The Addicted Pain Patient

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Disclosures

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Learning Objectives

• To understand the brain changes with addiction
• To understand the impact opioids have on brain reward
• To understand approaches to pain treatment in patients with addiction.

We Have Been Here Before

• Morphine was first isolated between 1803 and 1805 by Friedrich Serturner. Named after Morpheus the Greek God of dreams.
• 1853: The hypodermic syringe is invented. Inventor’s wife is first to die of injected drug overdose.
• 1898: Bayer chemist invents diacetylmorphine, names it heroin. Touted as the antidote to morphine addiction and non-addictive treatment for pain.
• 1900: Mail order heroin from Sears & Roebuck

Dreamland. Sam Quinones
Opioid Timeline

- 2014: Actor Philip Seymour Hoffman dies, focusing widespread attention for the first time on the United States’ opiate-abuse epidemic and the transition from pills to heroin in particular.
- 2014: The FDA approves a timed-release hydrocodone (Zohydro) painkiller with no abuse deterrent. It also approves Purdue’s the combined timed-release oxycodone with naloxone (Targiniq ER), the opiate-overdose antidote.
- 2015: Increased Risk of OUD related to Prescription Opioid Studies Released
- 2016: CDC Guidelines
- Increasing death rates due to increase in illicit fentanyl
- 2017 VA/DoD Guidelines
Prince Rogers Nelson, died April 21 at age 57, after being found unresponsive in an elevator at Paisley Park, his home and recording studio in Chanhassen, Minnesota.

The Scope of the Problem:

- In the 1960s, 80% of people entering treatment for heroin use started using heroin as their first opioid, while in the 2000s, 75% of people entering treatment for heroin use started using prescription opioids as their first opioid.
- Since 1999, the number of overdose deaths involving opioids quadrupled.
- 91 Americans die every day from an opioid overdose.
- Since 1999, the amount of prescription opioids sold in the U.S. nearly quadrupled, yet there has not been an overall change in the amount of pain that Americans report. Deaths from prescription opioids—drugs like oxycodone, hydrocodone, and methadone—have more than quadrupled since 1999.

EVIDENCE ABOUT OPIOID THERAPY

- Benefits of long-term opioid therapy for chronic pain not well supported by evidence.
- Short-term benefits small to moderate for pain; inconsistent for function.
Evidence For Harm

• Overdose
• Development of OUD – Risks increase with acute therapy and increase further with chronic therapy, especially with increased dose
• Increased all cause mortality
• Increased risk of hospital acquired pneumonia
• Significant side effects even when taken as directed
Opioid Use Disorder and Prescription Opioids

- Using electronic records from a large US health care system, we identified outpatients receiving five or more prescription orders for opioid therapy in the past 12 months for noncancer pain in 2008, we completed diagnostic interviews with 705 of these patients using the DSM-IV criteria. In the current study, we reassessed these results using the final DSM-5 criteria.
- Lifetime prevalence of "any" prescription opioid-use disorder in this cohort was 41.3%.
- The best predictors were age less than 65 years, current pain impairment, trouble sleeping, suicidal thoughts, anxiety disorders, illicit drug use, and history of substance abuse treatment.

Boscarino et al. Substance Abuse and Rehabilitation 2015:6 83–91

An odds ratio (OR) is a measure of association between an exposure and an outcome. The OR represents the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure.

- OR = \( \frac{a/c}{b/d} \) = \( \frac{a \times d}{b \times c} \)
- OR > 1 Exposure associated with higher odds of outcome
- OR < 1 Exposure associated with lower odds of outcome
- OR = 1 Exposure does not affect odds of outcome
- OR > 1 Exposure associated with higher odds of outcome
- OR < 1 Exposure associated with lower odds of outcome
Opioid Prescribing and OUD

- Patients with CNCP prescribed opioids had significantly higher rates of OUDs compared to those not prescribed opioids. Effects varied by average daily dose and days supply:
  - low dose, acute OR=3.03
  - low dose, chronic OR=14.92
  - medium dose, acute OR =2.80
  - medium dose, chronic OR=28.69
  - high dose, acute OR=3.10
  - high dose, chronic OR=122.45

- Among individuals with a new CNCP episode, prescription opioid exposure was a strong risk factor for incident OUDs; magnitudes of effects were large. Duration of opioid therapy was more important than daily dose in determining OUD risk.


Powerful - Survival Based
- Limbic system activation - frontal cortex deactivation
- Strong sensory and memory linkage
- Behavioral learning
- Body movement control
- Heightened attention, and focus on reward attainment
Normal Pleasure Response

nucleus accumbens

vTR

substantia nigra

Increased Dopamine Release

Pleasure/Motivation Response

Brain Reward Pathway

substantia nigra

locus coeruleus

Psychoactive Addictive Drugs Act on this Pathway

Brain Reward Pathway

substantia nigra

locus coeruleus

Drug

Dopamine surge!!!
The "Wow!!" is a big reason people take drugs but other things also happen...

Our brains are wired to ensure that we will repeat life-sustaining activities by associating those activities with pleasure or reward.
Long-term drug exposure impairs brain functioning

1. Release 2 to 10 times more dopamine than natural rewards (eating, sex and social activities).
2. Powerful reward strongly motivates people to take drugs again and again.
3. The brain adjusts - producing less dopamine and reducing the number of receptors that can receive signals.
4. The ability to experience ANY pleasure is reduced.

Continued Drug Use – Increased Q/F

- Sensitization
  - Substantia nigra
  - Reward System becomes hypersensitized to effects of the drug & to associated stimuli (people, places or things)
  - Structure changes:
    - Craving
    - Environmental cues

Continued Drug Use – Increased Q/F

- Locus coeruleus
  - A “molecular switch” is thrown in the brain
    - Sensitization, Craving and Relapse
    - Loss of control over drug use
    - Compulsive drug seeking behavior

Wow!!!

- Sensitization
- Reward System becomes hypersensitized to effects of the drug & to associated stimuli
- Structure changes:
  - Craving
  - Environmental cues

A “molecular switch” is thrown in the brain
- Sensitization, Craving and Relapse
- Loss of control over drug use
- Compulsive drug seeking behavior
Neocortex (modern man)

1. Reasoning and learning
2. Consciousness
3. Motor and sensory
4. Memory
5. Language
6. Abstract thought
7. Reason and plan
8. Ability to execute both yes and no
9. Both on and off

Limbic and Reptilian

1. Survival
2. Emotions
3. Autonomic functions
4. Reward and appetite
5. Reliable and rigid
6. Only able to execute yes
7. Always on
8. Selectively accesses to access continuously
9. Unable to say no
10. Always on

Aberrant Dysfunctional Addiction Self (The Disease)

1. Survival, distorted concept of survival
2. Hyper reward, hyper appetite
3. Manipulates emotions
4. Automatic functions
5. Hyper rigid, hyper reliable
6. Can access selective memories
7. Selectively accesses motor and sensory for continued hyper-rewards
8. Unable to say no
9. Always on
Opioids, The 800lb Gorilla in Pain Care

American Society of Addiction Medicine Definition

Short Definition of Addiction:
- 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.

- Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one’s behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.

DSM-V Definition: Substance Use Disorders

1. Using larger amounts or over a longer period of time than intended.
2. Persistent desire or unsuccessful efforts to cut down or control.
3. Great deal of time spent in obtaining, using, and recovering from.
4. Craving or a strong desire or urge to use
5. Recurrent use resulting in failure to fulfill major role obligations
6. Continued use despite persistent or recurrent social or interpersonal problems caused by or exacerbated by use
7. Important social, occupational, or recreational activities are given up or reduced because of use
8. Recurrent use in physically hazardous situations
9. Continued use despite knowledge of having a persistent or recurrent physical or psychological problems that is caused or exacerbated by use
10. Tolerance defined by need for increased amounts to achieve desired effect or markedly diminished effect with continued use of the same amount
11. Withdrawal either with withdrawal symptoms, or continued use to relieve or avoid withdrawal
**DSM-V Definition: Substance Use Disorder**

- **Mild:** Presence of 2-3 symptoms
- **Moderate:** Presence of 4-5 symptoms
- **Severe:** Presence of 6 or more symptoms

**Basic strategy**

- Screening and boundary setting
- Minimize reinforcement
- Tight monitoring for SUD activation
- Referral for SUD treatment

**FIRST: DRUGS TO AVOID**

- Anything that is too brain rewarding
- Benzodiazepines - impair memory, mood, add risk, “downward spiral”
- Oxycodone
- Hydromorphone (Dilaudid)
- Short acting/rapid onset opioids
Basic strategy

- Screening and boundary setting
  - Minimize reinforcement
  - Tight monitoring for SUD activation
  - Referral for SUD treatment

Screening Instruments

- Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST)
- Alcohol Use Disorders Identification Test (AUDIT)
- AUDIT-C
- CAGE (Cut down, Annoyed, Guilty, Eye-opener)
- CRAFFT (Car, Relax, Alone, Forget, Family or Friends, Trouble)
- Drug Abuse Screening Test (DAST)
- DAST-A
- Fagerstrom Test for Nicotine Dependence
- Michigan Alcohol Screening Test (MAST)
- NIDA Drug Use Screening Tool
- Problem-Oriented Screening Instrument for Teenagers (POSIT)
- TWEAK (Tolerance, Worried, Eye-openers, Amnesia, [K] Cut down)

C = have you ever felt the need to cut down on your drinking?
A = have people annoyed you by criticizing your drinking?
G = have you ever felt guilty about your drinking?
E = Have you ever needed an eye opener in the morning?

If 2 are positive ~70% specific & ~70% sensitivity for alcohol addiction
May fail to detect low but risky levels of drinking.
### AUDIT Questionnaire

Circle the number that comes closest to your answer:

1. How often do you have a drink containing alcohol?
   - (0) never
   - (1) monthly or less
   - (2) Two to four times a month
   - (3) 1 or 2
   - (4) 3 or 4
   - (5) 5 or 6

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   - (0) 1 or 2
   - (1) 3 or 4
   - (2) 5 or 6

3. How often during the past year have you failed to do what was normally expected from you because of drinking?
   - (0) never
   - (1) less than monthly
   - (2) monthly
   - (3) 1 or 2
   - (4) 3 or 4
   - (5) 5 or 6

4. How often during the past year have you had a feeling of guilt or remorse after drinking?
   - (0) never
   - (1) less than monthly
   - (2) monthly
   - (3) 1 or 2
   - (4) 3 or 4
   - (5) 5 or 6

5. How often during the past year have you been unable to remember what happened the night before because you had been drinking?
   - (0) never
   - (1) less than monthly
   - (2) monthly
   - (3) 1 or 2
   - (4) 3 or 4
   - (5) 5 or 6

6. Have you or someone else been injured as a result of your drinking?
   - (0) No
   - (2) Yes, but not in the past year
   - (4) Yes, during the past year

7. Has a relative or friend or a doctor or other health worker been concerned about your drinking or suggested you cut down?
   - (0) No
   - (2) Yes, but not in the past year
   - (4) Yes, during the past year

### CDC - Determining When to Initiate or Continue Opioids for Chronic Pain

1. Nonpharmacologic therapy and non-opioid pharmacologic therapy are preferred for chronic pain. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient. If opioids are used, they should be combined with nonpharmacologic therapy and nonopioid pharmacologic therapy, as appropriate.

2. Before starting opioid therapy for chronic pain, clinicians should establish treatment goals with all patients, including realistic goals for pain and function, and should consider how therapy will be discontinued if benefits do not outweigh risks. Clinicians should continue opioid therapy only if there is clinically meaningful improvement in pain and function that outweighs risks to patient safety.

3. Before starting and periodically during opioid therapy, clinicians should discuss with patients known risks and realistic benefits of opioid therapy and patient and clinician responsibilities for managing therapy.
4. When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids.

5. When opioids are started, clinicians should prescribe the lowest effective dosage. Clinicians should use caution when prescribing opioids at any dosage, should carefully reassess evidence of individual benefits and risks when considering increasing dosage to ≥50 morphine milligram equivalents (MME)/day, and should avoid increasing dosage to ≥90 morphine milligram equivalents (MME)/day/day or carefully justify a decision to titrate dosage to ≥90 morphine milligram equivalents (MME)/day/day.

6. Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should prescribe the lowest effective dose of immediate-release opioids and should prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids. Three days or less will often be sufficient; more than seven days will rarely be needed.

7. Clinicians should evaluate benefits and harms with patients within 1 to 4 weeks of starting opioid therapy for chronic pain or of dose escalation. Clinicians should evaluate benefits and harms of continued therapy with patients every 3 months or more frequently. If benefits do not outweigh harms of continued opioid therapy, clinicians should optimize other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids.

8. Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk factors for opioid-related harms. Clinicians should incorporate into the management plan strategies to mitigate risk, including considering offering naloxone when factors that increase risk for opioid overdose, such as history of overdose, history of substance use disorder, higher opioid dosages (≥50 MME/day), or concurrent benzodiazepine use, are present. Offer Naloxone to Patients When Factors That Increase Risk for Opioid-Related Harms Are Present.

High Risk Patient Populations Include:
- Patients with Sleep-Disordered Breathing, Including Sleep Apnea
- Pregnant Women
- Patients with Renal or Hepatic Insufficiency
- Patients Aged ≥65 Years
- Patients with Mental Health Conditions
- Patients with Substance Use Disorder
- Patients with Prior Nonfatal Overdose

9. Clinicians should review the patient’s history of controlled substance prescriptions using state prescription drug monitoring program (PDMP) data to determine whether the patient is receiving opioid dosages or dangerous combinations that put him or her at high risk for overdose. Clinicians should review PDMP data when starting opioid therapy for chronic pain and periodically during opioid therapy for chronic pain, ranging from every prescription to every 3 months.

10. When prescribing opioids for chronic pain, clinicians should use urine drug testing before starting opioid therapy and consider urine drug testing at least annually to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs.

11. Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.

12. Clinicians should offer or arrange evidence-based treatment (usually medication-assisted treatment with buprenorphine or methadone in combination with behavioral therapies) for patients with opioid use disorder.
ORT

- Opioid Risk Tool This tool should be administered to patients upon an initial visit prior to beginning opioid therapy for pain management. A score of 3 or lower indicates low risk for future opioid abuse, a score of 4 to 7 indicates moderate risk for opioid abuse, and a score of 8 or higher indicates a high risk for opioid abuse.

<table>
<thead>
<tr>
<th>Mark each box that applies</th>
<th>Female</th>
<th>Male</th>
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<tbody>
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<td>Illegal drugs</td>
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<td>Personal history of substance abuse</td>
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<td>Age between 20–45 years</td>
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<td>History of psychiatric sexual abuse</td>
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<td>AIDS, ODS, bipolar, schizophrenia</td>
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<td>Depression</td>
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<tr>
<td>Scoring totals</td>
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SOAPP-R (The Screener and Opioid Assessment for Patients with Pain)

1. The goal to address the limitations of the SOAPP v.1, have less transparent items to reduce overt patient deception.
2. Alpha version of the SOAPP-R was developed with 142 questions.
3. Beta version with 97 questions was administered to 283 chronic pain patients on long-term opioid therapy. Items were evaluated based on data collected at follow-up, including correlation with the Aberrant Drug Behavior Index (ADBI), derived from interview data, physician ratings, and urine toxicology screens.
4. Twenty-four items were retained and comprise the final SOAPP-R.
<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>Score</th>
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<tbody>
<tr>
<td>Never 0, Seldom 1, Sometimes 2, Often 3, Very Often 4</td>
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<tr>
<td>1. How often do you have mood swings?</td>
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<td>2. How often have you felt a need for higher doses of medication to treat your pain?</td>
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<td>3. How often have you felt impatient with your doctors?</td>
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<td>4. How often have you felt that things are just too overwhelming that you can’t handle them?</td>
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<td>5. How often is there tension in the home?</td>
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<td>6. How often have you counter pain pills to see how many are remaining?</td>
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<td>7. How often have you been concerned that people will judge you for taking pain medication?</td>
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<td>8. How often do you feel bored?</td>
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<td>9. How often have you taken more pain medication that you were supposed to?</td>
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<td>10. How often have you worried about being left alone?</td>
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<td>11. How often have you felt a craving for medication?</td>
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<td>12. How often have others expressed a concern over your use of medication?</td>
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<td>13. How often have any of your close friends had a problem with alcohol or drugs?</td>
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<td>14. How often have others told you that you had a bad temper?</td>
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<td>15. How often have you felt consumed by the need to get pain medication?</td>
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<td>16. How often have you run out of pain medication early?</td>
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<td>17. How often have others kept you from getting what you deserve?</td>
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<td>18. How often, in your lifetime, have you had legal problems or been arrested?</td>
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<td>19. How often have you attended an AA or NA meeting?</td>
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<td>20. How often have you been in an argument that was so out of control that someone got hurt?</td>
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<td>21. How often have you been sexually abused?</td>
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<td>22. How often have others suggested that you have a drug or alcohol problem?</td>
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<tr>
<td>23. How often have you had to borrow pain medications from your family or friends?</td>
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<tr>
<td>24. How often have you been treated for an alcohol or drug problem?</td>
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**Current Opioid Misuse Measure (COMM)**

Development and Validation of the Current Opioid Misuse Measure, Stephen F. Butler, Simon H. Budman, Kathrine C. Fernandez, Brian Houle, Christine Benoit, Nathaniel Katz, and Robert N. Jamison

1. An initial pool of 177 items from 26 pain management and addiction specialists.
2. Concept mapping identified six primary concepts underlying medication misuse.
3. Twenty-two pain and addiction specialists rated the items on importance and relevance, resulting in a 40-item alpha COMM.
4. Final item selection was based on 227 patients taking opioids for CNCP, using the alpha version of the COMM, the Prescription Drug Use Questionnaire (PDUQ) interview, and urine toxicology screening. From the 40 items alpha COMM, 17 items appeared to adequately measure aberrant behavior, demonstrating excellent internal consistency and test-retest reliability.
### Never 0, Seldom 1, Sometimes 2, Often 3, Very Often 4

1. How often have you had trouble with thinking clearly or had memory problems?

2. How often do people complain that you are not completing necessary tasks? (i.e. doing things that need to be done, such as going to class, work, or appointments)

3. How often have you had to go to someone other than your prescribing physician to get sufficient pain relief from your medications. (i.e. another doctor, the Emergency Room)

4. How often have you taken your medications differently from how they are prescribed?

5. How often have you seriously thought about hurting yourself?

6. How much of your time was spent thinking about opioid medications? (having enough, taking them, dosing schedules, etc.)

7. How often have you been in an argument?

8. How often have you had trouble controlling your anger? (e.g. road rage, screaming, etc.)

9. How often have you needed to take pain medications belonging to someone else?

10. How often have you been worried about how you’re handling your medication?

11. How often have others been worried about how you're handling your medications?

12. How often have you had to make an emergency phone call or show up at the clinic without an appointment?

13. How often have you gotten angry with people?

14. How often have you had to take more of your medications than prescribed?

15. How often have you borrowed pain medication from someone else?

16. How often have you used your pain medication for symptoms other than for pain? (e.g. to help you sleep, improve your mood, or relieve stress)

17. How often have you had to visit the Emergency Room?

### The Pain Treatment Contract

- Mandatory for patients on chronic opioids, Absolutely essential for addicted pain patients.
- Key points:
  - Define pain treatment goals
  - Lost, stolen, misplaced prescription
  - One pharmacy
  - Urine drug screens, pill counts, random urine drug screens
  - Zero tolerance for alcohol, street drugs, filling any pain related medications from any other provider
  - Family involvement
  - Recovery activities
  - Referral for treatment
  - Discharge from clinic
First Visit- can take time

• Feel at ease-get to know them
• In general...no opioids
• Function...what do you want to do that pain is preventing you from doing?
• Drug screen, pill bottles, and counts.
• My philosophy...are we compatible? Evidence based medicine, pt. preferences, trial, one change at a time, dose of realism, activity, explain monitoring, long acting vs. short acting, benzos, safe adjuncts, answer not in a pill, psychiatric comorbidity treatment, PCP, need for non-medicine therapy. Teaching, addiction expertise, anonymity?. Discuss risks/benefits...OK are we still compatible?

First visit...cont.

• H&P
• Beginnings of a plan, medications, procedures, PT, tests, referrals, rehab?
• Agreements need to be signed
• + UDS...Drug abuse or addiction? Not screening out patients. Detox or Addiction treatment
• “Meet patients where they are at” S.T.
• Now...patient knows where we are coming from...are we still compatible?

Basic strategy

• Screening and boundary setting
  • Minimize reinforcement
    • Tight monitoring for SUD activation
    • Referral for SUD treatment
Some Adjuncts and Alternatives to Opioid Therapy

- Antidepressants: SNRI, TCA
- Membrane Stabilizers
- Acetaminophen
- Safe Medications for sleep – Non benzodiazepine
- Topical Agents
- NSAIDS
- Heat
- Physical therapy
- Exercise
- Cognitive-behavioral therapy
- TENS Unit
- Mindful Meditation
- Yoga
- Acupuncture

Balancing Benefits and Risks of Opioid Therapy

Proper patient selection
Trial approach to opioid therapy
Proper assessment and monitoring
Increased rate of misuse, abuse, and diversion

Buprenorphine

- Various preparations:
- High dose SL for addiction. 2 and 8mg
  - SL: Suboxone tab/film, Subutex
  - Low dose transdermal for pain. 5,10,20 mcg/h
  - 7 day Patch: Butrans…FDA appr for pain
  - Implantable: Probuphine

There seems to be a difference between high dose (SL) and low dose transdermal…Further increases confusion.
Clinical Implications - Addiction and Pain

- Opioid replacement: Decreases cravings, ameliorates PAW, and blocks other opioids from attaching. Office based.
- Excellent pain medication - pain/addiction often coexist...don't need special DEA to prescribe for pain. SL use TID dosing. Buprenorphine (Butrans) q 5 days. Possibly near full mu agonist at Butrans dosing. 40+ times MSOA
- Simplifies pain dosing...breakthroughs? - OIH implications/ neuropathic pain - Kappa antagonism
- Employment/school drug tests - stigma
- Ceiling effect on respiratory depression...
- May be less euphorogenic than 100% Mu agonist
- Mentation

Less overdose risk...but not “0”

- Reports from France, where only buprenorphine without naloxone (Subutex) tablets have been available for years.
- Overdose when: Patients dissolved and injected buprenorphine tablets and/or used with very high potency benzodiazepines
- Finland - replaced heroin. 2000 60 OD, past two years, 1 death (heroin)

Abuse Potential of Buprenorphine

- Buprenorphine is reinforcing!
- Buprenorphine/Naloxone has IV abuse potential (Comer et al) although less so than with buprenorphine alone
- Intranasal buprenorphine is reinforcing (Jones et al)
**Buprenorphine Misuse and Diversion in US**

- Initially reports were positive with minimal concern.
- More recent literature shows dramatic increase in concern and more IV use of buprenorphine.
- Poison control centers report 400% increase in buprenorphine reports.
- Drug Abuse Warning Network (2006-2011): 384% increase in buprenorphine-related ED visits

**Appalachian community study**

- Studied 503 buprenorphine users
  - Of those, 70.1% used to get high
  - 46.5% used diverted buprenorphine over the 6 month follow-up
  - Most common sources were dealers and friends

**Buprenorphine Misuse 2008-2013**

- Greater than 10k patient surveyed at greater than 150 treatment centers with greater than 250 interviews
- Although buprenorphine not usually primary drug of choice, rate of buprenorphine use to get high quadrupled from 2008-2013
- 4th most commonly diverted drug (oxycodone, hydrocodone, alprazolam, buprenorphine, methadone)

*Drug and Alcohol Dependence 142 (2014) 98–104*
Buprenorphine Misuse 2008-2013
• Initially tablets most misused, HOWEVER, film misuse increased sharply when introduced. Patches and solution are rarely misused.
• Increase misuse associated more with heroin than with other opioids
• As buprenorphine misuse increases, methadone misuse decreases
• 34.4% of buprenorphine misuse is IV and not just plain buprenorphine, although mono more common

Methadone
• Like buprenorphine and naloxone combined (Suboxone®)...long T1/2 but only 6-8 hours of good analgesia
• Unpredictable cross tolerance and metabolism
• 23 hour T1/2, but slow onset. Teach patients, wait 5 days to change dose.
• NMDA antagonists (D isomer)
• QT prolongation...EKG?...pre-exist CV, dosage over 100mg/d, other QT prolongers...ex Geodon

Basic strategy
• Screening and boundary setting
• Minimize reinforcement
• **Tight monitoring for SUD activation**
• Referral for SUD treatment
Red Flags

- Personal Hx
- Long distances
- Focus on opioids
- Narrowing the choices
- No records/documentation
- Positive UDS
- Nebulous dx/S
- Multiple problems
- "Embellishment"
- Problems with other providers
- Hep B, C, HIV
- Medication preference flags

- Abuse/PTSD
- Cigarettes
- "Profiling" (hemp, certain tattoo, friends)
- Track marks
- "Allergies"
- Too much knowledge
- Drug language
- Drug pref vs finances
- Early use cigs, MJ, ETOH
- 6th Sense

Red Flags

- UDS..."shy bladder" temp, clarity etc, EFG, hair
- Lost, stolen meds-police report, responsibility
- Overuse...underuse
- Not helping, dose escalating, "intolerances"
- Late calls, Friday PM calls
- Worrisome medication requests
- Rejecting non-medications suggestions
- Quality of life issues, relationships
- Missing appointments

Follow up visits

- 2 weeks then monthly
- UDS, breathalyzer, vitals, PE
- Interval report "5 A's"
  - Analgesia, activity, adverse drug effects, aberrancy, affect
- Boundaries...be careful: exams, procedures
- Recovery, collaterals
Urine Screening

- Testing should be random
- Need tamper proof POC cups
- Need GCMS or LCMS confirmation
- Testing only “suspects”
  - Open to biases (e.g., disproportionate testing of minorities).
  - Misses 50% of those using unprescribed or illicit drugs.

Katz NP. American Academy of Pain Medicine 2001

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