ADDICTION

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DISCLOSURE
I have no financial relationships to disclose.
I will not discuss off label or investigational medication use in my presentation.

Board Certified - Anesthesiology, Psychiatry and Addiction Medicine
2010 – 1/2017 Board of Medical Examiners
2014 - 1/2017 Chair - CSMD Committee
2/2017 – present Medical Director – TMF- Physician's Health Program
Steering Committee: Chronic Pain Guidelines, DOH

OBJECTIVES
Attendees will
• Learn the definitions of Addiction.
• Understand the etiologies of Addiction.
• Grasp the concepts and potencies of non-opioid analgesics.
• Recognize Misprescribing and Drug Seeking Behavior.
USA's Appetite for Opioids
2017 - % of World's…

International Narcotic Control Board

WHAT IS ADDICTION?

"That is not one of the seven habits of highly effective people."

ORIGINAL RESEARCH

"Significant Pain Reduction in Chronic Pain Patients after Detoxification from High Dose Opiates"

Journal of Opioid Management
2:5 September/October 2006
Michael Baron, MD
Figure 1. Individual Pain reports

Figure 2. Change in Patient pain after detox

Figure 3. Pain Self Reports

Number Needed for 50% Pain Relief

Efficacy of Pain Medication

Efficacy of Pain Medication

SINGLE DOSE ORAL ANALGESIC IN ED ON ACUTE EXTEMITY PAIN

Effect of Opioid vs Nonopioid Medications on Pain-Related Function in Patients With Chronic Back Pain or Hip or Knee Osteoarthritis Pain.

240 randomized patients – 12 months
Pain was significantly better in the nonopioid group.
Adverse medication-related symptoms were significantly more common in the opioid group.

Treatment with opioids was not superior to treatment with nonopioid medications for improving pain-related function over 12 months. Results do not support initiation of opioid therapy for moderate to severe chronic back pain or hip or knee osteoarthritis pain.

JAMA. 2018;319(9):872-882

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What is Addiction

*Addiction is a brain disease*

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The Reward Circuit

- Prefrontal Cortex
- Hippocampus
- Nucleus Accumbens
- Ventral Pallidum
- Amygdala
- Ventral Tegmental Area

- GLU
- GABA
- DA
WHAT IS ADDICTION?

Addiction is a Disease!

Addiction is the single most preventable cause of Disability and Death in the US.
Addiction = Substance Use Disorder

NIDA

Addiction is a primary, chronic, neurobiologic disease, with genetic, psychosocial and environmental factors influencing its development and manifestations. It is characterized by behaviors that include one or more of the following: impaired Control over drug use, Compulsive use, Continued use despite harm, and Craving.

4Cs-

Substance Use Disorder = Addiction

DSM-IV

Abuse and Dependence

Abuse = Willful misuse
Dependence = Addiction

DSM-5

Substance Use Disorder

Recurrent use of alcohol or other drugs that causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home.

Depending on the level of severity, this disorder is classified as mild, moderate, or severe.
ETIOLOGY - GENETICS

Children of Alcoholics:
• Four times more likely to develop alcohol problems than the general population.
• Studies of Adopted-away children of persons with alcohol dependence
• Higher risk for many other behavioral and emotional problems.

ETIOLOGY - GENETICS

• Genetic and environmental influences may be correlated to substance initiation and use.
• Progression to Addiction (Substance Use Disorder) is more related to genetic factors.

ETIOLOGY - TRAITS

• High novelty and sensation seeking
• Impulsivity
• Low harm avoidance
• High reward dependence
• Temperament – anxiety, aggression or irritability
• Intelligence – cognitive abilities
ETIOLOGY - ACE

Adverse Childhood Experiences
The quantity of traumatic events experienced in childhood correlates with the development of addiction. The greater the number the more likely.

HIGH NUMBER OF ACE’s

Increasing Adverse Childhood Experiences strongly correlates with the risk for:
• Substance use disorder/addiction
• Anxiety disorders
• Depression
• Diabetes
• Heart disease
• Obesity
• Suicide attempts
• Increased risk for intimate partner violence
Etiology - Exposure

Length of postoperative opioid exposure associated with large increase in misuse.

- Duration of opioid use was strongest predictor of misuse.
- 568,612 patients received postoperative opioids
- Each refill and additional week of opioid use associated with an adjusted increase in rate of misuse of 44%
Brain Healing Takes Time

- Normal levels of brain activity in PFC brains show up as yellow to red
- Reduced brain activity after regular use can be seen even after 10 days of abstinence
- After 100 days of abstinence, we can see brain activity starting to recover


OPIOID DEATHS BY FENTANYL ANALOGS

- Fig. 1. Percentages of opioid overdose deaths testing positive for fentanyl and fentanyl analogs, by state — 50 states, July-December 2017

MMWR Vol 66, October 27, 2017
MISPRESCRIBING
Prescribing in quantities or frequency inappropriate for the complaint or illness.
Examples:
- Large quantities/frequent intervals/crescendo pattern
- Progression to multiple drugs
- For trivial complaints
- Family members
- Known alcoholic or drug addict

Categories of Misprescribing

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<tr>
<th>Dated</th>
<th>Disabled</th>
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<tr>
<td>Dupsed: Doesn’t detect deception</td>
<td>Disempowered: Skewed perception of power</td>
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<tr>
<td>Dysfunctional: Can’t say no</td>
<td>Disorganized: No systems in place</td>
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<tr>
<td>Dismayed: Prescription is to make up for lack of time</td>
<td>Disregard for Scope: Practicing out of specialty</td>
</tr>
<tr>
<td>Dishonest: Prescribing for financial gain</td>
<td>Dodging: Using refills to avoid patient visits</td>
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Suspect Drug-Seeking Behavior in the Patient who . . .
Possible Drug-Seeking Behavior

- A dramatic, compelling but vague complaint
- Pressures for an increases in dose
- Drug screens are negative for Rx’ed medicine
- Symptoms contradict clinical observation
- Patient asks for a specific drug
- Patient has no interest in the diagnosis
- Rejects all treatment that is not opioids

Possible Drug-Seeking Behavior

- Reports an NSAID Allergy
- Has abundant pharmacologic knowledge
- Patient makes veiled threats
- Patient is very flattering
- Primary doctor is out of town
- Travels long distances to get to you
- Primary doctor just retired

THANK YOU