CBOM Pre-conference Session

“Pain and Fitness to Work Evaluation”
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Past President, Canadian Board of Occupational Medicine

Statement of Disclosure:

Nothing to Disclose
Assessing Pain and Fitness to Work

Ever felt like this about it?
Case Scenario

• A 43 year old Caucasian male sees you in your office

• Tells you of a history of persisting low back pain for the past 20 years

• At age 27 has his first lumbar surgery but back pain persists

• At age 37 has lumbosacral fusion procedure but complications

• Has 2 further lumbar procedures at age 38

• After failed back surgery gets spray and stretch and trigger point injections over the past five years, sometimes uses crutches

Cont.
• Describes daily low back pain “like a toothache” with exacerbations from minor back motions and “stress”

• Currently has a high profile administrative job, attendance is OK but he hides his condition well, looks fit

• Wants to apply for the job as CEO of a large corporation with vast international interests

• Job is high pressured, multi-tasking, executive demands, with some safety sensitive aspects

• **Is he fit to work as a CEO?**
Case Scenario cont.

• He campaigns and wins the 1960 Presidential election

• Has ongoing back pain

• (Has a nasty flare up after planting a tree in Canada in 1961)

• His physician, Dr. Janet Travell, (of Travell & Simons’ textbook “Myofascial Pain and Dysfunction - Trigger Point Manual”) gives him procaine injections 2-3 times/day

• He takes up to 5 hot showers a day for his back

• Maintains a public image of fitness and vitality despite his back pain and other longstanding health issues
• He tries to use crutches out of the public’s view

• But he doesn’t miss any of his 1036 days on the job due to his back problem

• Was wearing his back brace on the day of his assassination, Nov. 22, 1963 (so he couldn’t slump forward enough after the first bullet to his upper back to avoid the next bullet to the back of his head?)

Pain is

- A universal experience but
- Difficult to communicate
  “The pain of another is ultimately unknowable”
  - James D. Katz in Maldynia, CRC Press, 2013:26
- Socially and psychologically constructed
- A highly individualized experience
- Difficult to measure
The current neurosensory view of pain is novel

Pain was understood in classical times as an emotion rather than as a sensation ("affect theory of pain")

Into the middle ages pain was viewed as an internal imbalance or an inner disorder of the bodily states

e.g.
• imbalance of the 4 bodily humors
• a distortion of inner stasis or body fibres
• animal vs. vegetative conditions (vitalists)
• conflict of body and the soul (animists)
• etc.
The modern era of pain

René Descartes (1596-1650) brings about the age of the sensory model of pain and the so-called “specificity theory of pain”, i.e. pain is a specific sensation with its own sensory apparatus.

Cartesian model of pain transmission

- Particle of heat activates surface spot tethered to the brain by a fibre which opens a valve releasing animal spirits activating the motor functions
Johannes Müller’s research into sensory nerves gives a biological basis for Descartes’ model of pain transmission.

Our sensations are determined by receptors linked to cortical centres by sensory nerves. So, as our sensations are determined peripherally so also is our pain?

Johannes Peter Müller (1801-1858)
Müller’s student Emil du Bois-Reymond (1818-1896) discovers the action potential in 1865.

Peripheral receptors determine sensory outcomes.

He even claims that if the auditory nerve was somehow connected to the visual cortex and the optic nerve to the auditory cortex we could see thunder and hear lightning!
Cambridge neurophysiologist Charles Sherrington (1857-1952) develops the understanding of the reflex arc and coins the term “synapse”.

He concludes that surface receptors determine the excitability threshold for the somatic senses and proposes the idea of a “nociceptor”.

Sherrington shares his 1932 Nobel Prize with the electrophysiologist Edgar Adrian who discovers slow and fast pain fibres.

The biological “wiring” is now in place for the Cartesian specificity theory.
Pain as nociception is disturbed by Melzack and Wall

Ronald Melzack (1929-)
Patrick Wall (1925-2001)

“It was fifty years ago today... “ 🎶🎶🎶

PAIN and FITNESS TO WORK EVALUATION
Melzack and Wall’s ground-breaking “gate control” model of pain published in *Science*, 1965:

![Diagram of the gate control model](image)

**Figure 1. Gate control model. Large fiber input (rubbing or vibration) closes the gate, while small fiber input (intense pain) opens the gate. SG, substantia gelatinosa; T, transmission cell**
• Mechanoreceptor afferents inhibit (close) the pain pathway gate whereas C afferents activate (open) the pain gate.

• Moreover, activity from descending fibers can also modulate the gate.

• We now know that pain pathway modulation occurs at many supraspinal relay centres.
Beyond Nociception: What about “functional overlay\(^1\)” in pain?

From Melzack and Wall, *The Challenge of Pain* 2\(^{nd}\) ed. revised 1996, page 162

In 1968, Melzack and Casey challenged the dichotomous understanding of pain and affect, i.e. that nociception and affect are parallel or sequential:

**Cognitive-evaluative:** appraisal from psychosocial contexts and beliefs

**Motivational-affective:** emotional, aversive, and avoidant aspects of pain

**Sensory-discriminative:** intensity, location, quality, and duration
The International Association for the Study of Pain (IASP) has based its definition of pain on this multidimensional model:

“Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”

PAIN and FITNESS TO WORK EVALUATION
McGill Pain Questionnaire

PAIN and FITNESS TO WORK EVALUATION
Sensory-discriminative aspects of the pain experience

• Location
  Pain site checklists and drawings, (have them point to it!)

• Onset and course to date (triggers and relievers)

• Frequency, duration, migration, radiation, fluctuation, etc.

• Quality
  burning, stabbing, aching, throbbing, shooting, piercing, pounding, pulsing, gnawing, crushing, heavy, pulling, searing, sharp, dull, deep, stinging, etc. (See MPQ)

• Intensity
  Verbal Rating Scales (VRS), Visual Analog Scales (VAS), Numerical Rating Scales (NRS)
Somatoform-functional pain is typically associated with symmetric patterns, long lines, and a higher number of marks.” Egloff et al. BMC Musculoskeletal Disorders 13 (December 20, 2012): 257.
Caution:
A meta-analysis of pain drawings to identify or predict psychological state concluded that “pain drawings do not predict psychologic state at a level that is acceptable for clinical use”


What about pain rating scales?
We physicians love numerical ratings of pain, but what do numerical ratings really represent?

Is the perception of pain a power function of the stimulus intensity?

(from Stevens, Carton, and Shickman, 1958)  (from Tursky, Jamner, Friedman, 1982)
PAIN and FITNESS TO WORK EVALUATION
What about this pain response to a standardized stimulus?

Study of reported pain intensity after a standardized SC injection of 1% lidocaine in 165 patients with chronic pain (Manabat et al., 2011)
Conclusion:

Numerical pain scales cannot be readily compared between subjects.

Numerical pain scales are not predictive of disability but are useful for estimating **within subject variation** in pain, e.g. responses to aggravating factors or pain relieving factors, time trends, medications, and other treatment effects.

(Myles et al., *Anesthesia and Analgesia* 89 (1999): 1517-1520)
36 year old female RCMP officer who was T-boned while driving home from her work as a patrol officer and developed chronic shoulder and low back pain.
**Critical to standardize numerical scales**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Worst imaginable pain. Causes you to be completely incapacitated and barely able to talk. Requires immediate emergency hospitalization.</td>
</tr>
<tr>
<td>8-9</td>
<td>Pain that causes disability between levels 7 and 10. Nearing need for hospitalization.</td>
</tr>
<tr>
<td>7</td>
<td>Severely disabling pain. You cannot use or move the painful area. You have difficulty talking and concentrating on anything but the pain. Needing to lie down and/or pain-related tearfulness are also common.</td>
</tr>
<tr>
<td>6</td>
<td>Pain that causes disability between levels 5 and 7.</td>
</tr>
<tr>
<td>5</td>
<td>Very disabling pain. Causes great difficulty moving or applying any strength through the painful area. You are unable to complete the current activity.</td>
</tr>
<tr>
<td>4</td>
<td>Pain that causes disability between levels 3 and 5.</td>
</tr>
<tr>
<td>3</td>
<td>Functionally disabling pain. Pain that is starting to affect your ability to perform the current activity (for example decreased movement, decreased speed, and/or the need to briefly rest and/or stretch in order to continue completing the current activity).</td>
</tr>
<tr>
<td>0.25-2.75</td>
<td>Non-disabling pain. The pain is present, but not yet at a level which limits you from performing the current activity.</td>
</tr>
<tr>
<td>0</td>
<td>No pain or discomfort.</td>
</tr>
</tbody>
</table>
“The results suggest that baseline physical functioning and overall mental and physical health status are more predictive of specific patterns of post-injury employment than pain intensity measures, possibly because there is considerable idiosyncratic variation in the pain intensity measures.”

PAIN ASSESSMENT

Mark the location of your numbness or pain on the pictures below by using the kind of markings that match what you feel at each site of your body.

Note the front and back views and be careful about Left and Right sides.

- Numbness
- Pins & Needles
- Burning
- Stabbing
- Aching
- Other

FOR EACH SITE YOU HAVE MARKED:

How much does it hurt? Use a 1 to 10 scale with 1 as least and 10 as the worst.

How often does it hurt? Give the usual number of days felt each month.

How long does it hurt? Give the usual number of hours felt each day.
Fluctuations / Patterns of pain (Exacerbating /Alleviating factors)

What is the effect of:
• ambient heat and cold
• dampness/humidity
• weather changes
• body and limb movements
• rest
• postures, e.g. driving, computers
• stress
• fatigue
• alcohol, coffee, smoking (tobacco, marihuana, OTC/Rx and OTC medications, etc.)
• inactivity
• sleep
• recreational activities (gardening, crafts, hobbies, etc.)
• domestic activities (housekeeping, shopping, childcare, etc.)
Effects of treatments (conventional and others) on pain

- Macrobiotics or Megavitamins
- Special Diets or Nutritional Supplements
- Special Changes in Lifestyle
- Relaxation / Biofeedback Techniques
- Hypnotherapy
- Yoga/Meditation
- Counseling or Prayer Therapies
- Acupuncture or Acupressure
- Traditional Ethnic Medicine treatments e.g. Chinese, Ayurveda,
- Homeopathic Medicine / Naturopathy
- Herbal Medicine
- Rolfing
- Reflexology
- Aromatherapy
- Craniosacral Therapy
- Chelation Therapy
- Colonic Enemas
  (Electro)magnetic / pulsed fields, wearables, mattress pads, etc.
- Electrostimulators
Motivational-affective aspects of the pain experience

- Motivation-Affect is even more challenging to measure than pain intensity.
- The underlying mechanisms are even less defined.
- There is confounding in measurement by pain intensity and quality.
- Measurement tools are less validated.
- Several of the verbal clusters on the McGill Pain Questionnaire (i.e. groups 11-15) address the affective aspect.
- Consider asking “where is your most bothersome pain” (it isn’t always the one that is most intense) and “what is most bothersome about your pain”? 
Screening questionnaires shouldn’t be relied upon for definitive definitions, diagnoses, or prognoses. Like functional testing they offer another “window” into the pain experience.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Time to complete</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Health Questionnaire - 9</td>
<td>3 min.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Beck Depression Inventory second ed.</td>
<td>5-10 min.</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Quick Inventory of Depressive Symptomatology</td>
<td>5-10 min.</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Hamilton Rating Scale for Depression</td>
<td>15-30 min.</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Montgomery–Asberg Depression Rating</td>
<td>15 min.</td>
<td>++</td>
<td>++</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIME-MD</td>
<td>Predecessor of PHQ, now mainly of historical interest. (PRIMary care Evaluation of Mental Disorders)</td>
<td>Combined self-administered patient screener with clinician follow up questions</td>
</tr>
<tr>
<td>PHQ</td>
<td>Five modules covering 5 common types of mental disorders: depression, anxiety, somatoform, alcohol, and eating</td>
<td>Selected provisional DSM-IV diagnoses for all types of disorders except somatoform.</td>
</tr>
<tr>
<td>PHQ-9</td>
<td>Depression scale from PHQ.</td>
<td>Nine items, each of which is scored 0 to 3.</td>
</tr>
<tr>
<td>GAD-7</td>
<td>Anxiety measure developed after PHQ but incorporated into PHQ-SADS.</td>
<td>Seven items, each of which is scored 0 to 3, providing a 0 to 21 severity score.</td>
</tr>
<tr>
<td>PHQ-15</td>
<td>Somatic symptom scale from PHQ.</td>
<td>Fifteen items, each of which is scored 0 to 2, providing a 0 to 30 severity score.</td>
</tr>
<tr>
<td>PHQ-SADS</td>
<td>PHQ-9, GAD-7, and PHQ-15 plus panic measure from original PHQ.</td>
<td>See scoring for these scales above.</td>
</tr>
</tbody>
</table>
# Pain and Fitness to Work Evaluation

During the past 4 weeks, how much have you been bothered by any of the following problems?

<table>
<thead>
<tr>
<th></th>
<th>Not bothered at all (0)</th>
<th>Bothered a little (1)</th>
<th>Bothered a lot (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Stomach pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Back pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Pain in your arms, legs, or joints (knees, hips, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Menstrual cramps or other problems with your periods (skip if not applicable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Headaches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Chest pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Dizziness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Fainting spells</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Feeling your heart pound or race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Shortness of breath</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Pain or problems during sexual intercourse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Constipation, loose bowels, or diarrhea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Nausea, gas, or indigestion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Feeling tired or having low energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Trouble sleeping</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In this study of employees sick listed for more than 6 months, the authors state that “If the optimal balance between sensitivity and specificity is sought, a cut point of 9 yields sensitivity of 56.5% and specificity of 61.9%... The findings suggest that the PHQ-15 may be used as a screener in the OH setting, in order to alert the OHP of the possibility of somatoform disorders.”
What about symptom “exaggeration” or “magnification”?

(“functional overlay”!)
The challenge of the so-called “non-organic findings” in pain

**Waddell’s Signs** were first proposed in 1980 by Gordon Waddell from studies of “problem back patients” in Glasgow and Toronto. He identified 5 categories which suggested more “detailed psychosocial assessment” in chronic low back pain. He found that 3 such signs were present in 29% of “problem backs”.

PAIN and FITNESS TO WORK EVALUATION
Waddell’s “Nonorganic Signs”

1. **Tenderness**
   - Superficial skin tender to light touch
   - Nonanatomic deep tenderness not localized to one area

2. **Simulation**
   - Axial loading pressure on the skull of a standing patient induces lower back pain
   - Rotation: shoulders and pelvis rotated in same plane induces pain

3. **Distraction**
   - Difference in straight leg raising in supine and sitting positions

4. **Regional**
   - Weakness: many muscle groups, “give-away weakness” (patient does not give full effort on minor muscle testing)
   - Sensory: sensory loss in a stocking or glove distribution, non-dermatomal

5. **Overreaction**
   - Disproportionate pain behavior e.g., facial or verbal expressions, guarding, etc.
“Waddell’s Signs” have been much misused leading to Waddell to note a number of caveats in an article in *Spine* in 1998. According to Waddell, **behavioral responses to examination** (i.e. Waddell’s Signs”)

- Cannot be assumed to be deliberately simulated (“faked”)
- May be behavioral signs of fear responses
- Must be considered in context of patient’s illness/injury beliefs
- May have associated comorbidities
- Show inter-rater variability
- Are not a psychological assessment
- Do not rule out significant organic disorder
- Do not determine “functional overlay” or exaggeration
- Are not a test of credibility or veracity

Nevertheless,

http://www.youtube.com/watch?v=0bby9NQ7Ln4

PAIN and FITNESS TO WORK EVALUATION
Pain behaviors are well worth noting during an assessment, e.g.,

- **Gait** (stride length, leg swing, limp, pelvic tilt, pace, use of canes or crutches, etc.)
- **Postures** (standing – swaying, leaning, shifting weight, pacing; sitting – fidgeting, leaning, stretching out, getting up and down, twisting, tucking leg under)
- **Guarding** (stiff, rigid, or awkward movements, withdrawing)
- **Bracing** (holding furniture, leaning on wall)
- **Rubbing** (pressing or massaging)
- **Facial** (grimacing, wincing, frowning, squinting, blinking, lip movements, clenching)
- Sighing, groaning, grunting, moaning, gasping, exclamations
Alas, “Lay adults and even experienced physicians cannot reliably differentiate real expressions of pain from faked expressions of pain”
Whereas even trained observers achieve only 55% accuracy, computerized facial pattern recognition can attain 85% accuracy in discriminating real from faked facial pain signals.

“There is no laboratory test or imaging technique that can measure the patient's true versus reported experience of sensation. The terms "magnification" and "exaggeration" imply that we can measure true sensations and compare these measurements with patient reports. Thus, by definition, "symptom magnification" and "exaggerated pain behavior" cannot be measured. Use of these terms, therefore, should be avoided...”

Cognitive-discriminative aspects of the pain experience

“Fear of pain and what we do about it may be more disabling than pain itself”
– G. Waddell et al., 1993

“Results of this meta-analysis indicate a robust, positive association between pain-related fear and disability, which can be classified as moderate to large in magnitude”

The Fear-Avoidance Model of Chronic Pain

Measurement Tools in Fear-Avoidance Aspects of Pain

- The Chronic Illness Problem Inventory (Romano et al., 1992)
- The Sickness Impact Profile (Bergner et al., 1981)
- The Coping Strategy Questionnaire (Lawson et al., 1990)
- The Roland and Morris Disability Questionnaire (Roland & Morris, 1983),
- The Oswestry Low Back Pain Disability Questionnaire (Fairbank et al., 1980),
- The Fear-Avoidance Beliefs Questionnaire (Waddell et al., 1993),
- The Survey of Pain Attitudes (Jensen, Karoly & Huger, 1989),
- The Pain and Impairment Relationship Scale (Riley, Ahern & Follick, 1988),
- The Pain Beliefs and Perceptions Inventory (Williams & Thorn, 1989),
- The Pain Experience Scale (Turk & Rudy, 1985),
- The Behavioral Assessment of Pain profile (Tearman & Lewandowski, 1992),
- The Computerized Assessment of Response Bias (Conder, Allen & Cox, 1992),
- The Stress Audit (Miller et al., 1992),
- The Millon Behavioral Health Inventory (Millon et al., 1979).
<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I might injury myself if I exercise</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>If I were to try to overcome it, my pain would increase</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>My body is telling me I have something dangerously wrong</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>My pain would probably be relieved if I were to exercise</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>People aren’t taking my medical condition seriously enough</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>My accident has put my body at risk for the rest of my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Pain always means I have injured my body</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Just because something aggravates my pain does not mean it is dangerous</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>I am afraid that I might injure myself accidentally</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Simply being careful that I do not make any unnecessary movements is the safest thing I can do to prevent my pain from worsening</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>I wouldn’t have this much pain if there weren’t something potentially dangerous going on in my body</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Although my condition is painful, I would be better off if I were physically active</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Pain lets me know when to stop exercising so that I don’t injure myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>It’s really not safe for a person with a condition like mine to be physically active</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>I can’t do all the things normal people do because it’s too easy for me to get injured</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td>Even though something is causing me a lot of pain, I don’t think it’s actually dangerous</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17</td>
<td>No one should have to exercise when he/she is in pain</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
41 year old commercial/industrial painter with chronic generalized back pain since MVA on January 24, 2011. Has done physiotherapy, massage therapy, acupuncture, trigger point injections, two epidural injections, various medications.

Pain behaviors, 5/5 Waddell’s signs, and flexion of elbows “hurts his back”
Other issues in the cognitive-discriminative dimension:

- Health and fitness
- Medications taken
- Cultural background
- History of injury/illness
- Family dynamics
- Social situation
- Risk perceptions
- Lifestyle
- Sleep patterns
- Coping styles
- Mood disorders
- Fears of (re)injury/pain
- Relations with employer

- Stressors
- Beliefs
- Expectations
- Resources
- Treatments undertaken
- Legal and compensation issues
- Relations with management and co-workers
- History of disability
Subjective Pain Condition  ?  Objective Job Demands

PAIN and FITNESS TO WORK EVALUATION
PAIN and FITNESS TO WORK EVALUATION

Subjective Pain Condition

• behavioral responses to physical assessment
• ADLs, RTW attempts, recreational, childcare, social functions, interests
• Assessment tools and other observations
• Diagnoses and Pathology

Objective Job Demands

• Shift duration & times
• Overtime
• Pacing (self vs. production)
• Repetition
• Forces
• Postures
• Latitude to adapt/control
• Environmental
• Supports
• Breaks
• Tools & machines
• Labour relations
• Interpersonal conflict
• Cognitive demands
• Concentration
• Safety sensitive work
• Corporate culture
• Job satisfaction and security
• Employee benefits
• Accommodated work
• Disability management
PAIN and FITNESS TO WORK EVALUATION

Central Processing

Tool Kit of Behaviors

Pain Behavior Analysis

Behavioral Task Analysis

COMPARE
Thanks for your kind attention