WHY ARE SO MANY PEOPLE CHOOSING TO PLAY RUSSIAN ROULETTE?

Maybe it is not a choice: The Truth and Consequences Behind the Fentanyl Epidemic

Raymond M. Pomm MD
THE BASICS
OPIOIDS (OPIATES?)
OPIOIDS

Compounds with agonist effects at the mu opioid receptor:

- Opiates: natural substances derived from opium: morphine, codeine and thebaine (paramorphine, similar to both morphine and codeine used as a base compound for many semi-synthetic opioids).
- Semi-synthetic opioids: modifications of a naturally occurring opiate: heroin from morphine; buprenorphine and oxycodone from thebaine.
- Synthetic opioids: fully synthetic compounds: methadone and fentanyl.
Historical Perspective

- Civil War: Introduction of the hypodermic needle and morphine analgesia.
- Harrison Act (1914): prohibition on prescription of narcotics (opioids) to addicts:
  - Many physicians prosecuted/fears of opioid prescribing
  - Increased drug trafficking and crime associated with opiate (heroin) and cocaine abuse
- 1974: 1st methadone maintenance program for opioid addiction.
"An Act To provide for the registration of, with collectors of internal revenue, and to impose a special tax on all persons who produce, import, manufacture, compound, deal in, dispense, sell, distribute, or give away opium or coca leaves, their salts, derivatives, or preparations, and for other purposes." The courts interpreted this to mean that physicians could prescribe narcotics to patients in the course of normal treatment, but not for the treatment of addiction.
In 1971 President Richard Nixon officially declared “a war on drugs” and in 1973 he created the DEA to coordinate the efforts of all other agencies.

In 1984 Nancy Reagan launched her “Just Say No” campaign.

1989 President George H. W. Bush presented a national drug control strategy that included the largest budget increase in U.S. history. Unfortunately, even though there were large seizures of drugs and many individuals imprisoned, we have continued to see an increase in drug use.
Abuse of Prescription Opioids

In 1995, Purdue Pharma developed OxyContin. After an aggressive marketing campaign, this drug became a significant option for chronic pain management. In this regard, physicians began prescribing this drug in excess quantities. In its original form, OxyContin was crushable which allowed addicts to snort or inject very large quantities of oxycodone at one time. OxyContin became the most widely abused prescription drug in history. This was the beginning of what we now know as a familiar term: prescription drug abuse.
Abuse of Prescription Opioids

- Eventually, Purdue Pharma reformulated OxyContin to a non-crushable form, but it was too late.
  - Headline NPR (March 3, 2022): Purdue Pharma, Sacklers reach $6 billion deal with state attorneys general

- Pill mills were full throttle, hospitals and emergency departments were attempting to achieve an expected smiley face for their patients through evaluation of the 5th vital sign.
  - JCAHO (Joint Commission on Accreditation of Healthcare Organizations)
Abuse of Prescription Opioids

• Then we saw the rise of oxycodone! When attention was brought to that drug as a problem.........
• Methadone use for pain management began to be prescribed!
• Eventually, oxycodone re-emerged as leader.

Wow! What were we chasing?
Abuse of Prescription Opioids

People were dying:

• in 1999 there were 4,030 opioid-related deaths and in 2010 there were 16,665 but the U.S. population only increased by less than 10%.
• During this time, an acetaminophen-free hydrocodone was being developed.
• The FDA approved Zohydro made by Pernix Therapeutics anyway! And, lo and behold, Purdue Pharma came back with its own version; Hysingla.
Abuse of Prescription Opioids

Due to the prescription drug abuse, states had been clamping down on pain clinics. Many states developed their own rules for pain and also prescription drug monitoring programs. Unfortunately, Florida was very late in that endeavor. While neighboring states were clamping down, bus loads of people were coming to Florida pain clinics for those excessive quantities of opioids and benzodiazepines (this busing of individuals from out of state to Florida was called the “Oxycontin Express”).
Abuse of Prescription Opioids

- The Federal Centers for Disease Control labeled Florida the epicenter of prescription drug diversion because it had weak regulatory oversight of pain management practices, limited regulation of physician dispensing habits and, most importantly, no prescription drug monitoring program.
- Florida became known as the “Pill Mill” capital of the country.
Abuse of Prescription Opioids

• According to DEA
• The state had over 900 unregulated pain management clinics in 2010.
• These clinics employed 90 of the top 100 oxycodone dispensing physicians in the country.
• Of the top 50 oxycodone dispensing clinics in the U.S., 49 were located in Florida and were selling more than 1 million oxycodone pills a month.
Before new regulations were enacted by the Florida legislature, it was projected from state medical examiners reports that about 10 persons each day died of prescription drug overdose, primarily due to oxycodone abuse.
Abuse of Prescription Opioids

• Florida’s prescription drug monitoring program, E-FORCSE (the Electronic-Florida Online Reporting of Controlled Substances Evaluation), eventually began operation in 2011.

As of June 2016 only 23.7% of all licensed healthcare practitioners were registered to use it! Now it is required!
Abuse of Prescription Opioids

In addition, in 2011 Florida passed the following:
Florida TITLE 64 DEPARTMENT OF HEALTH
DIVISION 64B8 BOARD OF MEDICINE CHAPTER
64B8-9 STANDARDS OF PRACTICE FOR MEDICAL
DOCTORS; 64B8-9.013. Standards for the Use of
Controlled Substances for the Treatment of Pain.
Abuse of Prescription Opioids

- Since 1999: 300% increase in the sales of opioids in U.S.
- 2008: surge in deaths from overdoses (14,800); more than for heroin and cocaine combined.
- 2009: 475,000 emergency dept. visits for adverse events related to misuse of opioids (doubling in 5 years).
- CDC: Mixing of drugs was found in half of prescription opioid-related deaths.
- Past year heroin use increased from 373,000 (2007) to 669,000 (2012).
Unfortunately, the black-market business machine made its next move; heroin became much cheaper than prescription opioids.

Our local methadone clinics began seeing increasing numbers of individuals using heroin and not the all too familiar and popular prescription opioids.

The next concern became Krokodil (Desomorphine) (“From Russia with Love” and known as the “poor man’s heroin” in Russia or “the world’s deadliest drug”). This drug is highly addictive and made by combining codeine with ethanol, gasoline, red phosphorus, iodine, hydrochloric acid and paint. Unfortunately, those individuals who used this drug rapidly witnessed their flesh being eaten away and eventual death.
KROKODIL
Thankfully, what was thought to be a minor miracle occurred as we only saw its introduction to this country in 2013 and it spread no further. One might speculate that the reason why it did not spread any further is that another drug came along which is the cause of our present epidemic: *Fentanyl*.
AMA (Jan 11, 2022) states that “... fentanyl is fueling the nation’s drug overdose epidemic and primarily responsible for the deaths of more than 100,000 people last year alone.”
Figure 2. 12 Month-ending Provisional Number of Drug Overdose Deaths by Drug or Drug Class: United States
In 2015, Florida Heroin Deaths escalated to 779, a 74% increase from 2014. Fentanyl deaths increased over 69% (538 to 911) from 2014-15.

In 2015, North Florida Heroin deaths rose to 45, a 181% increase from 2014. Fentanyl deaths increased nearly 70% (33 to 56) from 2014-15.

Overdose victims – 2015 - JFRD responded to 2,114; 2016 – JFRD responded to 3,114- 911 calls had tripled.

In 2015 – cost of transporting OD victims was $1,895,388.00; 2016 cost $3,143,376.00 with the trend projections reaching $4,451,124.00 in 2017.

Naloxone use by Paramedics had increased fivefold with one-tenth of medical supply budget spent on naloxone.
In 2016 Duval County had 106 murders and 464 overdose deaths (up from 201 in 2015).

Age distribution of drug related deaths in Duval County - 20-60 years old with 86.9% being Caucasian.

The morgue continues to be over capacity! 1900% increase in OD deaths due to heroin since 2011.

Duval had the 2nd highest in the state for NAS cases in 2016

A sampling of urines from a lab servicing the nation analyzing positive heroin samples in Florida from 2013 to 2016 found a 56.41% increase in associated fentanyl positivity (not testing for the other IMF’s). Gateway detox: 100% of all heroin + urines are + for Fentanyl.

In 2017 there were almost 2 deaths per day in Duval County.
Jacksonville Fire & Rescue Department Overdose Responses by Month

Source: Jacksonville, Florida Fire & Rescue Department, Asst. Chief Mark Ryan. A 9-1-1 call dispatched as overdose and/or naloxone administration does not necessarily confirm an overdose, opioid use or opioid misuse. Definitions: Dispatched as Overdose = a 9-1-1 call in which the caller stated that the victim was suffering from a known or suspected overdose. Naloxone Administered = the count of naloxone administered, which may include repeat doses to same patient. Opioid-Related Overdose = the following type of incidents: naloxone administered and nature of call at scene is “injection/poisoning/OI”, or naloxone administered and clinical impression is “opiod-related”, or overdose reported with the following substances: “Fentanyl, Heroin, or Heroin”. Each of these definitions and events are independent of the other and are not mutually exclusive.
Sources and Destinations
In the last three years, the number of babies with neonatal addiction at UF Health is up from 10 per 1,000 to 15 or 16 per 1,000.

The average LOS is 16 to 17 days and can stay up to two months.

And their mothers often didn’t expect or want babies: “90% of newborns battling the demon of addiction, passed via fallopian tubes, were products of ‘unintended pregnancies’.”
Florida’s Response: HB 21
(7/1/2018)

- Education a late but great idea!
- Limiting prescriptions to 3 to 7 days for acute pain; possibly effective but not complete!......What will happen when those addicted to pain pills can no longer get their prescriptions?
- This Bill was needed in the late 90’s for the pill opioid epidemic......we need more than this Bill due to the Fentanyl epidemic!!!
- STR and SOR only a beginning.....I hope!
By Jan Hoffman
March 3, 2022
Members of the billionaire Sackler family and their company, Purdue Pharma, have reached a deal with a group of states that had long resisted the company’s bankruptcy plan — a crucial step toward funneling billions of dollars from the family’s fortune to addiction treatment programs nationwide, according to a court filing on Thursday.

If Judge Robert Drain, who has presided over Purdue’s bankruptcy proceedings in White Plains, N.Y., approves the agreement, the Sacklers would pay as much as $6 billion to help communities address the damage from the opioid crisis. In return, Sackler family members would get the prize they insisted upon for nearly three years: an end to all current and future civil claims against them over the company’s prescription opioid business.
Opioid Pharmacology

- Types of opioid receptors:
  - Mu
  - Kappa
  - Delta
- Addictive effects occur through activation of mu.
- Role of kappa and delta receptors in the addictive process are not well defined
# Mu Receptor Drugs

<table>
<thead>
<tr>
<th>Morphine</th>
<th>Heroin</th>
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<tbody>
<tr>
<td>Methadone</td>
<td>Buprenorphine</td>
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<tr>
<td>Hydromorphone (dilaudid)</td>
<td>Oxycodone</td>
</tr>
<tr>
<td>Codeine</td>
<td>Hydrocodone</td>
</tr>
<tr>
<td>Fentanyl</td>
<td></td>
</tr>
</tbody>
</table>
The Centerpiece of Addiction

Dopamine
Neurophysiology

The Action of Opioids
Brain Reward:
Ventral Tegmental Area (VTA)

Location of dopamine cell bodies
Projects to nucleus accumbens (reward center) and prefrontal cortex (executive control)
Brain Reward:
Nucleus Accumbens (NA)

The “reward center” of the brain.
Integrates VTA (dopamine) and PFC (glutamine) inputs to determine motivational output.

- Incentive (appetitive)
- Reward (consummatory)
Brain Reward: Prefrontal Cortex (PFC)

Exerts executive control over midbrain structures
“Conscience”
“Mind”
Potency at the Receptor

FENTANYL 50-100× > HEROIN 2-5× > MORPHINE 1× > CODEINE 0.1×
Potency: Fentanyl 50-100x’s More Potent than Heroin
<table>
<thead>
<tr>
<th>Hydrophilic</th>
<th>Lipophilic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Immediate Release Opioid</strong></td>
<td><strong>Onset of Analgesia</strong></td>
</tr>
<tr>
<td>Morphine (oral)</td>
<td>30-40 min</td>
</tr>
<tr>
<td>Oxycodone (oral)</td>
<td>30 min</td>
</tr>
<tr>
<td>Hydromorphone (oral)</td>
<td>30 min</td>
</tr>
<tr>
<td>Fentanyl (Transmucosal)</td>
<td>~5-10 min</td>
</tr>
</tbody>
</table>
Fentanyl: Pressed Pills
TOLERANCE
Addiction Hijacks the BRAIN

FENTANYL HIJACKS the MIND, BODY and SOUL!
Fentanyl and its analogues
Fentanyl and its Analogues
Jacksonville Fire & Rescue Department Overdose Responses by Month

Source: Jacksonville, Florida Fire & Rescue Department, Asst. Chief Mark Rowley. A 9-1-1 call dispatched as overdose and/or naloxone administration does not necessarily confirm an overdose, opioid use or opioid misuse. Definitions: Dispatched as Overdose = a 9-1-1 call in which the caller stated that the victim was suffering from a known or suspected overdose. Naloxone Administered = the count of naloxone administered, which may include repeat doses to same patient. Opioid-Related Overdose = the following type of incidents: naloxone administered and nature of call at scene is "injection/poisoning/OI", or naloxone administered and clinical impression is "opioid-related", or overdose reported with the following substances: "Fentanyl, Heroin, or Naloxone". Each of these definitions and events are independent of the other and are not mutually exclusive.
Opioid Intrinsic Activity

- Full Agonist
  - Morphine, Hydromorphone
- Partial Agonist
  - Buprenorphine
- Antagonist
  - Naloxone, Naltrexone

Efficacy
- %
- Opioid effect
  - Analgesia
  - Sedation
  - Respiratory Depression

Log Dose of Opioid
Pharmacologic Treatment Options
Methadone

- For opioid dependence only.
- It is a highly regulated Schedule II opioid.
- DCF, DEA and Board of Pharmacy perform regular and stringent audits of Methadone clinics.
- The gold standard for pregnant women due to potential fetal demise from withdrawal.
- Stops withdrawal sx$s and craving.
Methadone cont’d

- Most researched medication used in the treatment of addiction.
- Clients don’t get high once stabilized.
- Tolerance is not as much of a factor with this medication.
- Do not confuse its abuse with the methadone prescribed from pain clinics.
Once stable, the majority of clients reveal the following:

- Reduced spread of disease
- Stable home life
- Reduced crime
- Stable finances/job
- Reduced relapse rate
Methadone works very well for prescription opioid dependence.

Methadone is not working as well for treatment of the abuse of fentanyl or its analogues!
Suboxone/Buprenorphine

- Schedule III medication for opioid dependence only.
- Buprenorphine is the active drug (Subutex) and attached to naloxone (Suboxone)
- Can only be prescribed by physicians with a “x” number. Certain training or course is required.
- For individual physicians, limited to 100 active clients.
Given sublingual. Takes approx. 10 minutes to dissolve.

A partial mu agonist with reduced abuse potential. Long duration of action. Holds tight to the mu receptor.

Clients rarely need more than 16mg, though max dose is 32 mg.

Must be in withdrawal before the induction process is started.
Suboxone/Buprenorphine cont’d

- Clients don’t get high once stable.
- Can be used in pregnancy.
- Clients also reveal the same as Methadone once stable:
  - Reduced spread of disease
  - Stable home life
  - Reduced crime
  - Stable finances/job
  - Reduced relapse rate
Pregnancy:

- Fetus is sensitive to withdrawal symptoms and can lead to demise
- Methadone Maintenance is the gold standard
- Buprenorphine vs Suboxone?
- Detoxification: DON’T
Vivitrol

- For opioid and alcohol dependence.
- Injectable form of Naltrexone; a full mu receptor antagonist. It fully covers the receptor and does not allow opioids to attach.
- This is not an opioid. Not mood altering and not addictive.
Vivitrol cont’d

- A monthly injection. The pill form can be taken every day but compliance is a problem and side effects are a greater possibility.
- Blocks action of opioids and reduces cravings for opioids.
- Reduces craving for alcohol and reduces effect.
HOW TO PROCEED
Opioid Withdrawal

Opiate Withdrawal Timeline

- Last Dose
- 6-12 hours: Short-Acting Opiates
- 30 hours: Long-Acting Opiates
- 72 hours

Symptoms Peak:
- Nausea
- Vomiting
- Stomach Cramps
- Diarrhea
- Goosebumps
- Depression
- Drug Cravings
# Opioid Binding for Educational Understanding

<table>
<thead>
<tr>
<th>Commonly Used Opioids and Antagonists</th>
<th>Ki (nM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufentanil</td>
<td>0.1380³</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>0.2157³</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>0.3654³</td>
</tr>
<tr>
<td>Morphine</td>
<td>1.168³</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>1.346³</td>
</tr>
<tr>
<td>Naloxone</td>
<td>1.518³</td>
</tr>
<tr>
<td>Methadone</td>
<td>3.378³</td>
</tr>
<tr>
<td>Remifentanil</td>
<td>21.1⁴</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>25.87³</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>41.58³</td>
</tr>
<tr>
<td>Codeine</td>
<td>734.2³</td>
</tr>
<tr>
<td>Tramadol</td>
<td>12,486³</td>
</tr>
</tbody>
</table>

Ki is the equilibrium inhibition constant. Opioids with low Ki values have greater binding affinity at the μ receptor but not necessarily greater potency than other opioids. Boldface is used here to facilitate comparison of the Ki values of buprenorphine with the Ki values of other opioids.
Buprenorphine Induction Process

Outpatient:

• When to start
  ➢ Half-life; 5 half-lives to reach stable serum levels
  ➢ Tolerance factors
  ➢ LFT’s before 1st appointment/brief h&p best practice
  ➢ COWS
  ➢ X-waiver required

Initially, one could start within hours when dealing with Fentanyl. Now not advisable to start for at least 24hrs. Initially, people were using micrograms, now using milligrams. What is happening?
Subjective vs Objective findings

### Clinical Opiate Withdrawal Scale

For each item, circle the number that best describes the patient’s signs or symptoms. Rate on just the apparent relationship to opiate withdrawal. For example, if heart rate is increased because the patient was jogging just prior to assessment, the increased pulse rate would not add to the score.

<table>
<thead>
<tr>
<th>Patient’s Name:</th>
<th>Date and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for this measurement:</td>
<td></td>
</tr>
</tbody>
</table>

#### Scoring
- **Scoring:**
  - **Score 1-7 = mild:**
  - **Score 8-15 = moderate:**
  - **Score 16-30 = severely:**

#### Items
- **Sleeping:**
  - 1: Difficulty sleeping
  - 2: Less than normal
  - 3: Normal
- **Eating:**
  - 1: Anorexia or vomiting
  - 2: Loss of appetite
  - 3: Normal
- **Respiration:**
  - 1: Slow or shallow
  - 2: Normal
  - 3: Rapid or deep
- **Pupils:**
  - 1: Dilated
  - 2: Normal
  - 3: Constricted
- **Resistant to passive motion:**
  - 1: Active
  - 2: Passive
  - 3: Resistant
- **Alertness:**
  - 1: Alert
  - 2: Drowsy
  - 3: Stupor
- **Respiration:**
  - 1: Slow or shallow
  - 2: Normal
  - 3: Rapid or deep
- **Pupils:**
  - 1: Dilated
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- **Resistant to passive motion:**
  - 1: Active
  - 2: Passive
  - 3: Resistant
- **Alertness:**
  - 1: Alert
  - 2: Drowsy
  - 3: Stupor
- **Total Score:**
  - The total score is the sum of all 11 items.

This version may be copied and used clinically.
Buprenorphine Induction Process, cont’d

If your patient isn’t comfortable, s/he will relapse. Every relapse is like playing Russian roulette with 5 chambers full!

- A prescription for Baclofen 20mg tid prn and clonidine 0.1 mg tid prn (bac/clon)
- No opioids for at least 24 hours come into clinic in significant withdrawal
- Pick up Rx for six 8mg Suboxone on way to clinic and bring bac/clon
- UDS and pill count when arrive
- COWS greater than “10” with mostly objective sxs
- Now ready for induction
Buprenorphine Induction Process, cont’d

- Give 4mg and wait for 1.5 hours
- If patient not comfortable, give 4mg
- Continue process until comfortable enough to go home
- Give home instructions

If precipitate withdrawal (only would have after first dose), give 0.2mg of Clonidine. If B/P ok, return home on Bac/clon until next day or offer admission to detox for continuation.
### Subjective Opiate Withdrawal Scale (SOWS)

**Instructions:** We want to know how you’re feeling. To the column below today’s date and time, use the scale to write in a number from 0-4 about how you feel about each symptom right now.

- **Scale:** 0 = not at all; 1 = a little; 2 = moderately; 3 = quite a bit; 4 = extremely

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>SCORE</th>
<th>SCORE</th>
<th>SCORE</th>
<th>SCORE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel anxious</td>
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<td>2. I feel like yawning</td>
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<td>3. I am perspiring</td>
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<td>4. My eyes are tearing</td>
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<td>5. My nose is running</td>
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<td>6. I have goosebumps</td>
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<td>7. I am shaking</td>
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<td>8. I have hot flushes</td>
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<td>9. I have cold flushes</td>
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<td>10. My bones and muscles ache</td>
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<tr>
<td>11. I feel restless</td>
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<td></td>
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<tr>
<td>12. I feel nauseous</td>
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<tr>
<td>13. I feel like vomiting</td>
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<td>14. My muscles twitch</td>
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<td>15. I have stomach cramps</td>
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<td>16. I feel like using now</td>
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<tr>
<td><strong>TOTAL</strong></td>
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</table>

**Wild Withdrawal:** score of 1 – 9
**Moderate withdrawal:** 11 – 20
**Severe withdrawal:** 21 – 30

*More information on how to interpret scores available in the manual.*
Buprenorphine Induction Process, cont’d

Example: Patient went home after receiving 8mg of Suboxone

- May take 4mg based upon SOWS
- If total for 1st day is 12mg, take 12mg the next morning
- Cannot take more than 16mg on any day. Whatever the total day’s dose, take that much the next morning
- Remember half-life and 97% of receptors covered
- Take morning dose on day three; come into clinic
- Pill count, UDS assessment and the give one week Rx of Suboxone with return appt for exactly that time period
Post-induction, Stabilization to Maintenance Phase

- Weekly visits with nurse to include pill counts, UDS and vitals
- Weekly prescriptions
- Monthly visits with provider
- Continue weekly until stable with minimal risk of relapse and good compliance then move to biweekly
- With ongoing stability/compliance, move to monthly appointments
- All appointments include UDS and pill counts
- Role of counseling
- Role of Sublocade
Induction While in Detox Unit

- X-waiver not required
- DEA rule allows to “dispense” 3 days worth of buprenorphine for “acute opioid withdrawal”
- Do not give bac/clone
Induction While in Detox Unit, cont’d

- Once objective COWS (every 2h while awake) sufficient within context of at least a “10”
- Give 1mg test dose
- If precipitate, give 0.2mg clonidine and wait several hours to a day
- If tolerate, may give 4mg every 1.5 to 2 hours until comfortable
- Total daily dose is what is given the next morning
- Usually, no more than 16mg would be required
- Remember half-life and 97% of receptors covered
- Set dose by morning of 3rd day
- Call in Rx for next steps (referral to outpatient or residential); need X-waiver for Rx
Methadone

- DEA 3-day rule same as buprenorphine
- Beyond 3 days must be dispensed by a Methadone clinic
- May continue same dose as long as in detox/res coming from a clinic with confirmed dose and returning to a clinic (remember 10mg tabs)
- DO NOT switch to buprenorphine from methadone if pregnant
- If switching from methadone to buprenorphine must wait at least 4 to 5 days (support with bac/clon) and objective COWS before induction. Best done in detox unit
Vivitrol

- Do not use in pregnancy
- Must wait 7 to 10 days from last use; needs Rx for Baclofen/clonidine
- Must be ready to be drug free for the entire time (not common with fentanyl addicts)
- LFT’s prior to 1st injection; only contraindication is acute liver disease but po naltrexone contraindicated if LFT’s 5x’s or greater.
- Expensive
- 1st appt UDS and naltrexone challenge
- Of ok, may give 1st injection
- Monthly appts with UDS
- If in residential, use po naltrexone until day of d/c then can give injection
Let’s Save Some Lives

Naloxone
Naloxone

- Opioid antagonist
- Reverses the effects of opioids for a few minutes
- Acts by competitive inhibition at the mu receptor
- Added to some medications as a deterrent to abuse
- Induces withdrawal symptoms
Naloxone

In an effort to save more lives from opioid overdose, SAMHSA published the SAMHSA Opioid Overdose Prevention Toolkit – June, 2018. The Toolkit equips communities and local governments with material to develop policies and practices to help prevent opioid-related overdoses and deaths. It also serves as a foundation for educating and training:

- Communities
- Prescribers of opioid pain medications
- First responders
- Patients who are prescribed opioid medications
- Individuals and family members who have experienced an opioid overdose
The End of This Part of This Journey

QUESTIONS?