“Her Pain Is Becoming A Problem”

Adding Complementary Medicine for Persistent Pain when Opioids are not THE Solution.

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Yes, We do have a problem

- In 2006, 78 million had CP, 50% didn’t receive ANY treatment
- In 2010, **100 million**

- Diabetes: 25.8 (dx and estimated)
- Coronary Heart Disease: 16.3
- Heart attack, chest pain, stroke: 7 million
- Cancer: 11.9 million

National Institute of Medicine
ADA, American Heart, ACS
Problem of Unrelieved Pain

Impact on Quality of Life

- (59%) reported an impact on QOL.
- (77%) reported feeling depressed.
- 74% said energy level impacted by pain.
- 86% reported inability to sleep well.
- 3 out of 4 individuals report their pain is not relieved to their satisfaction

- $560-634 billion/yr
- 61 billion/yr lost in productivity
- Or 2 mill/per employee w CP
- Rx: $63. billion/yr
- Sx: increased by 55%, 1985-1995, at $15,000 a sx
<table>
<thead>
<tr>
<th>System Affected</th>
<th>Response to Pain</th>
</tr>
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<tbody>
<tr>
<td>Cardiovascular</td>
<td>↑ heart rate, ↑ cardiac output, ↑ peripheral vascular resistance, hypertension, deep vein thrombosis</td>
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<tr>
<td>Cognitive</td>
<td>↓ cognitive function, mental confusion</td>
</tr>
<tr>
<td>Developmental</td>
<td>↑ behavioral and physiologic responses to pain, irritability, higher somatization, addictive behavior, anxiety states</td>
</tr>
<tr>
<td>Endocrine</td>
<td>↑ adrenocorticotrophic hormone, ↑ cortisol, ↑ antidiuretic hormone, ↑ epinephrine, ↑ norepinephrine, ↓ insulin, ↓ testosterone</td>
</tr>
<tr>
<td>Future pain</td>
<td>Debilitating chronic pain syndromes, phantom pain, postherpetic neuralgia, postmastectomy pain, postthoracotomy pain</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>↓ gastric and bowel motility</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>↓ urinary output, urinary retention, fluid overload, hypokalemia</td>
</tr>
<tr>
<td>Immune</td>
<td>↓ immune response</td>
</tr>
<tr>
<td>Metabolic</td>
<td>Gluconeogenesis, hepatic glycogenolysis, hyperglycemia, glucose intolerance, insulin resistance, muscle protein catabolism</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>Muscle spasm, impaired muscle function, fatigue, immobility</td>
</tr>
<tr>
<td>Respiratory</td>
<td>↓ flows and volumes, atelectasis, shunting, hypoxemia, ↓ cough, sputum retention, infection</td>
</tr>
<tr>
<td>Quality of life</td>
<td>Sleeplessness, anxiety, fear, hopelessness, ↑ thoughts of suicide</td>
</tr>
</tbody>
</table>

↑- increased, ↓- decreased. Adapted from McCaffery M, Pasero C: Pain: Clinical Manual, St. Louis, 1999, Mosby
Addiction: Fact or Fear

- Prescriptions are second most abused category of drugs after MJ
- In 2009 nonmedical use of prescription drugs exceeded the use of cocaine, heroin, hallucinogens, and inhalants combined
- In 2008 5.1 million persons reported that they used prescription pain relievers for nonmedical or nonprescribed purposes
- Visits to ED involving the nonmedical use of prescription analgesics rose 111%, more than doubling the number of visits from 2004 to 2008

- 70% of individuals who use opioids for nonmedical use, obtain from friends/family-who have 1 prescriber.
Yet only ?% of those with pain are shown to have true addiction to pain medication
4 C’s Addiction

- Craving
- Impaired control
- Continued use despite harm
- Compulsive use
Acute Pain / Medical Model
# Biomedical vs Biopsychosocial

<table>
<thead>
<tr>
<th>Acute Pain</th>
<th>Persistent Pain</th>
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</thead>
<tbody>
<tr>
<td>• New and different</td>
<td>• Same old thing</td>
</tr>
<tr>
<td>• Less than 3 months</td>
<td>• Greater than 6 mo or longer than normal healing</td>
</tr>
<tr>
<td>• Test it</td>
<td>• May or may not show up on tests</td>
</tr>
<tr>
<td>• Diagnosis it</td>
<td>• May or may not have a diagnosis (Poss. “unknown cause”)</td>
</tr>
<tr>
<td>• Treat it</td>
<td>• Manage it</td>
</tr>
<tr>
<td>• Goes away</td>
<td>• Does not go away</td>
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</table>
Medical model

IF YOU DON’T LIKE MY DIAGNOSIS YOU COULD SEEK A SECOND OPINION

I’VE ALREADY DONE THAT! YOU’RE ABOUT THE TENTH
Figure 1: The “biopsychosocial” model of pain

Physical/Biological
- Nociceptive
- Injury, trauma, infection, illness, cancer
- Nerve damage

Psychological
- Impact on: mood, concentration, sleep
- Negative thoughts, irritability, helplessness
- Anxiety and depression
- Personality aspects: fears, beliefs, coping skills, level of trust

Psychosocial
- Relationships
- Work/employment
- Social networks
- Isolation

Other factors
- Drug dependence/abuse
- Financial difficulties
- Cultural barriers
- Litigation
- Language barriers
- Lack of health insurance

Persistent Pain
Medications: Just 1 tool in the box
Brief History

• 1980’s Alternative Medicine Emerged
• Early 1990’s Alternative and conventional options to “complement” each other
• 1996 NIH recommends use of mind body therapies for chronic pain
• 1999 NIH adopted term Complementary and Alternative Medicine as part of National Institutes of Health's National Center on Complementary and Alternative Medicine (NCCAM)
Definitions

• Conventional/Western Medicine
  Medical care in systems based on the laws of science and the application of the scientific method.

• Complementary Medicine
  Non-conventional, healing practices used in conjunction with conventional/traditional medicine practices.

• Integrative Medicine
  A new medical specialty focused on the use of evidenced based treatments that combine aspects of CAM and conventional medicine.

• Alternative
  “Alternative” refers to using a non-mainstream approach in place of conventional medicine.

10 Most Common Complementary Health Approaches Among Adults—2007

Percentage of U.S. Adults Who Used Complementary Health Approaches in 2007

- Natural Products: 17.7%
- Deep Breathing: 12.7%
- Meditation: 9.4%
- Chiropractic & Osteopathic: 8.6%
- Massage: 8.3%
- Yoga: 6.1%
- Diet-based Therapies: 3.6%
- Progressive Relaxation: 2.9%
- Guided Imagery: 2.2%
- Homeopathic Treatment: 1.8%

Why is complementary medicine effective for some...

- Works on mind and body (integrated self)
  - We cannot divide the mind and body
  - Mind drives body - ex
  - Pain involves perception
- People believe they work
- May have analgesic effect, addresses unpleasant side effect symptoms, distraction, perception, and sense of control

Affects sense of suffering
Suffering and Pain

• “Treating a disease and treating a person are very different concerns, because recovery depends in large part on the mind and spirit of the patient. Suffering, a state of mind, involves the entire person.”

Dr. Paul Brand
Pain and Suffering

- Perception of control and meaning that modulates sense of suffering
- Childbirth....
  - 1. Sense of control
    - Melzack discovered 2\textsuperscript{nd} time mothers rated labor pain lower.
    - First time mothers with lamaze
  - 2. Sense of suffering
    - Pain had positive meaning... purpose.. wasn’t mystery.
Control vs Manage

- Control... “to have power over”
- Manage “cope, pull off, come to terms with”, handle effectively, carry on or function”
# 8 Meanings of Pain

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Description</th>
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<tbody>
<tr>
<td>Mysterious</td>
<td>“What is causing this”</td>
</tr>
<tr>
<td>Punitive</td>
<td>“I deserve this.”</td>
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<tr>
<td>Entitled</td>
<td>“I didn’t hurt before, I shouldn’t hurt now.”</td>
</tr>
<tr>
<td>Fatalistic</td>
<td>“Nothing will help”</td>
</tr>
<tr>
<td>Progressive</td>
<td>“It will only get worse.”</td>
</tr>
<tr>
<td>Curative</td>
<td>“There has to be a cure and I will find it.”</td>
</tr>
<tr>
<td>Stoic/Heroic</td>
<td>“Good people don’t c/o pain.”</td>
</tr>
<tr>
<td>Functional</td>
<td>“Would I be accepted/loved w/o my pain.”</td>
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<tr>
<td>Accepting</td>
<td>Refuse to be disabled despite pain</td>
</tr>
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</table>
Meaning: Most difficult to treat

- Feather vs Scorpion
  - Same nerve endings
- Feather... delight or pain...
  - anticipatory fear/pain
- False alarm or Further Injury
Existential Pain

• Need to clarify what is hurting
• One Boston Psychiatrist said,

“half the people who go to clinics with physical complaints are really saying “My life hurts” Pain is really an existential expression.”
Thoughts/Beliefs

• In fact, beliefs, anticipation, and expectation are better predictors of pain and disability than any physical pathology. (IOM report on pain, p. 62)
Intensifiers and Interactions (heart of CBT of Pain Management)

Fear, Depression, Anxiety, Guilt, Anger
Fear as intensifier

- Fear is physical not just emotional
- No pill or injection will address the fear
- Tx the fear and the pain:
  - Dr. Brand. “pain cannot be tx purely as a physical phenomena. We have to face the fear together with our pts. What does the pain mean to the pt?”
- HCP Tip:
  - Address/Validate fear
  - Provide resource to increase coping
  - Determine together next steps
Fear and Pain

• Memory of pain is locked into the brain and protects us in future.
• Touch hot pot..burn hand...use hot pad.
• Foot hurts with full wt bear so limp when stand next time to avoid pain.
• Anticipatory pain.
  ▫ Kineseophobia...deconditioned...increased pain...kineseophobia
Anxiety and Pain

- Inability to differentiate what is in distress...the mind or body
Anxiety

• Activates stress response—With physical consequences delaying healing
  Leads to behavioral avoidance, leading to kinesiosophobia
• Less likely to utilize effective coping strategies
• Can paralyze
  ▫ Unable to hear your instructions, i.e won’t follow them.. jeopardizes care
  ▫ Repeatedly calls you back

• HCP Tips/Tools:
  ▫ Write it down
  ▫ Keep it concrete and simple
  ▫ Provide reassurance
  ▫ Provide education (about procedure/tests etc)
  ▫ Highlight their power
  ▫ Allow extra time
  ▫ Go slow
  ▫ Teach visualization/relaxation
  ▫ Encourage purposeful self-awareness
  ▫ Biofeedback
  ▫ Assess diet
  ▫ Sleep hygiene
  ▫ Massage
  ▫ Meditation
  ▫ Yoga/Tai Chi
Depression
And Pain
Prevalence

- Depression is 3-4 times greater in the pain population than the general population.
- Depression consistently predicts:
  - Lower levels of function
  - Poorer coping
  - More pain-related disability
HCP Tip/Tools

- Depression/Suicide Screenings
- Refer for psychological consult specific to pain
- Obtain Medication consult for depression
- Encourage volunteer activities
- Validate/Non judgmental Listening/Provide Empathy
- Encourage journaling, thought logs
- Meditation
- Movement: exercise/Yoga/Tai Chi
- Music and expressive therapies
- Sleep hygiene
Pain and Suicide

- Pain sufferers are 2-3xs more likely to commit suicide
- Of those who completed suicide
  - 52% suffered from a chronic illness/chronic pain
  - 21% were taking analgesics daily for pain
Chicken or Egg Debate

- Debate is over. Current trend is accepting interrelatedness.
- Shared neurotransmitters: serotonin, norepinephrine, endorphins regulate both mood and pain.
- Hans Selye:
- Emotions Buried Alive
Depression presents as pain

- 75% of those with depression present to PCP with complaints of physical sx, esp pain.
- Why?
Losses

- Many losses accompany chronic pain
- Each loss is experienced on an emotional level
- Emotions activate the physiological stress response which affects the body increasing pain
- Pain causes stress: stress affects pain
Anger

And Pain
Who angry with

- Insurance co
- Employers
- Atty
- Medical Providers
- God
- World
- Themselves/their body
Anger and the body

• Anger greater risk factor for HD than smoking, HTN, and high cholesterol
• Less likely to utilize and receive from a support network
• Increases sympathetic system
• Decreases efficiency of parasympathetic system

• Weakens immune system
  ▫ Deactivates Natural killer cells
• Inc risk for anxiety and depression, Asthma, HTN, Coronary Artery Disease
• Higher incidence of risk taking, compulsive behaviors, cynical hostility..”why bother”
Anger and Pain

- Increased sensitivity to pain amongst those who are easily angered or who bottle anger
- Suppressed anger worsens depression, worsens pain
- Compromises adjustment to pain
- Anger precipitates pain....such as migraines and tension headaches Marcussen & Wolf, Martin & Teoh)
- Hostile people release more adrenaline and norepinephrine into blood stream than nonhostile people.
Anger/Grief/Loss

- Grief cycle
- Shock, denial, anger, depression, acceptance

HCP Tips/Tools:
- Be sensitive to loss behind anger
- Look for root. Anger is a secondary emotion
- Look for need and address it
- Be respectful for level of readiness
- Don’t take it personal/detach-don’t react
- Be mindful of boundaries, be self aware, avoid defensiveness
- Assist in increasing support
- Teach Relaxation/Breathing exercises,
- Teach Meditation individual to patient
- Music therapy
Guilt

• Immobilizes
You want me to see a what?!?!?!?

- Gold standard of care
- Beliefs
- Coping
- Meaning
- Thoughts
- Emotions
- Suffering
- Perceptions
Final Thoughts

“To cure sometimes, to relieve often, to comfort always”

-ascribed to Hippocrates (Greek physician, 460-370 BC)
Resources

- American Academy of Pain Medicine. Facts and Figures