, "I agree, you are the expert of your body, and I need your help to figure out what is going on. It seems that you have something very specific in your mind that you are worried about. What do you fear is the cause of this pain?"

She responds, "My neighbor was recently diagnosed with lung cancer. I am a smoker too. He had a lot of back pain."

"I am glad that you let me know about this. I will do a thorough assessment and we will specifically address this concern about cancer," you respond.

You complete a thorough history and physical exam. You share your conclusions with her.

"I can see that you are uncomfortable and your pain is real. I have done a complete history and physical exam, and the cause of your pain is a strain of the ligaments, muscles and soft tissues of your low back. I do not believe that you have cancer or something serious causing this pain. X-ray tests are not helpful in this kind of back pain. They simply expose you to radiation. I recommend an aggressive regimen using non-steroidal anti-inflammatory drugs and physical therapy in order to get you feeling better. I will follow you closely, and I encourage you to let me know if there is a change in your symptoms."

"I also want to directly address your concerns about cancer and what happened to your neighbor. I think watching your neighbor and experiencing this pain may help us move you into a place where you feel that you can address your cigarette smoking. If you really want to decrease your risk of developing cancers, the most important thing you can do is quit smoking. I would like to help you with this."

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<td>elicits knowledge of Evidence Based Medicine</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Language of scenario</strong></td>
<td></td>
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<tr>
<td>is likely to improve patient satisfaction</td>
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<tr>
<td><strong>Language of scenario</strong></td>
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</tr>
<tr>
<td>demonstrates knowledge of value-based care</td>
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</tr>
<tr>
<td><strong>Language of scenario</strong></td>
<td></td>
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</tr>
<tr>
<td>demonstrates the risks associated with imaging</td>
<td></td>
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</tr>
</tbody>
</table>
### Options for Instructor

- Use as a simulation exercise
- Use as a role play exercise
- Use as speed simulation exercise

| Information | Patient’s name: Matthew Jones  
Age: 50  
Health status: good |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for Encounter</td>
<td>Presents with lower back pain</td>
</tr>
<tr>
<td>Your Role</td>
<td>Learner in clinic</td>
</tr>
<tr>
<td>Situation</td>
<td>A 50-year-old man presented with lower back pain of moderate intensity that started approximately 72 hours ago, after he lifted supplies.</td>
</tr>
</tbody>
</table>
| Your Task | 1. Introduce yourself and listen to the patient’s story without interrupting. Identify patient needs.  
2. Inquire about “red flags” that would suggest serious pathology that may require imaging (i.e. history of cancer, unexplained weight loss, fever, recent infection, loss of bowel or bladder control, abnormal reflexes, loss of muscle power or feeling in legs).  
3. Make a statement of partnership with the patient. Acknowledge that they are the experts of their own body and have something to contribute to the decision-making process.  
4. Describe the natural history of acute uncomplicated low back pain and the indications for imaging.  
5. List and describe the risks and benefits of imaging for low back pain, including the costs that might be incurred.  
6. Educate the patient. Should any “red flags” appear, follow up with the physician. |
| **STANDARDIZED PATIENT ENCOUNTER**  
| **PHYSICAL EXAM** |

| **Vitals:** Pulse: 90, Respiration: 16, BP: 140/80, Temp 98.6, BMI 28 |

| **General** | Pleasant overweight male appears in moderate distress rubbing his lower back |
| **HEENT** | Normal Cephalic, A Traumatic, Extraocular Movements Intact, Pupils Equal Round Reactive to Light, moist mucous membranes |
| **Lungs** | Clear to Auscultation Bilaterally |
| **Cardio** | S1S2, Regular Rate and Rhythm, No Murmurs Rubs or Gallops |
| **Abdomen** | Positive Bowel Sounds in all four quadrants, Soft, Non-Tender, Non-Distended |
| **Extremities** | Positive Distal Pulses, No clubbing or edema |
| **Back** | No spinal deformity; symmetry of spinal muscles, Moderate para-spinal muscle tenderness, no pain over palpation of the vertebra |
| **Neurological** | Normal Strength in all extremities; normal reflexes, Walking with a limp because of back pain, Negative straight leg raising, No muscle atrophy, No saddle anesthesia |
NOTE: Script covers all problems/abnormalities. If asked about any other problems, everything is normal.

Patient Name: Matthew Jones
Age: 50 years old
Health status: good

Chief Complaint: “I’ve had some low back pain, and I want help for it.”

Identifying Data: Married, construction worker, does heavy lifting often, two children, and good home life

Scenario: Your low back/left leg pain began about three days ago at a moderate intensity. You recall three days ago that you were lifting heavy supplies.

Patient Profile: Concerned/anxious about this problem. You are in pain during the interview, but it is tolerable. Sitting is very uncomfortable, so shift around after several minutes. Bend forward slightly when sitting (put hands under knees—having knees higher than pelvis feels better). When walking, do so slowly with pelvis tilted forward. You have slow movements with some stiffness in your back. Standing tolerance is 10-15 minutes. You bend over and rotate slowly. If asked to lie down: bring your knees up and flatten your back for comfort.

History of Present Illness
- When did it start? 72 hours ago.
- How did it come on? It gradually started and has persisted since.
- Did you have any injury to bring this on? No, but was doing heavy lifting the day of.
- How frequent is the pain? It is mostly constant, although stops occasionally
- How long does it last? It generally lasts for hours, stopping occasionally.
- Where is the pain? Lower back, especially left side and left leg, along back and side of leg into side of foot.
- If probed further: Currently have both back and leg pain, but can have back pain without leg pain.
- Describe the pain. Dull and achy.
- How bad is the pain? On a scale of 1-10 (10 as the worst), it ranges from 3-7; now it’s at 6.

Continued on next page
• **Does it interfere with your life?** After an hour at your desk you get stiff. Haven’t been able to do your usual routine with the pain. Can’t bend over to pick things up. Housework is painful (like doing laundry). Shifting painful when driving.

• **Relieving factors?** Lie on side and sit with feet up.

• **Aggravating factors?** Exercise, standing, bending over, and stress

• **Any other symptoms beside pain, such as numbness?** Intermittent numbness and tingling in left leg, and left leg feels weak

• **Where is the numbness?** The same area as the pain

• **How often does the numbness occur?** Up to once a week lately; less often than the pain.

• **How long does the numbness last?** A few hours at a time

• **Does the numbness accompany the pain?** Sometimes have numbness without pain.

**Past Medical History**

• Answer NO to the following: allergies, surgery, tobacco, intravenous or recreational drugs

• **Medications?** None now. Tried a non-steroidal anti-inflammatory (Motrin, over-the-counter), Hasn’t really helped much so just take it on and off.

• **Alcohol?** Socially, one or two glasses of wine a week

• **Hospitalizations?** None.

• **Exercise?** I am a construction worker, so I do heavy lifting daily. Haven’t been able to because of the pain.

**Family History**

Live with spouse and two children; parents living; one sibling – an older sister. No history of hypertension, cancer or coronary artery disease in family; father and sister have allergies--hay fever.

**Questions to Ask**

• What do you think I have?

• Is this a herniated disc?

• Will I need surgery?

• Should I receive a CT scan to make sure everything is all right?

• Is there an immediate solution?

• How long can I expect before the pain dissipates?

*Based on Baylor College of Medicine example ([http://www.bcm.edu/spprogram/?PMID=9325](http://www.bcm.edu/spprogram/?PMID=9325))
Learner Instructions
Document your assessment and plan based on your patient encounter.
# EVALUATION

**Evaluate Resident in Simulation Exercise Based on Criteria Below**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Relationship Development</th>
<th>Unsatisfactory</th>
<th>Proficient</th>
<th>Advanced</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comm, prof</td>
<td>Learner Introduced him/herself</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comm., pbli</td>
<td>Allowed you to speak without interrupting</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>Comm., pt, care</td>
<td>Acknowledged your emotions</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>Comm., pt care</td>
<td>Communicated concern and willingness to help</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>MK, pt care, comm.</td>
<td>Explained unfamiliar jargon</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>Pt care, pbli, comm</td>
<td>Maintained awareness of the situation in the moment, and responded to meet patient needs</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>Comm, pbli</td>
<td>Respond welcomingly and productively to feedback</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
</tbody>
</table>

## Case Goals

<table>
<thead>
<tr>
<th>MK</th>
<th>Explained risks and benefits associated with imaging for low back pain</th>
<th>Unsatisfactory</th>
<th>Proficient</th>
<th>Advanced</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK</td>
<td>Explain indications for imaging for low back pain</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>MK</td>
<td>Explain what information the imaging results contain</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>MK</td>
<td>Summarized problem/condition</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>Comm., prof, pbli</td>
<td>Invited your ideas about treatment plan</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
<tr>
<td>Comm., pt care</td>
<td>Made statements of partnership</td>
<td>Unsatisfactory</td>
<td>Proficient</td>
<td>Advanced</td>
<td>Outstanding</td>
</tr>
</tbody>
</table>

## Overall Organization and Time Management

| Pt care                    | Brought encounter to some conclusion                                                    | Unsatisfactory | Proficient | Advanced | Outstanding |

## Summary

- **All**
  - Overall relationship development and maintenance skills: No Opportunity to Assess
  - Not Met
  - Partially Met
  - Fully Met

- **Pt, care, mk, comm**
  - Overall negotiation and share decision-making skills: No Opportunity to Assess
  - Not Met
  - Partially Met
  - Fully Met

- **All**
  - Would you recommend this physician to a friend who wanted a physician with excellent communication skills: No
  - Yes
  - N/A
Has professional and respectful interactions with patients and speaks respectfully of caregivers and members of the interprofessional team (e.g. peers, consultants, nursing, ancillary professionals and support personnel). (PROF1)

<table>
<thead>
<tr>
<th>Critical Deficiencies</th>
<th>Ready for Unsupervised Practice</th>
<th>Aspirational</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Lacks empathy and compassion for patients and caregivers</td>
<td>□ Consistently respectful in interactions with patients even in challenging situations</td>
<td>□ Role models compassion, empathy and respect for patients</td>
</tr>
<tr>
<td>□ Disrespectful in interaction with patients</td>
<td>□ Emphasizes patient privacy and autonomy in all interactions</td>
<td>□ Role models appropriate anticipation and advocacy for patient and caregiver needs</td>
</tr>
<tr>
<td>□ Sacrifices patient needs in favor of own self-interest</td>
<td>□ Demonstrates empathy, compassion and respect for patients</td>
<td>□ Teaches others regarding maintaining patient privacy and respecting patient autonomy</td>
</tr>
<tr>
<td>□ Blatantly disregards respect for patient privacy and autonomy</td>
<td>□ Demonstrates a responsiveness to patient needs that supersedes self-interest</td>
<td></td>
</tr>
</tbody>
</table>

Gathers and synthesizes essential and accurate information to define patient’s clinical problem(s). (PC1)

<table>
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<th>Critical Deficiencies</th>
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</tr>
</thead>
<tbody>
<tr>
<td>□ Does not collect accurate historical data</td>
<td>□ Acquires accurate and relevant histories from patient</td>
<td>□ Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis</td>
</tr>
<tr>
<td>□ Does not use physical exam to confirm history</td>
<td>□ Performs accurate and appropriately thorough physical exams</td>
<td>□ Identifies subtle or unusual physical exam findings</td>
</tr>
<tr>
<td>□ Fails to recognize patient’s central clinical problems</td>
<td>□ Uses collected data to define a patient’s central clinical problem(s)</td>
<td>□ Role models and teaches the effective use of history and physical examination skills to minimize the need for further diagnostic testing</td>
</tr>
<tr>
<td>□ Fails to recognize potentially life threatening problems</td>
<td>□ Acquires accurate and relevant histories from patient</td>
<td></td>
</tr>
</tbody>
</table>

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Learns and improves via feedback. (PBL.I3)

<table>
<thead>
<tr>
<th>Critical Deficiencies</th>
<th>Ready for Unsupervised Practice</th>
<th>Aspirational</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Actively resists feedback from others</td>
<td>☐ □ Responds to unsolicited feedback in a defensive fashion</td>
<td>☐ □ Performance continuously reflects incorporation of solicited and unsolicited feedback</td>
</tr>
<tr>
<td></td>
<td>☐ □ Solicits feedback only from supervisors</td>
<td>☐ □ Welcomes unsolicited feedback</td>
</tr>
<tr>
<td></td>
<td>☐ □ Is open to unsolicited feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ □ Solicits feedback from all members of the interprofessional team and patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ □ Welcomes unsolicited feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ □ Is open to unsolicited feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ □ All members of the interprofessional team and patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ □ Welcomes unsolicited feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ □ Performance continuously reflects incorporation of solicited and unsolicited feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ □ Able to reconcile disparate or conflicting feedback</td>
<td></td>
</tr>
</tbody>
</table>

Identifies forces that impact the cost of health care, and advocates for, and practices cost-effective care. (SBP.3)

<table>
<thead>
<tr>
<th>Critical Deficiencies</th>
<th>Ready for Unsupervised Practice</th>
<th>Aspirational</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ □ Ignores cost issues in the provision of care</td>
<td>☐ □ Lacks awareness of external factors (e.g. socioeconomic, cultural, literacy, insurance status) that impact the cost of health care and the role that external stakeholders (e.g. providers, suppliers, financiers, purchasers) have on the cost of care</td>
<td>☐ □ Teaches patients and healthcare team members to recognize and address common barriers to cost-effective care and appropriate utilization of resources</td>
</tr>
<tr>
<td>☐ □ Demonstrates no effort to overcome barriers to cost-effective care</td>
<td>☐ □ Recognizes that external factors influence a patient’s utilization of health care and may act as barriers to cost-effective care</td>
<td>☐ □ Actively participates in initiatives and care delivery models designed to overcome or mitigate barriers to cost-effective high quality care</td>
</tr>
<tr>
<td></td>
<td>☐ □ Minimizes unnecessary diagnostic and therapeutic tests</td>
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<tr>
<td></td>
<td>☐ □ Advocates for cost-conscious utilization of resources (i.e. emergency department visits, hospital readmissions)</td>
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<tr>
<td></td>
<td>☐ □ Incorporates cost-awareness principles into standard clinical judgments and decision-making, including screening tests</td>
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</tbody>
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### Knowledge of diagnostic testing and procedures. (MK2)

<table>
<thead>
<tr>
<th>Critical Deficiencies</th>
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<th>Aspirational</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Lacks foundational knowledge to apply diagnostic testing and procedures to patient care</td>
<td>□ Unable to interpret basic diagnostic tests accurately</td>
<td>□ Interprets complex diagnostic tests accurately</td>
</tr>
<tr>
<td>□ Does not understand the concepts of pre-test probability and test performance characteristics</td>
<td>□ Interprets basic diagnostic tests accurately</td>
<td>□ Understands the concepts of pre-test probability and test performance characteristics</td>
</tr>
<tr>
<td>□ Minimally understands the rationale and risks associated with common procedures</td>
<td>□ Needs assistance to understand the concepts of pre-test probability and test performance characteristics</td>
<td>□ Teaches the rationale and risks associated with common procedures and anticipates potential complications when performing procedures</td>
</tr>
<tr>
<td>□ Fully understands the rationale and risks associated with common procedures</td>
<td>□ Interprets basic diagnostic tests accurately</td>
<td>□ Interprets complex diagnostic tests accurately</td>
</tr>
<tr>
<td>□ Interprets basic diagnostic tests accurately</td>
<td>□ Understands the concepts of pre-test probability and test performance characteristics</td>
<td>□ Teaches the rationale and risks associated with common procedures and anticipates potential complications when performing procedures</td>
</tr>
<tr>
<td>□ Interprets complex diagnostic tests accurately</td>
<td>□ Understands the concepts of pre-test probability and test performance characteristics</td>
<td>□ Teaches the rationale and risks associated with common procedures and anticipates potential complications when performing procedures</td>
</tr>
</tbody>
</table>

### Communication and Rapport with Patients and Families (ICS1)

<table>
<thead>
<tr>
<th>Critical Deficiencies</th>
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<th>Aspirational</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Ignores patient preferences for plan of care</td>
<td>□ Engages patients in discussions of care plans and respects patient preferences when offered by the patient, but does not actively solicit preferences.</td>
<td>□ Identifies and incorporates patient preference in shared decision-making across a wide variety of patient care conversations</td>
</tr>
<tr>
<td>□ Makes no attempt to engage patient in shared decision making</td>
<td>□ Attempts to develop therapeutic relationships with patients and caregivers but is often unsuccessful</td>
<td>□ Incorporates patient-specific preferences into plan of care</td>
</tr>
<tr>
<td>□ Routinely engages in antagonistic or counter-therapeutic relationships with patients and caregivers</td>
<td>□ Defers difficult or ambiguous conversations to others</td>
<td>□ Role models effective communication and development of therapeutic relationships in both routine and challenging situations</td>
</tr>
</tbody>
</table>

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Monitors practice with a goal for improvement. (PBLI1)

<table>
<thead>
<tr>
<th>Critical Deficiencies</th>
<th>Ready for unsupervised practice</th>
<th>Aspirational</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Unwilling to self-reflect upon one’s practice or performance</td>
<td>□ Inconsistently self-reflects upon one’s practice or performance and inconsistently acts upon those reflections</td>
<td>□ Regularly self-reflects upon one’s practice or performance and consistently acts upon those reflections to improve practice</td>
</tr>
<tr>
<td>□ Not concerned with opportunities for learning and self-improvement</td>
<td>□ Misses opportunities for learning and self-improvement</td>
<td>□ Recognizes sub-optimal practice or performance as an opportunity for learning and self-improvement</td>
</tr>
<tr>
<td>□ Unwilling to self-reflect upon one’s practice or performance</td>
<td>□ Inconsistently self-reflects upon one’s practice or performance and inconsistently acts upon those reflections</td>
<td>□ Regularly self-reflects upon one’s practice or performance and consistently acts upon those reflections to improve practice</td>
</tr>
<tr>
<td>□ Not concerned with opportunities for learning and self-improvement</td>
<td>□ Misses opportunities for learning and self-improvement</td>
<td>□ Recognizes sub-optimal practice or performance as an opportunity for learning and self-improvement</td>
</tr>
</tbody>
</table>

Appropriate utilization and completion of health records (ICS3)

<table>
<thead>
<tr>
<th>Critical Deficiencies</th>
<th>Ready for unsupervised practice</th>
<th>Aspirational</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Health records are absent or missing significant portions of important clinical data</td>
<td>□ Health records are organized and accurate but are superficial and miss key data or fail to communicate clinical reasoning</td>
<td>□ Role models and teaches importance of organized, accurate and comprehensive health records that are succinct and patient specific</td>
</tr>
<tr>
<td>□ Health records are absent or missing significant portions of important clinical data</td>
<td>□ Health records are organized and accurate but are superficial and miss key data or fail to communicate clinical reasoning</td>
<td>□ Role models and teaches importance of organized, accurate and comprehensive health records that are succinct and patient specific</td>
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<tr>
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<td>□ Role models and teaches importance of organized, accurate and comprehensive health records that are succinct and patient specific</td>
</tr>
</tbody>
</table>

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**LEARNER SELF REFLECTION**

**Instructions:**
Please complete the following self-reflection exercise by rating your experience on a scale from 1 (strongly disagree) to 10 (strongly agree). Results of this survey will be used to enhance this exercise.

1. I found myself utilizing material from my own patient experiences during the exercise.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

2. Placing myself in the patient role caused me to reflect upon my own interactions with patients.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

3. Participating in this exercise caused me to reevaluate my own communication skills.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

4. This exercise enhanced my communication skills.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

5. It is important to discuss overuse with patients.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

6. I will use the skills I practiced today in my patient encounters.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

7. I would recommend this experience to other residents.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

8. I am prepared to recommend in my interactions with patients that imaging for low back pain should be avoided, unless ‘red flags’ appear.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

*Continued on next page*
9. What did you like most about this exercise?

10. Are there any changes you would suggest for this exercise?

11. Additional Comments
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