Managing Complex Pain in a busy practice: What can I do in 15 minutes?

Timothy H. Wideman, PT, PhD
Assistant Professor
School of Physical and Occupational Therapy
McGill University

Geoff P. Bostick PT, PhD
Assistant Professor
Faculty of Rehabilitation Medicine, Dept of Physical Therapy
University of Alberta

12 May 2015
Alberta College & Association of PTs

Traditional Understanding of Pain

Traditional Understanding of Disability
Traditional approaches to Pain and Disability Management

Heal tissues.  

Pain and disability resolve.

Challenging traditional understanding and approaches

- Many forms of pain and disability can be explained with a simple tissue damage model
- However, the model breaks down when considering more complex pain
How we understand complex pain conditions

Thoughts, feelings & beliefs information

Social context & environmental information

Tissue damage information
Working definition of Complex Pain Syndromes

- Not a simple one-to-one relationship between tissue damage and pain experienced
  - Additional factors influence pain and prognosis
- Persistent pain
- Poor response to traditional PT interventions

Patients with complex pain require a unique approach to treatment.

Managing Complex Pain Syndromes

- Multidisciplinary treatment is gold standard approach, however there are important barriers to implementation
  - Wait lists
  - Urban settings
  - High cost
- Current clinical practice guidelines call for treating complex pain by primary care clinicians
  - Challenge: How to manage this complexity within a busy practice?

Today’s Objectives:

- Understand the fundamental principles for assessing and managing complex pain
- Identify 15-minute management strategies that can be integrated into practice
Five principles of complex pain management

1. Look!
2. Listen!
3. Support self-management
4. Forget about fitness*
5. Don’t just measure, treat!

Assessment Strategies

Treatment Strategies

Principle #1: Look! (for signs of complexity)

- Complex pain syndrome = multiple factors influence the pain and disability state
- These multiple factors can broadly be grouped into
  1. Hypersensitivity of the nervous system
  2. Psychological risk factors
What is hypersensitivity of the nervous system?

Social context & environmental information

Hypersensitivity of the nervous system changes tissue damage information

Thoughts, feelings & beliefs information

Tissue damage information

Changes in the nervous system effectively increase the volume of actual or potential tissue damage information

Net effect of these changes:

• What wasn’t painful is now painful
• What was painful is now more painful
• Location of pain spreads
How to **look** for people with hypersensitivity of the nervous system:

1. Pain disproportionate to injury
2. Disproportionate aggravating/easing factors
3. Diffuse/non-anatomic areas of tenderness
4. Psychosocial symptoms

98% likely to have pain-related hypersensitivity of the nervous system

---

**Principle #1: Look!**
(for signs of complexity)

- Complex pain syndrome = multiple factors influence the pain and disability state
- These multiple factors could broadly be grouped into
  1. Hypersensitivity of the nervous system
  2. Psychological risk factors

---

**Psychological risk factors:**
Broad and specific constructs
What is the clinical importance of psychological risk factors?

- Pain-related thoughts, feelings and beliefs that are associated with a problematic outcomes, such as:
  - Increased and prolonged pain & disability
  - Poor treatment response
  - Modifiable

How to look for psychological risk factors in the clinic?

- Pain Catastrophizing Scale (PCS)
  1. Magnification
     - “I become afraid that the pain will get worse”
  2. Rumination
     - “I can’t stop thinking about how much it hurts”
  3. Helplessness
     - “There is nothing I can do to reduce the intensity of the pain”

Bidirectional relationship between different signs of complexity

PAIN!

Psychological risk factors

Social & environmental factors

Hypersensitivity of the nervous system
Five principles of complex pain management

Assessment Strategies
1. Look!
2. Listen!

Treatment Strategies
3. Support self-management
4. Forget about fitness*
5. Don’t just measure, treat!

Principle #2: Listen!

Listen? Why not just measure?
An experiment in love...
• Who is currently, or has ever been, in love?
• Who knows someone who is, or has ever been, in love?
• Think about this love experience
• Rate the love experience
  – 0 (no love) to 10 (the most love you could ever imagine)
The challenge of pain assessment

- Pain and love are experiences that we cannot measure directly
- We can only infer the pain and love of others through observations
- Measures, while helpful, only address narrow aspects of this experience
- Measures can never invalidate the experience
- Listening to your patient is the best way to understand their pain experience and is the foundation of effective treatment

Okay. But how do we listen?

- Drop the clip board
- Ask a broad question
  - “Can you please describe your pain experience?”
- Let your patient talk
- Ask them some probing questions to get a richer story (ACT-UP)

Probing questions: ACT-UP

<table>
<thead>
<tr>
<th>Activities</th>
<th>How is pain affecting your life (sleep, appetite, relationships, physical activities)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coping</td>
<td>How do you deal/cope with your pain?</td>
</tr>
<tr>
<td>Think</td>
<td>Do you think your pain will ever get better?</td>
</tr>
<tr>
<td>Upset</td>
<td>Have you been feeling worried (anxious)/depressed?</td>
</tr>
<tr>
<td>People</td>
<td>How do people respond when you have pain?</td>
</tr>
</tbody>
</table>

(Turk and Rubinstein 2010 in Bonica's management of pain 5th ed.)
Listen, understand, validate

• Validate patient’s experience of pain
  – Patient is the expert on their pain experience; they can’t be wrong about this
  – Your goal:
    • Accept patients where they’re at
    • Match treatment to patients’ abilities and goals

Looking and Listening in 15 (x2) minutes

• Pain assessment for patients with complex pain differs from regular assessment in that it:
  – Gives extra time for listening to pain story (15 minutes, can be entire assessment if distress is high)
  – Looks for indications that simple tissue damage model of pain and disability is not the only relevant process (15 minutes, part of subjective and objective exam)
• For highly complex cases, assessment can be completed over multiple visits

Five principles of complex pain management

Assessment Strategies

1. Look!
2. Listen!

Treatment Strategies

3. Support self-management
4. Forget about fitness*
5. Don’t just measure, treat!

Supporting self-management means:
Long term goal of intervention is that patient is autonomously managing pain condition
Principle #3: Support self-management

What do we mean by “self-management”?  
• Goal of intervention is that patient achieves disability-reduction goals and is autonomously managing pain condition  
• Autonomous ≠ Independent  
• Autonomous = Internal coping framework, personal pain expert, access to coping resources

How can we support self-management?  
• General strategy:  
  – Support autonomy by building competence and facilitating understanding  
• Specific interventions  
  – Pain education

Supporting self-management through education

• Education must be personalized and pain-specific  
  – Personalized = appropriate for patients with high distress  
  – Pain-specific = Information about how pain works and/or how to cope with pain  
• Traditional approaches to education may backfire:  
  – Anatomical education has no effect on psychosocial risk factors or disability (Burke et al., 2009)  
  – May actually be detrimental if we are not mindful of how we present information...
Are We Increasing Our Patients’ Distress?

Personalized Education

- We need to be mindful of:
  - How our patients may perceive the information that we are presenting to them

Educational strategies

- Short educational strategy:
  - Quick, easy
  - Permeates treatment
- Long educational strategy:
  - More effort and time
  - Discrete intervention
- Short + Long = Beauty
Educational strategies: Short

- **Three components:**
  - Reassurance: Pain is not dangerous
  - De-medicalize pain condition: Patient is expert
  - Encourage activity: Progressive return to pre-pain activities

- **Benefits:**
  - Helps reduce fear avoidance beliefs (Burton et al., 1999; Buchbinder and Jolley, 2005)
  - Quick intervention (Initial intervention: 5 minutes) that can be easily incorporated throughout treatment (Follow-up intervention: < 1 minute)

Educational strategies: Long

- **Neurophysiological education:**
  - Explain how:
    - Pain physiology works
    - Pain can persist without injury
    - Treatment targets physiology
  - Benefits:
    - Reduces catastrophizing (Moseley et al., 2004; Moseley, 2004)
  - Implementation
    - Introduction to text and assign home reading: 5 minutes
    - Debriefing sessions: 10 minutes per reading X 6 readings

Supporting self-management in 15-minutes

Integrate brief educational strategies throughout treatment
- Initiate reassurance after ruling out red flags in initial assessment: 5 minutes
- Integrate similar message in each intervention: < 1 minute

Identify patients that need long version during interview (e.g. increased questions, skepticism, concerns)
- Initiate neurophysiological education early in treatment (e.g. assign first reading on Day 1 or 2)
- Work through material in the clinic (6 X 5 to 10 minutes)
- Return to message throughout treatment (e.g. during flare-ups)

Alternate approach: Group intervention
Five principles of complex pain management

1. Look!
2. Listen!
3. Support self-management
4. Forget about fitness*
5. Don’t just measure, treat!

Forget about fitness *(for now) & use a graded approach

Principle #4: Use a graded approach

• When activity hurts
  – For people living with pain, engaging in physical activity can be an imposing challenge
  – Patients may use problematic coping strategies to address this challenge...

“No Pain, No Gain”

Net decrease in activity & increase in sensitivity

[Graph showing decrease in physical activity over time with an increase in sensitivity]
“Let Pain Be Your Guide”
Net decrease in activity & increase in sensitivity

Physical Activity

Time

Principle #4: Use a graded approach

• Your challenge is to find a strategy to help patients reverse this process:
  • Increase physical activity without increasing pain
• Solution:
  – Use a graded approach

Graded Activity

• First developed as an intervention based on operant conditioning theory (Fordyce et al., 1973)
  – Consequences of behaviours influence future participation in these behaviours

• For individuals with chronic pain, physical activity is often “punished” by pain
Conditioning effects of activity

Graded Activity

Both “No pain, no gain” and “Let pain be your guide”...
- Reinforce the message that pain ultimately governs physical activity
- Result in sense of failure and guilt
- Lead to long-term reductions of physical activity

Graded Activity: Quotas Instead of Pain

- Graded activity uses mutually established quotas, rather than pain intensity, to guide participation in physical activity
- Procedure
  1. Choose a physical activity that is accessible and interesting
  2. Assess tolerance
     - How long can physical activity be performed before pain increases?
  3. Patient and therapist choose a quota below tolerance level
     - Choose a quota that patient knows they will be able to achieve
  4. Provide encouragement (positive reinforcement) for success with quota
  5. Progress quota with patient
     - Slow, but consistent increases
Benefits of Graded Activity

- Reinforces physical activity by facilitating a sense of accomplishment rather than failure
- Decreases disability (Staal et al., 2004)
- General approach that can be used with most patients with chronic pain and a disability problem

Graded activity helps make activity rewarding

In early stages these positive, rewarding emotions are more important than achieving fitness goals

Using a graded approach in 15-minutes

- E.g. Graded activity
  - Day 1 (5 min): Discuss relationship between chronic pain and physical activity. Send patient home with homework of monitoring their activity.
Five principles of complex pain management

Assessment Strategies
1. Look!
2. Listen!

Treatment Strategies
3. Support self-management
4. Forget about fitness*
5. Don’t just measure, treat!

Psychologically Informed Physical Therapy

Challenge: Many physical therapists are now measuring psychological factors, but still aren’t treating them

Principle #5: Don’t just measure psychosocial factors, treat them!

How can we specifically target psychosocial factors?
- Integrating the general principles that we’ve been discussing will broadly benefit psychosocial factors (e.g. Depression reduction with “standard” PT)
- Specific cognitive-behavioral interventions will help your patients further...
Specific psychosocial intervention: Thought monitoring and cognitive restructuring

- Cognitive-behavioural technique to increase awareness of patients’ reaction to pain
- Has been shown to reduce risk factors and disability (Sullivan et al., 2006; Tan et al., 2011)
- Can facilitate learning during a flare up

Pain Reaction Record

<table>
<thead>
<tr>
<th>Pain Situation</th>
<th>Negative Thoughts</th>
<th>What you did</th>
<th>What could you have done differently?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was lifting my laundry hamper on to the dryer and heard a crack and then felt a sharp pain in my back</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pain Reaction Record

<table>
<thead>
<tr>
<th>Pain Situation</th>
<th>Negative Thoughts</th>
<th>What you did</th>
<th>What could you have done differently?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was lifting my laundry hamper on to the dryer and heard a crack and then felt a sharp pain in my back</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain Situation</td>
<td>Negative Thoughts</td>
<td>What you did</td>
<td>What could you have done differently?</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------</td>
<td>--------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>I was lifting my laundry hamper on to the dryer and heard a crack and then felt a sharp pain in my back</td>
<td>I'm really frustrated because it feels like I'm right back to where I started</td>
<td>I stopped my chores and laid down to watch television for the rest of the day</td>
<td>I could have continued with some of the lighter chores later in the day</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pain Reaction Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain Situation</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>I was lifting my laundry hamper on to the dryer and heard a crack and then felt a sharp pain in my back</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pain Reaction Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain Situation</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>I was lifting my laundry hamper on to the dryer and heard a crack and then felt a sharp pain in my back</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pain Reaction Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain Situation</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>I was lifting my laundry hamper on to the dryer and heard a crack and then felt a sharp pain in my back</td>
</tr>
</tbody>
</table>
Thoughts and Feelings Influence Pain and Physical Function

Disability  →  Pain

Decreased physical activity  ←  Negative thoughts and feelings

Thought Monitoring can Help Break the Cycle of Chronic Disability

Disability  →  Pain

Decreased physical activity  ←  Negative thoughts and feelings

Don’t just measure, treat — in 15-minutes

- Identify patients that need this intervention (e.g. high PCS)
  - For those with high distress start with this intervention
  - For those with moderate distress (or who aren’t yet open to discussing psychosocial factors) use this intervention when they get stuck with graded activity.
- Day 1: Discuss PCS results; assign first three columns of Pain Reaction Record (5 to 10 minutes)
- Day 2: Discuss Pain Reaction Record results; brainstorm 4th column strategies; assign 4th column homework (10 to 15 min)
- Day 3 and beyond: Monitor 4th column; facilitate autonomy in generating 4th column content (5 min)
Integration into Practice

Assessment Strategies
1. Look!
2. Listen!

Treatment Strategies
3. Support self-management
4. Forget about fitness*
5. Don’t just measure, treat!

Assessment: Listen! & Look! (as well as Understand, Validate and Measure!)

PAIN!

Social context & environmental information
Tissue damage information
Thoughts, feelings & beliefs information

Treatment Strategies
Support self-management via reassurance and pain education
Increase physical activity by using a graded approach
Use Cognitive Behavioral Interventions to target elevated psychosocial factors and to help cope with set-backs
Next steps for future learning...

• Additional treatment strategies

• Practical experience administering assessment and treatment strategies
  – Take these discrete interventions and find places for them within your broader approach to treatment

Thank you! Questions?