PAIN MANAGEMENT IN 2017
Medications, Interventions, and Implantable Devices

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Relevant Disclosures

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• Board of Directors
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TODAY’S TOPICS

• Patients with Chronic Pain
• The Development of Pain Management as a Specialty
• The Opioid Conundrum
• Current State of the field of Pain Medicine
• Biomedical Innovation and the Future of Pain Medicine

THE MOST COMMON SITUATION

Patients with chronic pain for more than a few months are scared and worried about the future.

AN EQUALLY COMMON PROBLEM

Patients with Chronic Pain have lost trust in their health care providers.
WHO ARE WE TREATING?

Patients with chronic pain are an often marginalized and an underserved population.

STIGMA, MARGINALIZATION [10M]

“It has been hell. First, you have to find someone who believes you.” [#135]

“Doctors don’t recognize pain they cannot see or diagnose as a specific issue.” [#314]

“The stigma is one of the biggest barriers. I have been treated like a lowlife by medical people when I disclose that I have chronic pain and use opioids for it.” [#383]

Relieving Pain in America
A Blueprint for Transforming Prevention, Care, Education, and Research, IOM, June 2011

BIASES IN THE 1980s

- Addiction as a moral failing
- “The only thing worse than dying of cancer is dying addicted”
- Patients with chronic pain were “crazy, lazy or addicted”
- Vietnam Post-script
  – ¼ to ½ of servicemen used or became addicted to heroin [Brecher et al., 1972]
“CIVIL COMMITMENT”

- Legislation enabling those with substance addiction and those “in imminent danger of becoming addicted” to be confined in rehabilitation centers without having first committed or been convicted of a crime

- Civil commitment was instituted in California and New York in the 1960’s and existed into the 1970’s

SUBSTANCE USE DISORDER

Many of us, including our policy makers, view substance use disorder as a series of bad decisions which deserve to be punished.

DEVELOPMENT OF THE SPECIALTY OF PAIN MEDICINE IN THE 1980s

- “Decriminalization” of Cancer Pain Treatment
- The rise of multidisciplinary pain centers
  - Bonica, Bridenbaugh, Carron, Raj, Winnie
- No Fellowships or Board Certification until 1992
- No long acting opioids available
- No fluoroscopy used for spinal interventions
- MRI not widely available
### CANCER PAIN

- **1994**
  - Less than half of persons with metastatic cancer were receiving adequate treatment of their pain.\(^1\)

- **1996**
  - The SUPPORT Study: 40% had moderate to severe pain in the last three days of life.\(^2\)

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### ABMS BOARD CERTIFICATION

- **1991**
  - American Board of Anesthesiology voted to administer certification in Pain Management

- **1992**
  - First accredited Fellowship in Pain Management

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### DEMAND FOR THE PAIN SPECIALTY TODAY

- **100 MILLION AMERICANS** are affected by chronic pain (31%)
- **35 MILLION AMERICANS** are affected by severe chronic pain

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\(^1\) Cleeland et al
\(^2\) A controlled trial to improve care for seriously ill hospitalized patients
\(^3\) The study to understand prognoses and preferences for outcomes and risks of treatments (SUPPORT), JAMA, 1996.
PAIN PHYSICIAN MANPOWER 2015

Approximately 1,000,000 Total physicians in the US
Approximately 50,000 Certified by the Board of Anesthesiology
Approximately 5,000 Added Qualification in Pain Management

PAIN PHYSICIAN MANPOWER
Of Self-Designated Pain Specialists

Neurology 0.5%
IM/Family Practice 0.9%
Pain 10%
Anesthesiology 77%

PAIN PHYSICIAN MANPOWER
Estimated Need: 35,000,000 Americans
5,000 Board Certified Pain Doctors
Current Capacity: 5 Million Patients
What Is the Practice of Pain Management in 2017?

How to Treat Chronic Pain in 2017?

When you have a hammer… everything looks like a nail.

New Tools

What Is the Practice of Pain Management in 2017?

Long Term Care of a Chronic Illness: Chronic Disease Management
Coordination of Care

Minimally Invasive Procedures

Accurate Diagnosis

Medication Management

Neuromodulation

Pain Management

Endocrinology

Mental Health

Neurology

Addiction Medicine

Urology/GI Medicine

Musculoskeletal Medicine
THE OPIOID CONUNDRUM AND OPIOPHOBIA

Pain Medicines Still Work for Pain
History of Opium Use

- 3400 BC Sumerians cultivate “joy plant” in Mesopotamia
- 1300 BC Egyptians grow opium in Thebes and export it to the Phoenicians who move it to Greece and Europe

Opioids Remain a Mainstay of Treatment for Severe Chronic Pain

They can be used safely and effectively with proper education, dosing, and vigilance.

What Did We Miss in the Early Days of Pain Management?

- Prevalence of Substance Use Disorder in the US
- The side effects of long term higher dose opioids including Hyperalgesia and Hypogonadism
The Opioid “Epidemic”

- Has resulted in large part from our failure to appreciate addiction as a mental health problem and not as a moral failing, and a failure to provide adequate treatment resources.

OVERALL ADDICTION IN US SOCIETY

- 47% of the US population
- 11 potential addictions: tobacco, alcohol, illicit drugs, eating, gambling, Internet, love, sex, exercise, work, and shopping

Substance Use Disorder in the US - 2017

- 21.7 million people aged 12 and older received substance use treatment
- 19.3 million people needed but did not receive substance use treatment
- 41 million people in the US suffer from Substance Use Disorder
- 325 million people in the US
- 13% of the US population has substance use disorder (not including nicotine and alcohol)
Illicit Opioids
- Street Fentanyl
- Heroin

Prescription Opioids
- Diverted
- Active Pain Treatment

U.S. 2016
- 33,000 Opioid Deaths
- 18,000 Illicit Opioids
  - Street Fentanyl
  - Heroin
- 15,000 Prescription Opioids
  - Diverted
  - Active Pain Treatment

Suicide and Self-inflicted Injury in the US
- 836,000 ER visits for self-inflicted injuries annually
- 100,000 suicide attempts
- 41,000 suicides annually

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CDC, 2012
Institute of Medicine Report: 2011

- **Chronic pain** affects about 100 million American adults—more than the total affected by heart disease, cancer, and diabetes combined.

Relieving Pain in America
A Blueprint for Transforming Prevention, Care, Education, and Research, IOM, June 2011.

BEST PRACTICE IN OPIOID PRESCRIBING

- Unrecognized patients with substance use disorder or predisposition
- Patients in Recovery who Develop Chronic Pain
- Diversion
  - “Casual Diversion”
  - Explicit diversion for money
  - Illicit use by the patient
BEST PRACTICE IN
OPIOID PRESCRIBING

• Pre-prescription risk assessment
  – SOAPP, CAGE, Epworth Sleepiness Scale
• Urine Drug Screening and Confirmation
• Prescription Drug Monitoring Programs
• Records
• Frequent Re-evaluation and course correction
• Ensure safe control and disposal of medications
• Patient responsibility
• Other Pain Relieving Strategies

BEST PRACTICE IN
OPIOID PRESCRIBING

• Alcohol
• THC
  – DEA prohibition on prescribing to addicts
• Benzodiazepines
• Soma and other sedating medications

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<table>
<thead>
<tr>
<th>Coordination of Care</th>
<th>Minimally Invasive Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accurate Diagnosis</td>
<td></td>
</tr>
<tr>
<td>Medication Management</td>
<td>Neuromodulation</td>
</tr>
</tbody>
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INJECTIONS FOR CANCER PAIN

- Celiac Plexus Block
- Hypogastric Plexus Block
- Intercostal Block
- Vertebroplasty
- Spinal Injections

CELIAC PLEXUS BLOCK

COMPRESSION FRACTURES
VERTEBROPLASTY

SPINAL INJECTIONS

- Epidural Corticosteroid Injections
- Facet Injections
- Sympathetic Blocks
- Trigger Point Injections
- Discography

TRANSFORAMINAL EPIDURAL INJECTION
**LUMBAR FACET JOINT INJECTION AND RADIOFREQUENCY ABLATION**

**Coordination of Care**

**Minimally Invasive Procedures**

**Accurate Diagnosis**

**Medication Management**

**Neuromodulation**

**INTRATHECAL DRUG DELIVERY**

Targeted Drug Delivery — improves pain and/or spasticity through delivery of medication directly into the cerebrospinal fluid.
INTRATHECAL DRUG DELIVERY: IMPLANTED COMPONENTS

Pump

Catheter

INTRATHECAL DRUG DELIVERY

• Analgesia
  – Morphine
  – Ziconotide
• Spasticity Control
  – Baclofen

INTRATHECAL PAIN THERAPY: REDUCED DOSAGE

1 mg Intrathecal Morphine = 300 mg Oral Morphine
ADVANTAGES OF INTRA-THECAL BACLOFEN FOR SPASTICITY

- Long term spasticity control
- Decreased need for oral and intramuscular agents
- Decreased side effects
- Reversibility
- Economically advantageous compared to CMM

NEUROMODULATION: IMPLANTABLE PAIN THERAPIES

- Intrathecal Drug Delivery
- Neurostimulation

SPINAL CORD STIMULATION
SPINAL CORD STIMULATION

What’s Next?

Innovation in Pain and Neuroscience

Advanced Practice Providers
ON THE HORIZON

• Neurostimulation
• Neuro-biology of Chronic Pain
• Regenerative Medicine
• Gene Therapy Strategies

OUR BIGGEST PUBLIC HEALTH NEED IN PAIN CARE?

Adequate reimbursement of mental health and addiction services.

We must all die. But that I can save him from days of torture, that is what I feel as my great and ever new privilege. Pain is a more terrible lord of mankind than even death itself.

• Albert Schweitzer
AS IT TURNS OUT

• Good medical decision making and technical skills are just the ticket for entry into our patients’ needs
• Provide an open and safe healing environment
• Earn their trust
• Allow them to regain hope that things can be better