Have We Missed the Boat in the Treatment of Chronic Pain

Mel Pohl, MD, DFASAM
Chief Medical Officer
Las Vegas Recovery Center
5 Key Facts:

- All pain is real.
- Emotions drive the experience of chronic pain.
- Opioids often make pain worse.
- Treat to improve function.
- Expectations influence outcomes.
Pain Definition

“An unpleasant sensory and emotional experience associated with actual or potential tissue damage ....”

*The International Association for the Study of Pain*

(Mesky, 1979)
HOW YOU FEEL PAIN: THE PAIN PATHWAY

1. Pain receptor
2. Peripheral nerve
3. Spinal cord
4. Somatosensory cortex

Frontal cortex

Limbic system

Epidermis

Dermis

LVRC
LAS VEGAS RECOVERY CENTER
How does acute pain become chronic pain?

Surgery or injury causes inflammation

**Acute Pain**

Peripheral Nociceptive Fibers
- Transient Activation
- Sustained currents

Peripheral Nociceptive Fibers
- Sensitization
- Sustained Activation

CNS Neuroplasticity
- Hyperactivity
- Structural Remodeling

**Chronic Pain**

Pain is influenced by:

• Culture
• Context
• Anticipation and previous experience
• Emotional and cognitive factors
Pain Switchboard – Lower Threshold

GENETICS

TRAUMA

COMT

PAIN

NOCEPTION

PAIN

LVRC

LAS VEGAS RECOVERY CENTER
NORMAL PAIN RESPONSE
CENTRAL SENSITIZATION
Chronic Pain Syndrome

- Pain > 6 months
- Depression, anxiety, anger, fear
- Restriction in daily activities
- Excessive use of medications and medical services
- Multiple, *non-productive* tests, treatment, surgeries
- No clear relationship to organic disorder
Pain Assessment Scale: Clinical definition of pain: “Whatever the patient says it is... unless proven otherwise”
Reasonable Goals of Pain Management: Enhance Quality of Life!!

- Maintain function
- Improve function
- Reduce discomfort by 50%
Pharmacologic Non-Opioid

- NSAIDs.
- Tricyclics and SNRIs.
- Anti-convulsants.
- Muscle Relaxants—(AVOID SOMA/carisoprodol).
- Topicals.
Treating Chronic Pain with Opioids

• Clinical Trial

• Ongoing Assessment

• Need exit strategy
Risk/Benefit of Opioids for Chronic Non-Cancer Pain
(Franklin; Neurology; Sept 2014 Position paper of the AAN)
Problems with Opioids

- Side Effects
- Tolerance and physical dependence
- Loss of function
- Perceive emotional pain as physical pain (chemical copers)
- Hyperalgesia
Opioid Hyperalgesia

Reported Pain Level vs. Increasing dose of opioid

Optimum dose

NEJM, Ballantyne & Mao
Nov 2003
Primary non-heroine opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)

1999 (range 1 - 50)

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)

2001
(range 1 – 71)

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)

2003 (range 2 – 139)

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
Primary non-heroine opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)

2005
(range 0 – 214)

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)

2007
(range 1 – 340)

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
U.S. Rates of Death from Unintentional Drug Overdoses

U.S. Numbers of Deaths, According to Major Type of Drug.

Prescription Drug Overdose and Abuse: A Growing Problem

Motor vehicle traffic, poisoning, and drug poisoning death rates, 1980-2009

### Results:

<table>
<thead>
<tr>
<th>Morphine Dose</th>
<th>Hazard Ratio of Serious Overdose</th>
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<tbody>
<tr>
<td>None</td>
<td>0.19</td>
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<tr>
<td>1 - &lt;20 mg /day</td>
<td>1.00</td>
</tr>
<tr>
<td>20 - &lt;50 mg/day</td>
<td>1.19</td>
</tr>
<tr>
<td>50 - &lt;100 mg/day</td>
<td>3.11</td>
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</table>
High Opioid Dose and Overdose Risk

* Overdose defined as death, hospitalization, unconsciousness, or respiratory failure.

Rates of prescription painkiller sales, deaths and substance abuse treatment admissions (1999-2010)

Industry-influenced “Education” on Opioids for Chronic Non-Cancer Pain Emphasizes:

- Physicians are needlessly allowing patients to suffer because of “opiophobia.”
- Opioids are safe and effective for chronic pain.
- Opioid therapy can be easily discontinued.
- Opioid addiction is rare in pain patients.
“Only four cases of addiction among 11,882 patients treated with opioids.”


Cited 693 times (Google Scholar)
ADDITION RARE IN PATIENTS TREATED
WITH NARCOTICS

To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients1 who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,2 Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug
Surveillance Program

Waltham, MA 02154

Total Sales & Prescriptions for OxyContin (1996-2002)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>Percentage increase</th>
<th>Number of prescriptions</th>
<th>Percentage increase</th>
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<tbody>
<tr>
<td>1996</td>
<td>$44,790,000</td>
<td>N/A</td>
<td>316,786</td>
<td>N/A</td>
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<tr>
<td>1997</td>
<td>125,464,000</td>
<td>180</td>
<td>924,375</td>
<td>192</td>
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<tr>
<td>1998</td>
<td>286,486,000</td>
<td>128</td>
<td>1,910,944</td>
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<tr>
<td>1999</td>
<td>555,239,000</td>
<td>94</td>
<td>3,504,827</td>
<td>83</td>
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<tr>
<td>2000</td>
<td>981,643,000</td>
<td>77</td>
<td>5,932,981</td>
<td>69</td>
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<tr>
<td>2001</td>
<td>1,354,717,000</td>
<td>38</td>
<td>7,183,327</td>
<td>21</td>
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<tr>
<td>2002</td>
<td>1,536,816,000</td>
<td>13</td>
<td>7,234,204</td>
<td>7</td>
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2013 – US sales of Rx painkillers = $12 Billion (IMS Health)
Figure 1. Age-adjusted rates for drug-poisoning deaths, by type of drug: United States, 2000–2013

[Line graph showing the increase in deaths per 100,000 population for Opioid analgesics and Heroin from 2000 to 2013.]
Medication Assisted Treatment

- Methadone
- Buprenorphine
- Naltrexone
- Naloxone
Suboxone tablets (RB)
Handheld Device That Delivers Opioid Overdose Treatment Approved by FDA

Naloxone

![Naloxone Package](image)
Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry.

Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations.

This is reflected in an individual **pathologically pursuing reward and/or relief** by substance use and other behaviors...
This is a **false dichotomy**
Aberrant drug use behaviors are common in pain patients

63% admitted to using opioids for purposes other than pain\(^1\)

<table>
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<th>Pain Patients</th>
<th>VS</th>
<th>“Drug Abusers”</th>
</tr>
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<tbody>
<tr>
<td>35% met DSM V criteria for addiction(^2)</td>
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92% of opioid OD decedents were prescribed opioids for chronic pain.


Cycle of Uncontrolled Pain and Fear

- Pain
- Avoidance Behaviors
- Decreased Mobility
- Diminished Self-Efficacy
- Altered Functional Status
- Social Limitations

FEAR arrows connect the nodes, indicating the cycle.
Ways to reduce pain intensity

- Cognitive/Behavioral Therapy (CBT)
- DBT/ACT
- Attention/Distraction
- Control/Placebo effect
- Fear reduction
Reversal of Cycle of Fear and Pain

- Pain
- Exercise
- Increased Mobility
- Improved Function
- Enhanced Self-Efficacy
- Less Pain
Pain Pearls

• Conditioning Increases Pain.

• Pain Patients Are A Pain.

• Secondary Gain Prevents Getting Well.
Non-Medication Treatments

- Exercise – Physical Therapy
- Chiropractic Treatments
- Therapeutic Massage
- Acupuncture
- Nutrition
- Individual + group therapy
- Mindfulness-Based Stress Reduction (Kabat-Zinn)
- Yoga - Chi Gong
5 Key Facts:

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- Opioids often make pain worse.
- Treat to improve function.
- Expectations influence outcomes.
THANK YOU

Mel Pohl, MD, DFASAM
702-271-1734
mpohl@centralrecovery.com
Drmelpohl.com