2022 SOAR Medications for Opioid Use Disorder (MOUD) Treatment Boot Camp

How To Get Started and Safely Manage Patients

History of the Opioid Epidemic | Brain & Addiction – Basic Neurobiology | Chronic Pain & Opioid Use Disorder (OUD)

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Disclosures

- Neither Kurt DeVine nor Heather Bell have any disclosures.

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History of the Opioid Epidemic

Brain & Addiction – Basic Neurobiology

Chronic Pain & Opioid Use Disorder (OUD)

Objectives

- Discuss the history of the opioid epidemic.
- Understand the basic neurobiology of addiction and what makes it a chronic health condition.
- Describe the intersection of chronic pain and opioid use disorder.
  - Illustrate different approaches to tapering chronic opioids analgesic therapy (COAT)
  - Identify alternative treatment options for chronic pain management.

Roadmap to Disaster

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Roadmap to Disaster

Dr. Portenoy co-wrote a seminal “paragraph” arguing opioids could be used in people without cancer.

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Roadmap to Disaster cont.

"We conclude that opioid maintenance therapy can be safe, salutary, and more humane alternative to the options of surgery or no treatment in those patients with intractable non-malignant pain and no history of drug abuse."

Pain, 1986 May 25 (2) 171-86

Roadmap to Disaster cont.

The American Pain Society trademarked the slogan, "Pain: The Fifth Vital Sign."

Roadmap to Disaster cont.

"If pain were assessed with the same zeal as other vital signs, it would have a much better chance of being treated properly."

- Dr. James Campbell, MD, President of the American Pain Society

Essential body functions – pulse, body temperature, and respiration – are used as a measure of health or physical condition.

Roadmap to Disaster cont.

That same year (1996), Purdue Pharma released OxyContin, the most widely used narcotic pain killer today.

Roadmap to Disaster cont.

Throughout the late 1990's, groups such as the American Pain Foundation urged tackling the epidemic of untreated pain.

Physicians were falsely educated that the risk of addiction was less than 1%.

ADDICTION 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 patients[1] 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.

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Roadmap to Disaster cont.

Less than 1%?

- *Study 1: Porter and Jick*
  Only four (4) of 11,882 patients became addicted.
  Source: New England Journal of Medicine 1980; 302:123
- *Study 2: Perry and Heidrich*
  Management of pain during debridement
  Zero (0) of 10,000 patients became addicted.
  Source: Pain 1982; 13: 267-280

Roadmap to Disaster cont.

The problem: these studies reflect patients treated for acute pain, not daily chronic pain.

Roadmap to Disaster cont.

Multiple studies from 1991 to 1997 showed addiction rates from 3-43% in patients on chronic daily narcotics, research Purdue Pharma chose to ignore.

Roadmap to Disaster cont.

The Veterans Health Administration made pain a “fifth vital sign.” The Joint Commission for Accreditation of Healthcare Organizations (JCAHO) did the same.

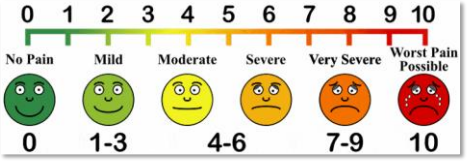
Roadmap to Disaster cont.

The Federation of State Medical Boards released a recommended policy reassuring doctors they would not face regulatory action for prescribing even large amounts of narcotics.

Roadmap to Disaster cont.

JCAHO issued new standards:

- Must regularly ask patients about pain
- Treatment of pain is a priority



Roadmap to Disaster cont.

The Federation of Medical Boards called on state medical boards to make under-treatment of pain punishable.

Roadmap to Disaster cont.

"Untreated pain or undertreated pain is as serious a departure from the standard of care, and as serious a violation of the Minnesota Medical Practice Act as is excessive prescribing of controlled substances or prescribing of controlled substance for non-therapeutic purposes."

- Minnesota Board of Medical Practice controlled substance work group, November 10, 2007

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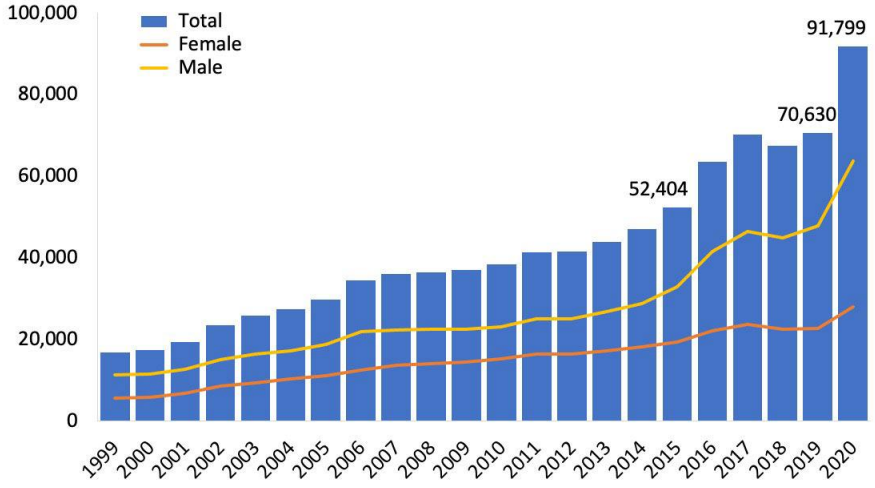
Figure 1. National Drug-Involved Overdose Deaths*
Number Among All Ages, by Gender, 1999-2020



*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2020 on CDC WONDER Online Database, released 12/2021.

StratisHealth

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Roadmap to Disaster cont.

Opioid overdose deaths surpass car accidents as the leading cause of accidental death, a **4-times increase in deaths from 1999.**

StratisHealth

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Roadmap to Disaster cont.

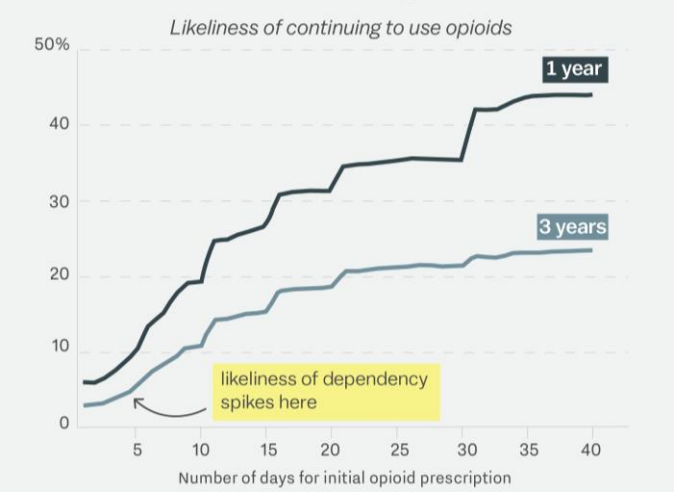
What we knew prior to the [2016] CDC guidelines:

- Opioids are useful for up to 8 weeks for acute pain.
- Pain relief is modest.
- No evidence to suggest it is effective beyond 2 months.
- Dose escalation to maintain analgesia occurs.

But Can We Predict Addiction?

Longer Use Has Greater Risk

Risk of continued opioid use increases at 4-5 days



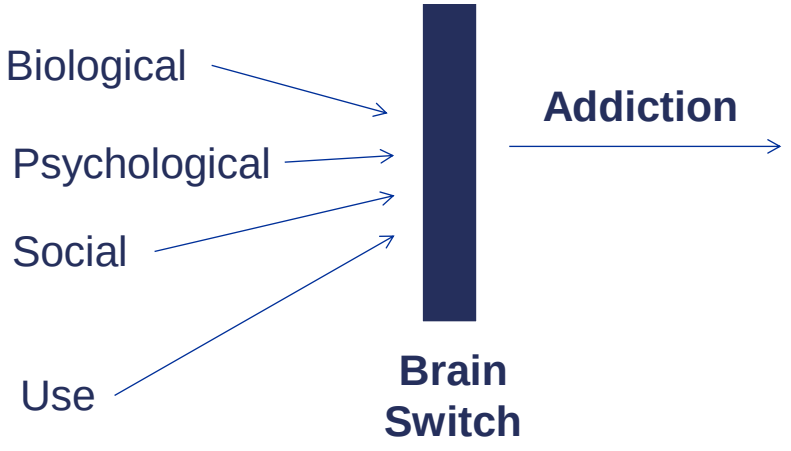
Source : CDC

But Why?

Neurobiology 101

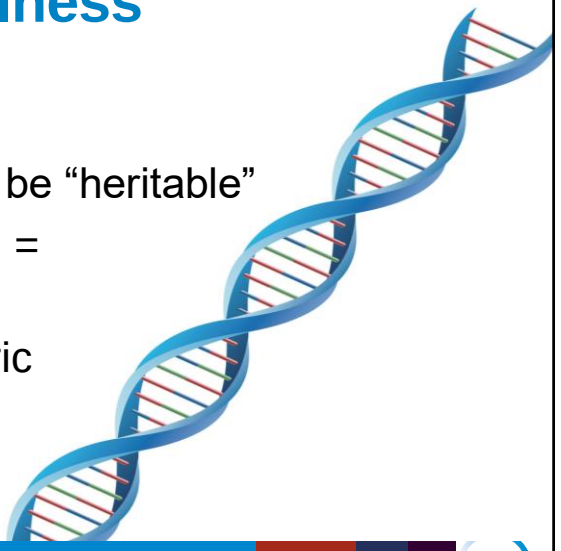
The Basic Model

A Bio-psycho-social Illness



A Bio-Psycho-Social Illness

- Biological
  - 40-60% of addiction is felt to be “heritable”
  - Both parents with alcoholism = 7x increased risk
  - 30% of people with psychiatric disorders also have SUD



A Bio-Psycho-Social Illness cont.

- Psychological
  - Self-medicate to numb or "treat" one's own emotional or physical illness

A Bio-Psycho-Social Illness cont.

- Social / Environmental risk factors:
  - Low socioeconomic status
  - Poor parental support
  - Physical and psychological abuse
  - Drug availability (access)

A Bio-psycho-social Illness

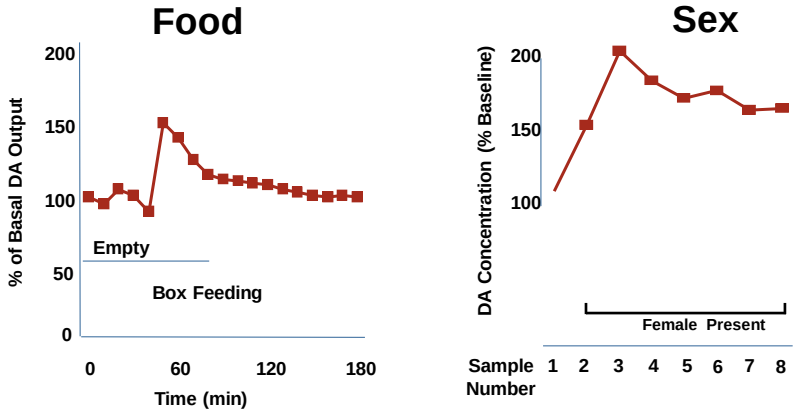
Brain Switch

Addiction →

- Addiction is its own disease independent of the other factors
- BUT modifying the other factors (biopsychosocial) can help with relapse prevention
- Relapse "primer" include
  - Stress
  - Trigger (cues)
  - Exposure

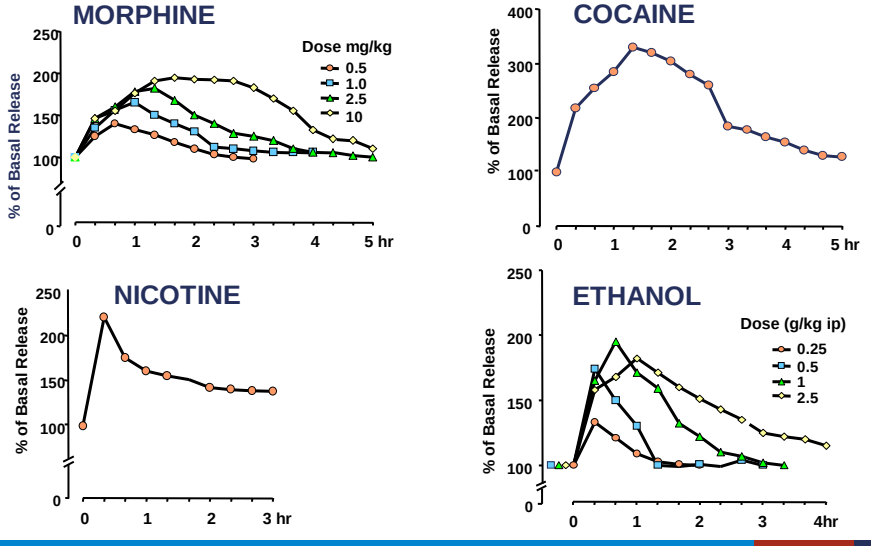
Dopamine and "Pleasure"

Dopamine and Addiction: A Natural Reward



Adapted from: Di Chiara et al, *Neuroscience*, 1999
Adapted from: Fiorino and Phillips, *J Neuroscience*, 1997

Effects of Drugs on Dopamine Levels



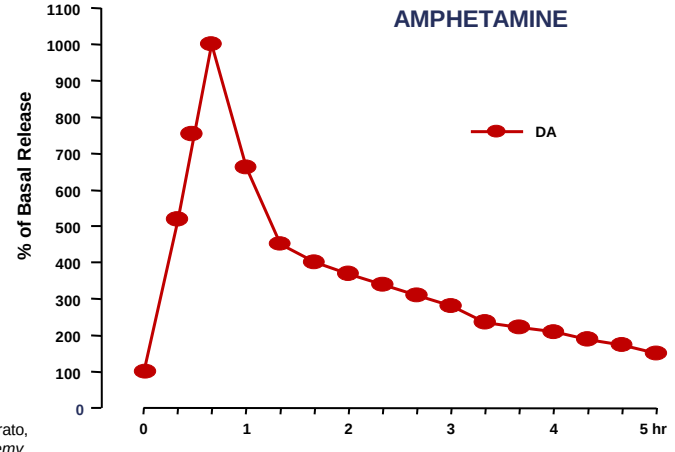
Adapted from:
Di Chiara and Imperato, *Proceedings of the National Academy of Sciences USA*, 1988; courtesy of Nora D Volkow, MD

Effects of Drugs on Dopamine Levels cont.

- Most 200-300% above baseline
- "Hijacking of pleasure/reward in nucleus accumbens"

Adapted from: Di Chiara and Imperato, *Proceedings of the National Academy of Sciences USA*, 1988; courtesy of Nora D Volkow, MD

Effects of Amphetamines on Dopamine Levels

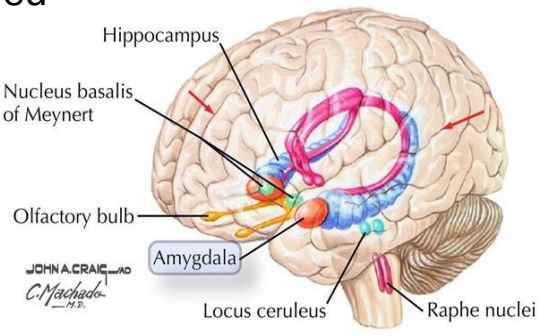


Amphetamines >>> 1000%

Adapted from: Di Chiara and Imperato, *Proceedings of the National Academy of Sciences USA*, 1988; courtesy of Nora D Volkow, MD.

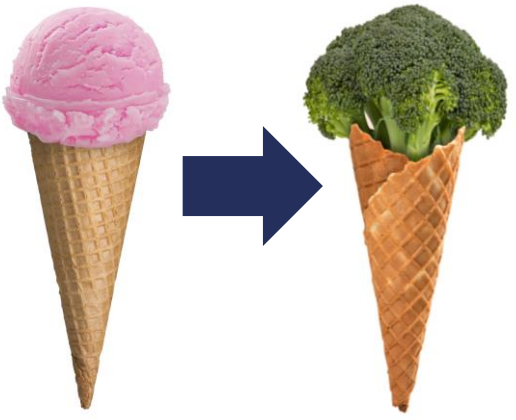
Addiction

- Affects the behavioral control areas of the brain
- As a result- addiction is displayed in terms of behaviors that are
  - Aberrant
  - Problematic
  - Atypical

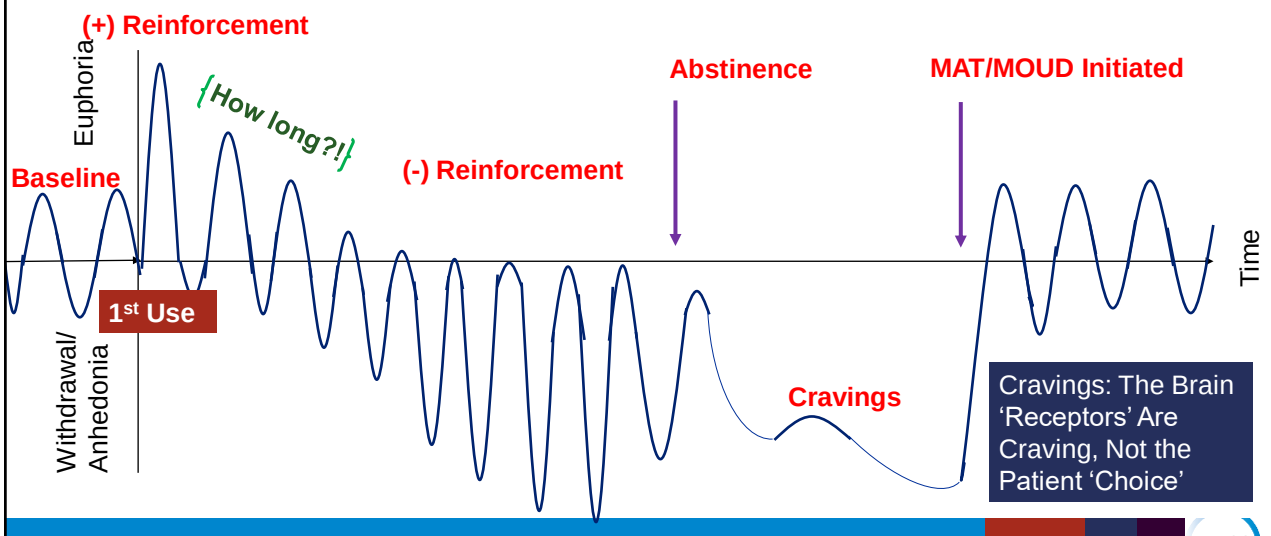


Use as a "Reward"

- Emotion over logic
- Over time = less dopamine "surge" = the "reward" is less "rewarding"



Dopamine… Over Time…

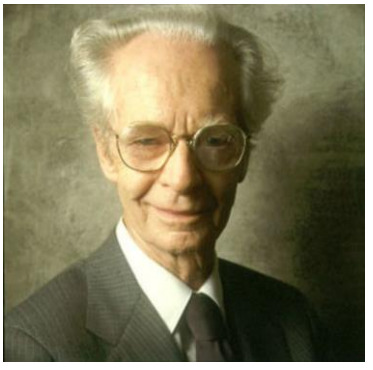


Use as a "Reward" cont.

- Poor inhibitory control and poor executive functioning mediated by prefrontal cortex (PFC)
  - Cannot "adult"
- Actions become stereotyped: drug seeking and drug taking become repetitive and ritualistic… not rewarding

Anti-Reward

- Activated when expected results do not materialize
- Activity increased with repetitive drug exposure causing negative mood with drug withdrawal
- Using to not get sick rather than using to get high



Use Begets More Use

But It's NOT A Choice

Stigma and Language

Stigma and Substance Use Disorder

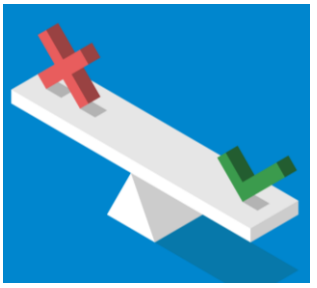
"There is no physical or psychiatric condition associated with social disapproval and discrimination than alcohol and/or other drug dependence"

Corrigan, Watson, and Miller. Journal of Family Psychology. 2006;20(2):239-246.

Stigma

- Experience of being held in contempt (shunned or socially invisible) because of a socially disapproved status
  - Labeling
  - Stereotyping
  - Social ostracism
  - Exclusion
  - Extrusion

Language



- Influences perceptions and judgement
- Study by Kelly et al:
  - More blame and punitive reactions when called "substance abuser" rather than a "person with a substance use disorder"
- ASAM DSM-5:
  - Changed "abuse & dependence" to "substance use disorder"
- White House Office of National Drug Control Policy (ONDCP) with NIDA, NIAAA, SAMHSA: "Changing the Language of Addiction" (2017)

Kelly JF, Dow SJ, Westerhoff C. Does our choice of substance-related terms influence perceptions of treatment need? An empirical investigation with 2 commonly used terms. J Drug Issues.2010;40(4):805-818

Changing the Language of Addiction

Instead of	Say
Drug abuser	Person with SUD (substance use disorder)
Clean	In recovery
Addiction	SUD
Addict	Person with SUD
Dirty urine	Person currently using substances
Clean urine	Person not currently using substances
Medication "replacement" or "substitute"	Medications for Opioid Use Disorder (MOUD) treatment
Junkie	Person with OUD (opioid use disorder)
La La Land	Intoxicated
Kicking	Withdrawal syndrome
Strung out	Intoxicated
Cop/fix	Obtain/purchase

Addiction/Chronic Pain

Overlap of Chronic Pain & OUD

- Study in Journal of Substance Abuse Treatment 2017:
  - Majority of patients diagnosed with OUD also had a diagnosis of chronic pain in a review of EMR (electronic medical record) data:
    - 5307 patients
    - 64.4%

Overlap of Chronic Pain & OUD cont.

- Study from 2019:
  - 10.3 million hospital admissions with a history of chronic pain
  - 680,631 had diagnosis of OUD (6.6%)
  - Female patients: ~54.5%

Overlap of Chronic Pain & OUD cont.

- Older adults group:
  - Largest jump from 2011-2015
  - 11.8% to 17%
  - Dual diagnosis of chronic pain and OUD

Overlap of Chronic Pain & OUD cont.

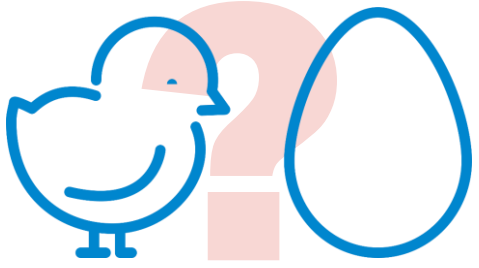
- Chronic pain may precede or follow the development of OUD
- Co-morbid mental health disorder falls between 60-70%

Overlap of Chronic Pain & OUD cont.

- Chronic pain patients who develop an OUD:
  - More often use benzodiazepines and similar medications, further increasing risk of accidental OD

Overlap of Chronic Pain & OUD cont.

- BUT… in MOST cases, chronic pain precedes the development of OUD



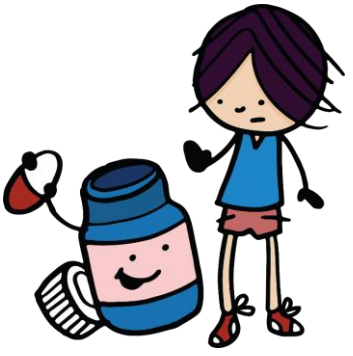
Overlap of Chronic Pain & OUD cont.

- 8-12% of people prescribed opioids for chronic pain develop an OUD

8-12%

Overlap of Chronic Pain & OUD cont.

- BUT:
  - 21-29% of patients misuse their opioids when prescribed for chronic pain



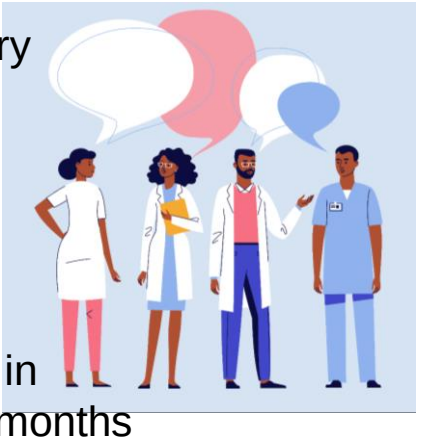
Overlap of Chronic Pain & OUD cont.

- A study by Tomoko et al (2018) “Drug dependence in patients with chronic pain”
  - Dominant factors in the development of a SUD
    - Pain catastrophizing
    - Disability

if...

Overlap of Chronic Pain & OUD cont.

- Authors believe that a multidisciplinary approach necessary to obtain improvement including:
  - Cognitive behavioral therapy (CBT)
  - Physical therapy (PT)
  - Other modalities
- This approach showed improvement in catastrophizing and anxiety in just 6 months



Overlap of Chronic Pain & OUD cont.

- Tomoko et al had a patient in the study with:
  - Chronic low back pain
  - Hip pain
  - Knee pain
  - Shoulder pain
- Chronic LBP and hip pain more likely to develop SUD-related to their treatment than other chronic joint complaints

Opioid Tapering Consideration

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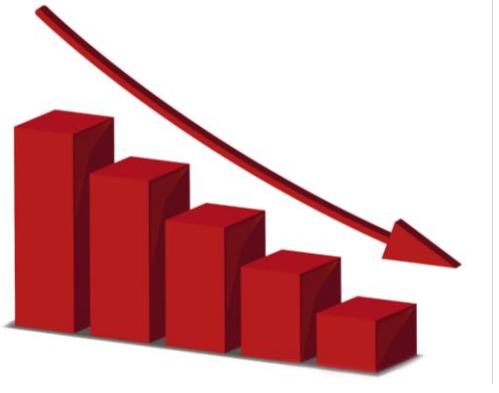
Opioid Tapering Consideration

- Taper definition:
  - Taper can mean to a "safer" level
  - Taper can mean to discontinuation of the opioid



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Opioid Tapering Consideration cont.

- **RISK > Benefit**
  - Older adult patient:
    - Increased risk of falls
    - Sleep apnea
    - Accidental overdose (often Dementia-related)
  - Sedative use:
    - Licit or illicit benzodiazepine
    - Sleeping aids (z-drugs)
    - "Heavy" alcohol use

Opioid Tapering Consideration cont.

- **RISK > Benefit**
  - Active SUD
  - High risk and/or aberrant behavior
    - Early refills (escalation of dose without provider approval)
    - Selling/diversion (legal charges)
    - Script forgery*
    - Overdose
    - 'Doctor shopping'#
  - Certain mental health concerns

*: Less with EMR #: Less with Prescription Drug Monitoring Program (PDMP)

Opioid Tapering Consideration

- No improvement of pain on opioids
  - Pain 10 out of 10 on opioids
  - Patient refuses or is non-compliant with adjunctive therapies
  - No **FUNCTIONAL IMPROVEMENT**

10/10

Opioid Tapering Consideration cont.

- Things to consider: conundrum of opioid tapering

"While long-term opioid therapy can lead to poorly controlled pain, poor psychosocial and functional status, psychiatric instability, aberrances and misuse among a proportion of patients, the logical therapeutic intervention of opioid tapering and discontinuation, on the other hand, can cause persistent worsening of these same issues"

Tapering 101

Opioid Tapering Consideration cont.

- Educate the patient
- Go slowly
- Support and listen to patient
- Monitor mental health
- Pause taper if necessary
- Never “cut off” patients
- Observe for signs/symptoms of OUD/SUD

Opioid Tapering Consideration cont.

- **Educate the patient**
- Go slowly
- Support and listen to patient
- Monitor mental health
- Pause taper if necessary
- Never “cut off” patients
- Observe for signs/symptoms of OUD/SUD

Opioid Tapering Consideration cont.

- Educate the patient:
  - What to expect with each dose reduction
  - Mild symptoms of withdrawal can be treated
  - Involve in plan for tapering
    - Short acting
    - Long acting
    - Etc.

Opioid Tapering Consideration cont.

- Educate the patient
- **Go slowly**
- Support and listen to patient
- Monitor mental health
- Pause taper if necessary
- Never “cut off” patients
- Observe for signs/symptoms of OUD/SUD

Opioid Tapering Consideration cont.

- Go slowly
  - CDC recommends at MOST >10% reduction [of MME] per week
  - 5-10% per week is widely accepted
  - Initially a taper may be faster (the first 50% dose reduction)
  - Fast tapers only if medically indicated, or necessary
    - *Certain psychiatric situations

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Opioid Tapering Consideration cont.

- Educate the patient
- Go slowly
- **Support and listen to patient**
- Monitor mental health
- Pause taper if necessary
- Never “cut off” patients
- Observe for signs/symptoms of OUD/SUD

Opioid Tapering Consideration cont.

- Support and discuss patient concerns:
  - Visits take time
  - Patients often have questions
  - Patients need reassurance
  - Adjunctive if necessary

Opioid Tapering Consideration cont.

- Educate the patient
- Go slowly
- Support and listen to patient
- **Monitor mental health**
- Pause taper if necessary
- Never “cut off” patients
- Observe for signs/symptoms of OUD/SUD

Opioid Tapering Consideration cont.

- Monitor mental health:
  - There is significant overlap of mental health issues and chronic pain.
  - Anticipate that the patient may have some instability

Opioid Tapering Consideration cont.

- Educate the patient
- Go slowly
- Support and listen to patient
- Monitor mental health
- **Pause taper if necessary**
- Never “cut off” patients
- Observe for signs/symptoms of OUD/SUD

Opioid Tapering Consideration cont.

- Pausing taper:
  - After a few decreases, patient may request a “break”
  - A pause can help the patient stabilize, both mentally and physically
  - This time can lead a patient to recognize their pain is:
    - The same as before the taper began
    - Occasionally better than before the taper began

Opioid Tapering Consideration cont.

- Educate the patient
- Go slowly
- Support and listen to patient
- Monitor mental health
- Pause taper if necessary
- **Never "cut off" patients**
- Observe for signs/symptoms of OUD/SUD

Opioid Tapering Consideration cont.

Never abruptly "Cut off" a patient*

*If a patient does not have their opioid in their urine occasionally on subsequently tested UDAS, then discontinuation is acceptable – this wouldn't be a taper

Opioid Tapering Consideration cont.

- Educate the patient
- Go slowly
- Support and listen to patient
- Monitor mental health
- Pause taper if necessary
- Never “cut off” patients
- **Observe for signs/symptoms of OUD/SUD**

Opioid Tapering Consideration cont.

- Observe for signs/symptoms of OUD/SUD
  - Urine drug screens
  - Aberrant behavior
  - PDMP
- MOUD and/or treatment referral may be indicated
- *Buprenorphine for OUD/Pain

Alternative Treatments for Chronic Pain

Alternative Treatments for Chronic Pain

- Non-Pharmacologic:
  - Exercise:
    - Walking
    - Yoga
    - Tai chi
    - Aqua therapy
  - Weight loss:
    - Especially in low back, knee and hip pain

Alternative Treatments for Chronic Pain cont.

- Non-Pharmacologic:
  - Physical therapy:
    - Tailored to area of concern
    - Patients are frequently referred-? Follow through/compliance
  - Other modalities:
    - Massage
    - Tens units
    - Pain stimulators

Alternative Treatments for Chronic Pain cont.

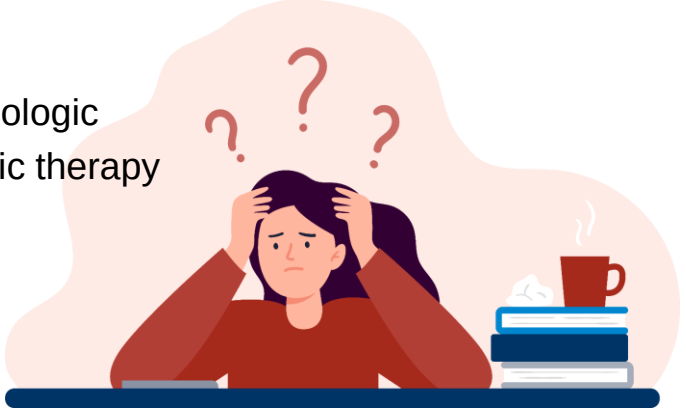
- Non-Pharmacologic:
  - Behavioral and psychological therapy:
    - Sleep hygiene techniques
    - Cognitive behavioral therapy
    - Biofeedback
    - Relaxation therapy
    - *Pain psychology

Alternative Treatments for Chronic Pain cont.

- Non-Pharmacologic:
  - Lifestyle changes
    - Diet (+/- weight loss)
    - Smoking cessation
    - Alcohol cessation
    - "Substance" cessation
  - Acupuncture
  - Chiropractic
  - Etc.

Alternative Treatments for Chronic Pain cont.

- Persistent pain?
  - Continue non-pharmacologic
  - Consider pharmacologic therapy



Alternative Treatments for Chronic Pain cont.

- Pharmacologic:
  - Nociceptive (tissue damage)
    - NSAIDs
    - Acetaminophen
    - Topical agents
      - Lidocaine
      - Capsaicin

Alternative Treatments for Chronic Pain cont.

- Pharmacologic:
  - Neuropathic
    - Anti-depressants:
      - Tricyclic antidepressants (TCAs)
      - Serotonin norepinephrine reuptake inhibitors(SNRIs)
    - Antileptics:
      - Gabapentinoids
      - Sodium channel agents:
        - » Lidocaine
        - » Carbamazepine
      - Botox- last line

Alternative Treatments for Chronic Pain cont.

- Referral for neuromodulation, interventional therapy or multidisciplinary team

Alternative Treatments for Chronic Pain cont.

Never underestimate the effect of current mental health or past trauma

Questions?

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Podcast: The Addiction Connection

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