

Updates in the Opioid Epidemic

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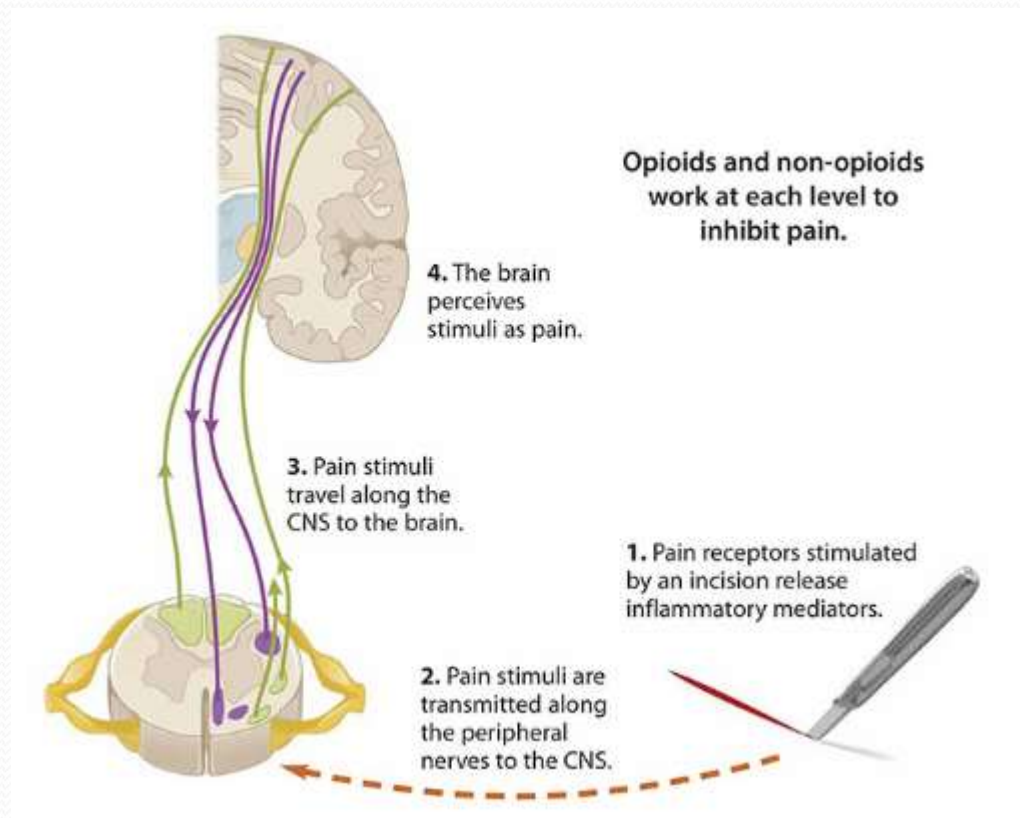
*Work Related Injuries Workshop
March 25th & 26th, 2019*

How Do Opioids Work?

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Understanding Pain Physiology





What are Opiates & Opioids

- Naturally-occurring molecules like endorphin
- Naturally-derived opioids from poppies used for hundreds of years.
- Artificial, or synthetic, opioids
 - Synthetic opioids mimic action of natural molecules and bind to mu and kappa receptors to “trick” the body and delay pain signals to brain.



How Opioids Work

- Opioids stimulate Mu and Kappa receptors to block pain signals
 - Mu receptors
 - Analgesia, decreased gastric motility, sedation, respiratory depression, euphoria and physical dependence
 - Kappa receptors
 - Analgesia, decreased gastric motility, sedation

What happens?



- Receptors in Brain
 - Pain perception, emotion and reward (pleasure)
 - Why opioids are addictive
- Receptors in Brain Stem
 - When opiates bind to receptors in brain stem, breathing slows/stops
- Receptors in Spinal Cord
 - Opioids bind to the receptors in spinal cord and reduce pain signals



CDC Recommendations for Prescribing

- Opioids should not be considered first-line or routine therapy for chronic pain (i.e., pain continuing or expected to continue >3 months or past the time of normal tissue healing) given small to moderate short-term benefits, uncertain long-term benefits, and potential for serious harms
- Exceptions
 - Active cancer
 - Palliative and end-of-life care



CDC Recommendations for Prescribing

- Non-opioid therapy is preferred for chronic pain outside of active cancer, palliative and end of life care
 - Physical therapy, exercise, non opioid medications and interventional injections
- Use lowest possible effective dose to reduce risk of abuse and overdose
 - Establish goals for pain and function
- Closely monitor patients taking prescribed opioids
 - Monitor PMP and urine toxicology



CDC Recommendations for Prescribing

- **No evidence shows long-term benefit of opioids** in pain and function versus no opioids for chronic pain with outcomes examined at least 1 year later
 - Most placebo-controlled randomized trials ≤ 6 weeks duration
- Extensive evidence shows possible harm from opioids
 - Opioid use disorder, overdose and motor vehicle injury.
- Extensive evidence suggests some benefits of nonpharmacologic and nonopioid pharmacologic treatments compared with long-term opioid therapy, with less harm.

Reducing Opioids Post-Operatively

Tony Tannoury, MD

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Opioid Reduction and Alternatives to Prescription Pain Medications



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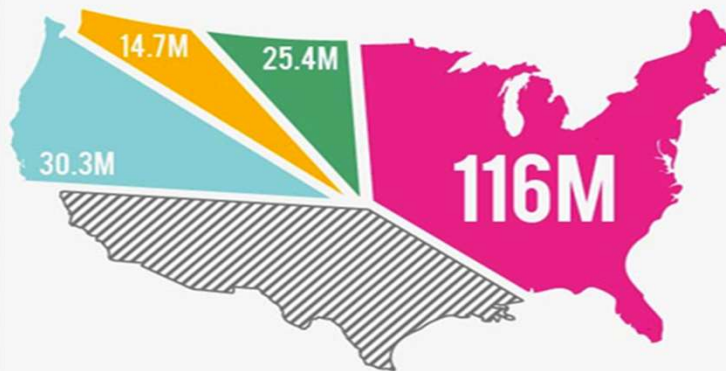
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Pain...

PAIN IN AMERICA



More than **30%** of Americans
are living with some form of chronic
or severe pain.

MORE PEOPLE LIVE WITH
CHRONIC PAIN THAN
CANCER, **HEART DISEASE**,
AND **DIABETES**, COMBINED.

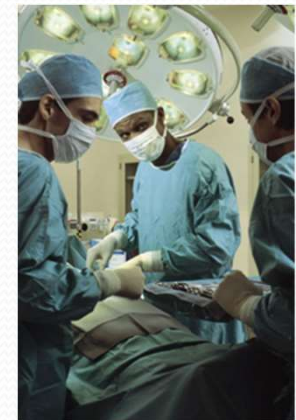
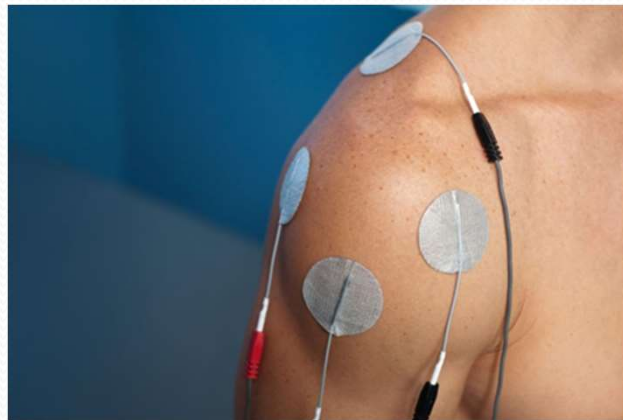
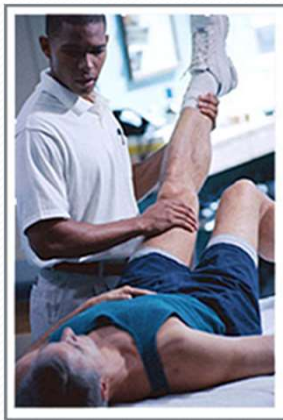
- Chronic pain: 116M
- Diabetes: 30.3M
- Heart disease: 25.4M
- Cancer: 14.7M

Sources: National Institutes of Health (NIH),
Centers for Disease Control and Prevention (CDC),
Institute of Medicine

Treatment Options

For Sub-Acute and Chronic Patients

- Medications
- Physical Therapy
- Electrotherapy Alternatives
- Surgery





Medications...The Problems

- The monthly (direct) cost of combined medications is high (\approx \$1600-\$2000 per month), often even higher...
- The cost of treating complications related to the medication is nearly the same as the cost of the medication itself... More than \$2 billion a year for NSAIDs alone.
(Griffin, RM. The Price tag of living with chronic pain. WebMD. 10/13/08)
- In 2016, about 12% of substance use disorders involved prescription pain medication, that is 2.4 million Americans.

Opioids, The Scary Truth

- “Should be used only if needed for severe pain and only for a short time. Opioids cause significant side effects... Poor patient tolerance, constipation, drowsiness, clouded judgment, memory loss, and potential misuse or dependence have been reported in up to 35% of patients.” (page 47-48)

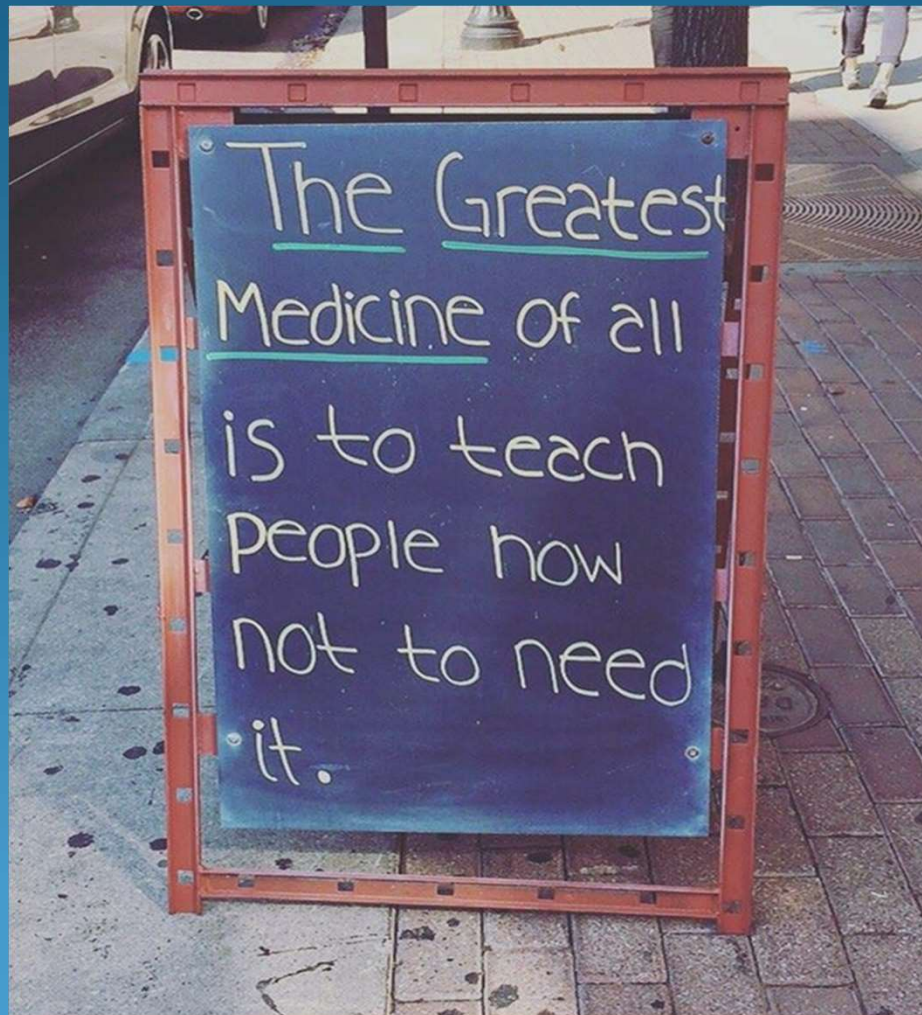
(ACOEM Practice Guidelines 2nd Edition)



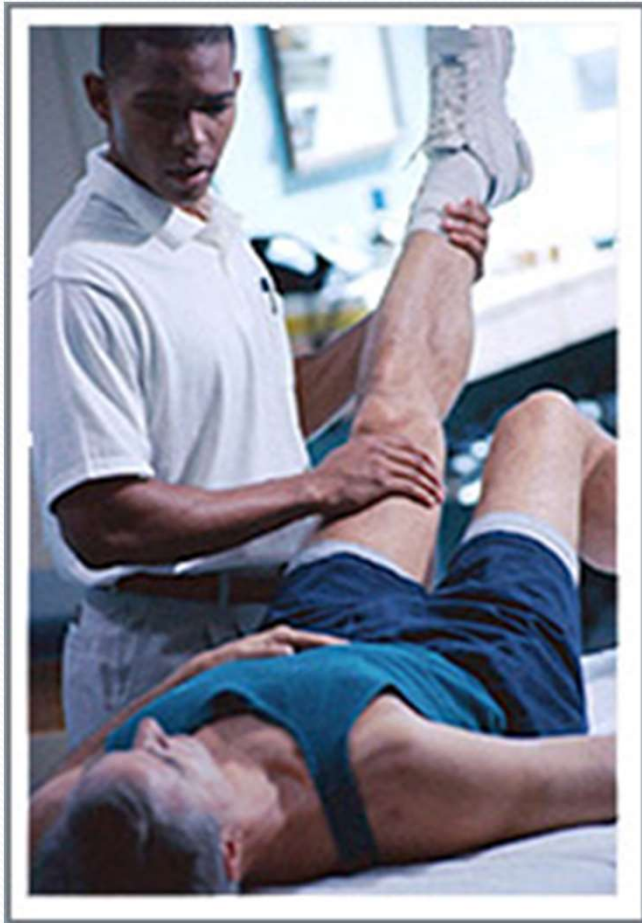


The Problem for the Employer, TPA, or Carrier...According to the Numbers

- 80.7 Million Opioid Claims for 116 Opioid Products.
- Opioids account for 24.1% of total pharmacy spend in 2017 for work-related injuries.
- 60.2% of all Injured Workers utilize Opioid Analgesics.
- >50% of persons receiving 90+ days of continuous opioid treatment remain on opioids for years and require large liability reserves.
- Americans, constitute only 4.6% of the world's population.
- However, Americans consume 80% of the global opioid supply.
- Furthermore, Americans consume 99% of the global hydrocodone supply.



Physical Therapy Benefits



- Hands-on care can motivate and push patients through difficult rehab
- Can be particularly useful for patients that need strengthening and improved ROM and flexibility
- No side-effects or addiction



Physical Therapy Downfalls

- Patients typically receive only 3 hours of care each week (\approx 1 hour, \approx 3 days per week)
- Though great for strengthening and ROM; therapy typically can't address the pain, spasm, swelling... that patients have the other 98% of their week.
- This, most often leads patients back to the drugs (something they can control) to address those daily symptoms.
- Costly at \$120 per 1 hour visit, or \$1200 per month (based on network/intermediary pricing)

Where does this leave us?

- Sub Acute and Chronic patients need non- pharmaceutical options,
- that are cost effective,
- and readily accessible to the patient when needed
- Home Electrotherapy fits this description...





Forms of Electrotherapy

Transcutaneous Electrical Nerve Stimulation (TENS)

Interferential Current Therapy (IFC)

Electronic Muscle Stimulator (EMS)

H-Wave

Electro-Acupuncture (EA)

Percutaneous Electrical Nerve Stimulation (PENS)

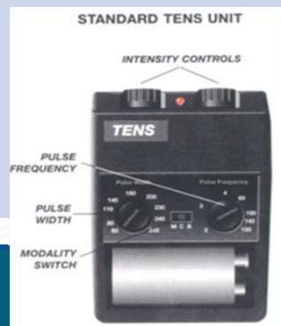
Spinal Cord Stimulation (SCS)

TENS



TENS Benefits

- TENS is a non-invasive form of electrotherapy indicated by the FDA to address pain.
- It's quite small and can be clipped to your belt as a pain-masking tool
- TENS is drug free and has no real side effects
- TENS is relatively cheap and easy



TENS Limitations

- Though TENS is accepted in many medical communities, the results of research on the topic are inconclusive
- Unfortunately patients with intense pain that cannot be controlled by TENS are not uncommon
- TENS only masks symptoms; so there is no lasting or rehabilitative benefits.
- TENS does nothing for the clinical issues that often cause and or accompany pain: decreased circulation and inflammation, spasm, atrophy, impaired range of motion, etc

It's known that inflammation of joints and compartmental swelling is the leading cause of disability and associated symptoms in Workers Compensation

(Leigh, JP. Miller, TR. Job-Related Diseases and Occupations Within a Large Workers' Compensation Data Set.
American Journal of Industrial Medicine 33:197-211)

H-Wave



- H-Wave is a multi-functional device that can address numerous symptoms (pain, spasm inflammation, atrophy, and loss of ROM)
- H-Wave optimally stimulates the body's circulatory and lymphatic systems
 - This delivers nourishment vital to recovery
 - Removes the inflammation and congestion at the root of symptoms
- When fluid shifts are not enough, a secondary Pain/Anesthesia setting is available

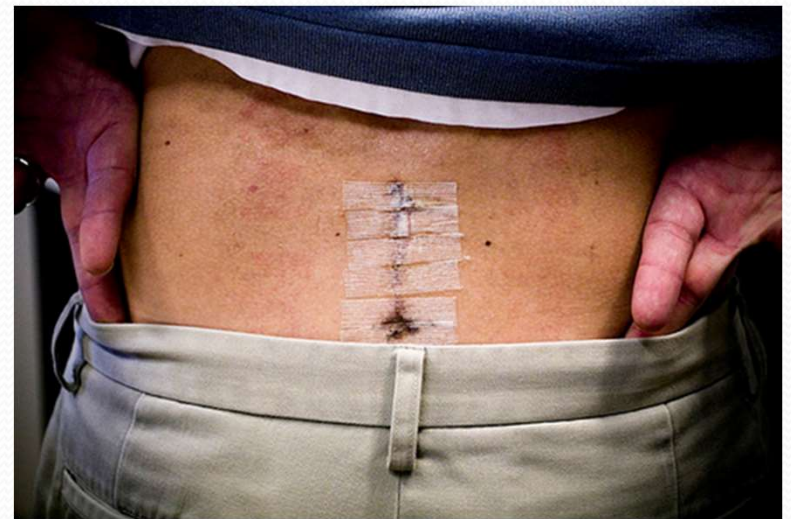
H-Wave



- H-Wave doesn't mask symptoms like many drugs and devices
- No side-effects and access to relief 24/7
- Doesn't de-motivate patients and creates no work restrictions
- If H-Wave is unsuccessful there is no cost!!!
- Limitations
 - Lack of knowledge
 - ODG designation

Surgery Overview

- Surgery can be very beneficial
- Direct and Indirect Costs can be extreme
- Success rates are varied and complications can arise
- Surgery should always be a last resort





Spinal Cord Stimulator

- Use electrical currents to block pain signals before they reach the brain
- Approximately 60,000 are implanted annually
- Cost \$100,000-\$150,000
- Patients report being shocked or burned or have suffered spinal-cord nerve damage ranging from muscle weakness to paraplegia, FDA data shows

Cost of a Claim



Treatment	Cost
Medications	\$1,600-\$2,000 per month ** plus cost of medications for complications
Physical Therapy	\$1,200-\$4,800
TENS	\$50-\$200 plus monthly supplies
H-Wave	\$330 retail monthly rental \$3,300 retail price purchase Also offer lifetime care special
Spinal Cord Stimulator	\$100,000-\$150,000



Conclusions

- There are multiple factors; including the physicians, treatment providers, and the patient; that ultimately impact the outcomes and cost of a claim.
- It is important to look at all the details to determine the most beneficial treatment plan.



"I can cure your back problem, but there's a risk that you'll be left with nothing to talk about."

Thank You!

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Update on Opioid Diversion Program

Senior Judge Omar Hernandez

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Q & A