Chronic Pain Management in Today’s Workforce

Catriona Buist, Psy.D.
Clinical Director
Progressive Rehabilitation Associates
Portland, OR

Face to Face Disability Management Conference
May 25, 2011
Toronto, Canada

Objectives

- Explain factors that can complicate chronic pain
- Learn how to identify red flags and prevent disability from chronic pain
- Explore outcomes from evidence based tx
Definition of Pain

Pain: an unpleasant sensory and emotional experience associated with actual or potential tissue damage
(International Association for the Study of Pain)

Acute Pain < 3 months
Chronic Pain > 3 months

A Common Problem

- Prevalence of chronic pain in the general population has been estimated at about 30%, at least 50 MM Americans.

- One in eight workers loses **5 hours per week** of productive time (excluding missed days) from pain
  - Combining reduced productivity while at work and lost work days equates to $61.2 billion in estimated lost productivity for the year 2001-2002.

- Associated with major co-morbid psychiatric disorders and emotional suffering

Stewart w et.al. Lost Productive time and costs due to common pain conditions in the US work force. JAMA 2003; 290(18)2443
Opioids and Workers Comp Outcomes

- Usually not recommended, but widely prescribed

- “Those who received more than 450 mg MEA were, on average, disabled 69 days longer than those who received no early opioids…” (Webster et al, *Spine* 2007)

- “For the small group of workers with compensable back injuries who receive opioids longer-term only a minority shows clinically important improvement in pain and function. The amount of prescribed opioid received early after injury strongly predicts long-term use.” (Franklin et al, *Clin J Pain* 2009)

- “Average claim costs of workers receiving seven or more opioid prescriptions were three times more expensive than those of workers who receive zero or one opioid prescription, and these workers were 2.7 times more likely to be off work and had 4.7 times as many days off work.” (Swedlow et al CWCI Special Report 2008)

---

Oregon had a 1,250% increase in methadone poisoning deaths from 1999-2004 (5 to 68 people)
www.usdoj.gov/ndic/pubs25/25930/index.htm
**Guidelines on Opioids**

“Given the uncertainty regarding the balance between benefit and risk when opioids are used in the management of chronic non-malignant pain, and, in particular, in association with their use for chronic musculoskeletal pain, the use of opioids during the sub-acute and chronic phases of an injury, especially in the absence of an objectively identifiable pain generator, cannot be recommended.”

Genovese, Harris, Korevaar 2007
ACOEM Guidelines, 2nd ed.

---

**Nationwide spine fusion numbers & charges**
(source: HCUPnet, AHRQ)

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Spine fusions</th>
<th>Avg charge for Spine fusion, $ thousands</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1997</td>
<td>50,000</td>
<td>10</td>
</tr>
<tr>
<td>1998</td>
<td>100,000</td>
<td>15</td>
</tr>
<tr>
<td>1999</td>
<td>150,000</td>
<td>20</td>
</tr>
<tr>
<td>2000</td>
<td>200,000</td>
<td>25</td>
</tr>
<tr>
<td>2001</td>
<td>250,000</td>
<td>30</td>
</tr>
<tr>
<td>2002</td>
<td>300,000</td>
<td>35</td>
</tr>
<tr>
<td>2003</td>
<td>350,000</td>
<td>40</td>
</tr>
<tr>
<td>2004</td>
<td>400,000</td>
<td>45</td>
</tr>
</tbody>
</table>

Deyo
(All spinal levels, all indications, all techniques)
Obstacles to Chronic Pain Management

- Failure to diagnose the anatomic source of pain
- Failure to search for and address psychosocial risk factors
- **Competing philosophies**
  - Interdisciplinary vs. Interventional
- Lack of understanding and willingness of injured worker, attorney and/or treating provider to consider interdisciplinary treatment

Chronic Pain Defined by the Pain Management Task Force (May 2010) 
Office of The Army Surgeon General

“Chronic pain continues beyond the normal time expected for healing and is associated with the onset of pathophysiologic changes in the central nervous system that may adversely affect an individual’s emotional and physical well-being, cognition, level of function, and quality of life. Chronic pain serves no apparent useful purpose for the individual and may be diagnostically and therapeutically approached as a chronic disease process.”
How Does Chronic Pain Develop?

The Fear-Avoidance Cycle

Central Sensitization
Cycle of pain, Guarding, Dysfunction, and Deconditioning
(Fibromyalgia, Arthritis Foundation, 1997)

A Conceptual Model of the Transition from Acute to Chronic Pain Where Physical Deconditioning Leads to Mental Deconditioning
(Gatchel, 1991; Copyright 1991 by Lea & Febiger)
Recognizing Chronic Pain

- Chronic pain behaviors can be seen in some claims as early as 2 weeks post-injury.
- Most cases with duration of disability >3 mos for soft tissue injury show chronic pain behaviors.
- 50% of patients with > 3 mos disability will not RTW at 12 mos (industry data).
- *Pain* is the primary problem which continues to interfere with all aspects of the injured or disabled employee’s life, including RTW and ADL’s.

The **fear** of pain is more disabling than the pain itself.

(Waddell)
Pain Related Impairment

High “fear-avoidance” beliefs result in higher absence days from work\(^3\)

*Do Fear-Avoidance Beliefs Play a Role on the Association Between Low Back Pain and Sickness Absence? A Prospective Cohort Study Among Female Health Care Workers.*


Predictors of Persistent Disabling LBP

- Maladaptive pain coping behaviors
  - Fear avoidance (avoiding movement, activities)
  - Catastrophizing (excessive negative thoughts)
- Nonorganic signs (somatic focus)
- Functional impairment
- Low general health status
- Presence of psychiatric co-morbidities

Chou, R., & Shekelle, P. Will This Patient Develop Persistent Disabling Low Back Pain? JAMA. April 7, 2010; Vol 303, No. 13, 1295-1302
Risk Factors that Predict Long-Term Disability

- Maladaptive attitudes and beliefs
- Lack of social support
- Heightened emotional reactivity
- Job dissatisfaction
- Substance abuse
- Compensation status
- Prevalence of pain behaviors (Turk, 1997)
- Psychiatric diagnosis (Gatchel & Epker, 1999)

Stages in the Development of Disability

<table>
<thead>
<tr>
<th>Premorbid Stage</th>
<th>Crisis build-up</th>
<th>Demanding work, job dissatisfaction, situational stress, poor general coping skills, social model for disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>The accident</td>
<td>Relationships among the nature of the accident, the severity of the injury, &amp; the claimed inability to work are often weak.</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Medical intervention</td>
<td>Following recovery from the injury, pt fails to return to normal social roles &amp; productivity. Repeated medical interventions may be performed, leading to possible iatrogenic complications, chronicity, &amp; learned pain behavior</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Stabilization of chronicity</td>
<td>Confusion, anger &amp; hostility, increasing dependency &amp; idleness, economic preoccupation &amp; difficulty; decline in competence for gainful employment.</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Legal intervention</td>
<td>Lack of systematized documentation to support proof of disability &amp; the adversary system further foster attitudes of passivity, exaggerated illness behavior, &amp; possibly malingering.</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Learned helplessness</td>
<td>Sick role solidifies; loss of hope for health recovery; generalized incompetent coping, frequently irreversible.</td>
</tr>
</tbody>
</table>

Hierarchy of Pain Treatment
Developed by WHO (2006)

Nerve ablation
Implanted pumps
Spinal stimulation
Surgery
Behavioral treatments
Nerve blocks and other injections
Narcotics and other oral analgesics
Muscle relaxants
Physical and occupational therapy,
   Chiropractic, Acupuncture
Non-steroidal anti-inflammatories
Over-the-counter medications

ABC's of Pain Relief and Treatment: Advances, Breakthroughs, and Choices. Dr. Tim Sams (2006)

Time since injury

Avg time since injury
Median time since injury

PRA, 2008-2010
Tackling Musculoskeletal Problems
a guide for clinic and workplace
identifying obstacles using the psychosocial flags framework
Kendall, Burton, Main, & Watson: TSO Books, 2009  www.tsoshop.co.uk/flags

- Flags are about identifying obstacles to being active and working
- The important thing is to figure out how these can be overcome or bypassed
- Collaborate and coordinate a plan of care for person, workplace, and healthcare

Standard recovery curve for musculoskeletal problems
The first part of the curve is quite steep, illustrating that many people recover or return to work within days or weeks. But, as time passes, the recovery curve flattens showing the mounting effect of obstacles – people then find it increasingly difficult to recover and get back to work.

Improved recovery curve
Effectively identifying Flags and tackling the obstacles will squash the curve. The effect will be increased recovery rates, leading to reduced sickness absence and less long-term disability.
Low Back Pain Program Objectives

- Provide quick access for assessment and tx of LBP

- Provide activity-based coordinated interdisciplinary care with an emphasis on return to function and meaningful activity

- Early identification of obstacles to recovery and function

- Supplement rehabilitation plan with evidence-based psychotherapy as needed
Clinical Effectiveness & Cost-Effectiveness of Treatment for Patients with Chronic Pain (Turk, D Clinical Journal of Pain, 2002;18:355-365)

- Investigated the clinical and cost-effectiveness of various treatment (pharmacological, conservative care, surgery, spinal cord stimulation, implantable drug delivery systems and pain rehabilitation programs) for patients with chronic pain.

  - Interdisciplinary pain management programs yield significantly better outcomes than other pain treatment approaches for:
    - return to work, functional activities, closure of disability claims, health care utilization, with substantially fewer iatrogenic consequences and adverse events.

Evidence-Based Clinical Practice Guidelines from the APS for Low Back Pain (Chou, R. & Huffman, L, 2010-2011)

For subacute low back pain, interdisciplinary rehabilitation (particularly with a work site visit) was associated with quicker return to work, reduced sick leave, and moderately improved disability relative to usual care (two lower-quality trials) (level of evidence: fair).

For chronic low back pain, intensive interdisciplinary rehabilitation with functional restoration is moderately more effective than usual care or non-interdisciplinary rehabilitation for reducing pain and improving function, though effects on work-related outcomes are inconsistent (four trials, two higher-quality) (level of evidence good).

Less intensive (<100 hours) interdisciplinary rehabilitation was not more effective than usual care or non-interdisciplinary rehabilitation (five trials) (level of evidence: good).
What is an Interdisciplinary Pain Program?

- Designed to help a person become part of the treatment team and take an active role in regaining control of his or her life in spite of the pain.

- Multiple disciplines working together on a team within one facility working toward the same shared treatment goals with the patient.

- The programs are focused on the total person and not just the pain.

- Focus on functional restoration and behavior modification.

- 15-20 days (6-8 hours/day)

Goals of Interdisciplinary Pain Program

- **INCREASE FUNCTION** and activity level
- Reduce pain
- Simplify medication / reduce opioids
- Graded physical exercise
- Reduce emotional distress, such as depression and anxiety (CBT)
- Increase self-management / coping skills
- Increase quality of life
- Teach self-regulation of psychophysical arousal
- Decrease inappropriate health care utilization

Pain Management Programs by the American Chronic Pain Association
Helping Change Unhealthy Habits

Who is Part of an Interdisciplinary TEAM

- Patient
- MD: PM&R and Occupational Medicine
- Psychologist
- Rehabilitation Nurses
- Physical Therapist / Occupational Therapist
- Case Management / Social Workers
- Vocational Counselors
- Biofeedback Therapist
- CAM – Acupuncturist, massage therapist, chiropractic, etc
- Nutritionist/dieticians
- Pharmacists
- Significant others
**Physician Services**

- Comprehensive medical mgmt
- Patient education
- Formulation of medication treatment plan
- Communication with the referring physician & CM
- Rating examinations and disability determinations
- Job analysis review & recommendations

**Nursing Services**

- Medication management
  - Monitoring time contingent medication use & taper schedules
- Education on comorbidities
  - *shared emphasis on improving health, wellness, and taking self-responsibility*
- TENS unit management
- Sleep hygiene and nutrition education
Physical Therapy

- Education on Anatomy & Physiology
- Home exercise program
- Cardiovascular fitness
- Stretching
- Increase flexibility
- Increase strength
- Increase endurance
- Improve posture

Self-Management Tools
People don’t hurt if they have something better to do. W. Fordyce, Ph.D.

We don’t stop playing because we grow old, we grow old because we stop playing George Bernard Shaw

Occupational Therapy

- Increase functional tolerances
- Eliminate excessive guarding behaviors
- Ergonomic consultation
- Body mechanics
- Self-pacing
- Goal setting
- Planner use
- ADLs

Ergonomics & Body Mechanics for Activities of Daily Living
Vocational Services

- Provide vocational guidance
- Job Analysis Review & Recommendations
- Provide information on Worker’s Comp system
- Provide info on labor market/wage & occupations
- Communicate with stakeholders
- Case Management
- Work Hardening/Conditioning

Biofeedback Services

- Stress management through relaxation
- Diaphragmatic breathing
- Muscle tension reduction
- Heart rate variability
Dealing with Psychosocial Issues Can Be Challenging

“It’s got to come out, of course, but that doesn’t address the deeper problem.”

Psychological Services

Pain Catastrophizing
Pain-related Anxiety
Fear
Helplessness

Self-efficacy
Pain Coping Strategies
Readiness to Change
Acceptance

Pain
Psychological Distress
Physical Disability

What Indicates Progress in Treatment?

“When successful rehabilitation occurs, there is an important cognitive shift from beliefs about helplessness and passivity to resourcefulness and ability to function regardless of pain.”

Jensen, Romano, Turner, 1999; Tota-Faucette, Gil, Williams, 1993; Williams & Thorn, 1989

Outcomes PRA Pain Program 2010

- 48% Decreased pain
- 98% increased lifting tolerance
- 89% increased endurance
- 80% decreased depression (BDI-II)
- 70% increased self-confidence in ability to cope with pain (PSEQ)
- Of those who entered program on opioids 70% reduced their dose
- Average dose reduction 70%
- 96% recommended medically stationary (MMI) and recommended RTW full time with restrictions
Comprehensive Pain Management Programs Selected For Individuals Who…

- Previously failed less intense intervention
- Have higher rates of opioid use (dose escalation)
- Activities limited due to fear of pain
- Have problems with vocational functioning
- Experience high levels of emotional distress
- Are disability convicted
- Are passive about tx & put life on hold waiting for fix
- Feel hopeless and helpless
- Multiple therapies with no improvement in function

Resources

- The Canadian Pain Society
- www.Chronicpainnetwork.com
- Chronic Pain Association of Canada http://www.chronicpaincanada.com/
- Western Pain Society
  – 541-345-7300
  – admin@painsociety.com
  – www.ampainsoc.org/societies/wps/
- American Pain Society
  – http://www.ampainsoc.org/
- Caresalliance.org (painkiller safety tips, warning signs and other educational resources for patients)
Evidence Based Guidelines

- American College of Occupational and Environmental Medicine (ACOEM)
- Institute of Medicine (IOM)
- American Medical Association (AMA)
- Agency for Healthcare Research and Quality (AHRQ)
- American Pain Society (APS)
- American Society of Interventional Pain Physicians (ASIPP)
- Institute of Clinical System Improvement (ICSI)
- North American Spine Society (NASS)
Being told that you have to learn to live with pain should not be the end of the road – It should be the beginning... Healing is truly a journey

Jon Kabat-Zinn, Full Catastrophe Living

Catriona Buist, Psy.D, Clinical Director
Progressive Rehabilitation Associates Intensive Interdisciplinary Pain Program

“Dedicated to providing medical rehabilitation in a caring environment to restore function and quality of life.”