Multi-dimensional Pain Assessment

MiCCSI

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Disclosures

- Consultant to Community Health Focus Inc.
- President of the American Pain Society
- Chair of Steering Committee reviewing grants for APS sponsored by Pfizer
- Funded for research by NIH

There will be no use of off-label medications in this presentation.
Multi-Dimensional Pain Assessment

- Documents targetable elements of chronic pain perception
- Monitors chronic pain perception over time
- Helps phenotype pain for research
Pain Care Pathway

Persistent Pain Complaint

- History/Physical
- Red Flags
- Specialist Referrals
- Diagnosis
- Investigations
- Multi-Dimensional Needs Assessment, Improvement Goals, & Treatment Planning

- Education
- Self-Management

- Multi-Component CBT
  - Mood, Function
  - Coping, sleep, pain
- Pharmacotherapy
  - Severe Pain
  - Sleep
- Fitness
  - Function
  - Pain
- Other Therapies
  - Massage
  - Hydrotherapy

Monitor Symptomatic Change

- Not improving
  - Repeat Needs assessment
- Improving
  - Regular Review /Pt. centric care

Adapted from Macfarlane et al. Ann Rheum Dis, 2017;76:318-328; Lee, et al., BJA 2014; 112:16-24; Peterson et al, VA ESP Project #09-199, 2017
Shared Neurotransmitters Explain

- The complexity of chronic pain presentation

- Sleep, Pain, Affect, Cognition, Energy

- New targets for treating pain perception

Traditional Pain Assessment

**Pain**
- Intensity
- Location, Quality
- Distribution
- Temporality

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
Intensity

**Visual Analogue Scale (VAS)**


**0-10 Numeric Pain Intensity Scale**

- 0: No pain
- 1-10: Moderate to severe pain

**Verbal Rating Scale: Discomfort Rating**

0. Pain or discomfort - none

1. Pain or discomfort - I am aware of it, I think about it

2. Pain or discomfort - I am aware of it, I think about it but I can ignore it at times.

3. Pain or discomfort - I can’t ignore it, but I can do my usual activities.

4. Pain or discomfort - It is difficult for me to concentrate; I can only do easy activities.

5. Pain or discomfort - Such that I can’t do anything.

**Wong-Baker FACES™ Pain Rating Scale**


[Scale images are not described in the text, but are likely to include a visual representation of the scale with different levels of pain intensity depicted.]
Brief Pain Inventory

Ex: Pain Diary

MONITORING PAIN DIARY

Instructions:
1. Keep a record of any pain you experience during any of the following periods with a 7 day diary.
2. Record how intense your pain was by rating it on a scale of 1 to 10 (1 is not very painful to 10 highly painful).
3. Record what you were doing or the situation you were in when you experienced the pain.
4. Record your thoughts at the time of experiencing the pain.

This will help you to develop more awareness about your experiences of physical pain to help you identify strategies and techniques to help manage pain.

<table>
<thead>
<tr>
<th>DAY</th>
<th>Brief description of type of pain</th>
<th>RATE 1-10</th>
<th>Situation/What you were doing</th>
<th>What you were thinking at the time</th>
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<tbody>
<tr>
<td>Monday</td>
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<td>Sunday</td>
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</table>
Domains of Pain Assessment

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
Sleep

- Sleep Disturbances
  - PROMIS\(^1\)
  - MOS\(^2\)
  - PSQI\(^3\)
- Sleep-related Impairment
  - PROMIS\(^1\)

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Focal vs Wide-Spread Pain

- Body Maps
- Assess for local Vs. Wide-spread pain
- In IC, only 19% focal

Fibromyalgia-ness:

- WPI+SS ≥ 13 cut point

Fibromyalgia Symptoms (Modified ACR 2010 Fibromyalgia Diagnostic Criteria)

1. Please indicate below if you have had pain or tenderness over the past 7 days in each of the areas listed below. Check the boxes in the diagram below for each area in which you have had pain or tenderness. Be sure to mark right and left sides separately.

2. Using the following scale, indicate for each item your severity over the past week by checking the appropriate box.

   - No problem
   - Slight or mild problems: generally mild or intermittent
   - Moderate: considerable problems; often present and/or at a moderate level
   - Severe: continuous, life-disturbing problems

   **a. Fatigue**
   **b. Trouble thinking or remembering**
   **c. Waking up tired (unrefreshed)**

3. During the past 6 months have you had any of the following symptoms?
   **a. Pain or cramps in lower abdomen**
   **b. Depression**
   **c. Headache**

4. Have the symptoms in questions 2-3 and pain been present at a similar level for at least 3 months?
   **a. No**
   **b. Yes**

5. Do you have a disorder that would otherwise explain the pain?
   **a. No**
   **b. Yes**
Affect and Chronic Pain

IASP Definition of Pain:
An unpleasant *sensory and emotional* experience associated with actual or potential tissue damage or described in terms of such damage.

Affective Vulnerability:
Highly predictive of first onset of chronic pain (e.g., TMD).

Neuroimaging Findings:
Compared to acute pain, chronic pain appears more like an emotional event than a sensory event.

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Negative Affect

- Depression/Dysphoria
  - CES-D¹
  - PHQ-9²
  - PROMIS³

- Anxiety
  - STAI⁴
  - GAD-7⁵
  - PROMIS³

- Anger
  - STAXI⁶
  - PROMIS³

**Positive Affect / Resilience**

- Positive/Negative Affect
  - PANAS\(^1\)
- Affect Balance\(^2\)
- Hardiness
- Grit
  - Short Grit Scale\(^3,4\)
- Optimism
- Determination/courage

- Satisfaction with life
  - SWL\(^5\)
- Benefit Finding
- Gratitude
- Forgiveness
- Subjective Well-being
  - SWBS\(^6\)
  - PROMIS Affect/Well-being\(^7\)
- Sense of Coherence

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**Resilience and Positive Affect:**

**Dyscognition**
- Perceived Problems
  - MASQ\(^4\)
  - MISCI\(^5\)

**Fatigue**
- Multidimensional Fatigue
  - MFI\(^6\)
  - PROMIS\(^1\)

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**Dyscognition:**

**Fatigue:**
Domains of Pain Assessment

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
Medical History
- Demographics
- Co-morbid medical conditions
- Current Treatments
- Medical History
- Family History

Trauma/Stress
- Trauma
  - CTES/RTES
- Stress
  - PSS

Personality
- 5 Factor Model
  - Neuroticism
  - Extroversion
  - Openness
  - Conscientiousness
  - Agreeableness
- IPIP
- TIPI


Domains of Pain Assessment

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<table>
<thead>
<tr>
<th>Pain Beliefs</th>
<th>Coping Resources</th>
<th>Expectancies</th>
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<tbody>
<tr>
<td>• Multi-component</td>
<td>• Coping Strategies</td>
<td>• Treatment Expectancy</td>
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<tr>
<td>• SOPA(^1)</td>
<td>• CSQ(^5)</td>
<td>and credibility</td>
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<tr>
<td>• PBPI(^2)</td>
<td>• CPCI(^6)</td>
<td>• TEC(^9)</td>
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<tr>
<td>• BBCA(^3)</td>
<td>• Catastrophizing</td>
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<td>• Locus of Control</td>
<td>• PCS(^7)</td>
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<td>• BPCQ(^4)</td>
<td>• Self-Efficacy</td>
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<td>• PSE(^8)</td>
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Domains of Pain Assessment

- Behavioral Responses
  - Disability
  - Function
  - Pain Behaviors

- Cognitive Responses
  - Historical Experiences
    - SPACE
    - Pain

- Pain interference
- Fear Avoidance
- Risky Behaviors

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
**Functioning**

- Multidimensional Functioning
  - SF-36\(^1\)
  - WHO-DAS 2.0\(^2\)
- Pain Interference
  - BPI\(^3\) (interference)
- Disability
  - PDI\(^4\)

**Pain Behaviors**

- PROMIS\(^5\)

**Fear Avoidance**

- TSK\(^6\)

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Substance Use

- Tobacco
  - 5FTQ
- Alcohol
  - 6CAGE
  - 7AUDIT
- Opiates
  - 8ORT
  - 9COWS
- Illicit Drugs
  - 10DAST

Substance Usage:
Domains of Pain Assessment

- Historical Experiences
- Cognitive Response
- Behavioral Response
- Environmental Influences

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
**Social**
- Multicomponent Social Functioning
  - WHYMPI¹
- Social Enfranchisement
  - PE²

**Family**
- Dyadic Adjustment
  - DAS³

**Work**
- Work Productivity/Impairment
  - WPAI⁴

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**Family**: ³Spanier GB. The measurement of marital quality. J Sex Marital Ther

Domains of Pain Assessment

- Pain
  - Intensity
  - Location, Quality
  - Distribution
  - Temporality

Historical Experiences
- Medical history
- Coping Resources
- Behavioral Response
- Cognitive Response
- Environmental Influences

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
Do we need to assess everything?
How to ERASE S.P.A.C.E.

Emotions
Reflections
Actions
Sleep
Environment

Sleep, Pain, Affect, Cognitive changes, Energy deficits
Targets

- Self-Management
  - Behavioral Sleep Strategies
  - Pacing
  - Social

- Physical Therapy
  - Functional status

- Cognitive Behavioral Therapy
  - Anxiety
  - Beliefs