Medications in the Opioid Treatment Program: Methadone, Buprenorphine, and Naltrexone

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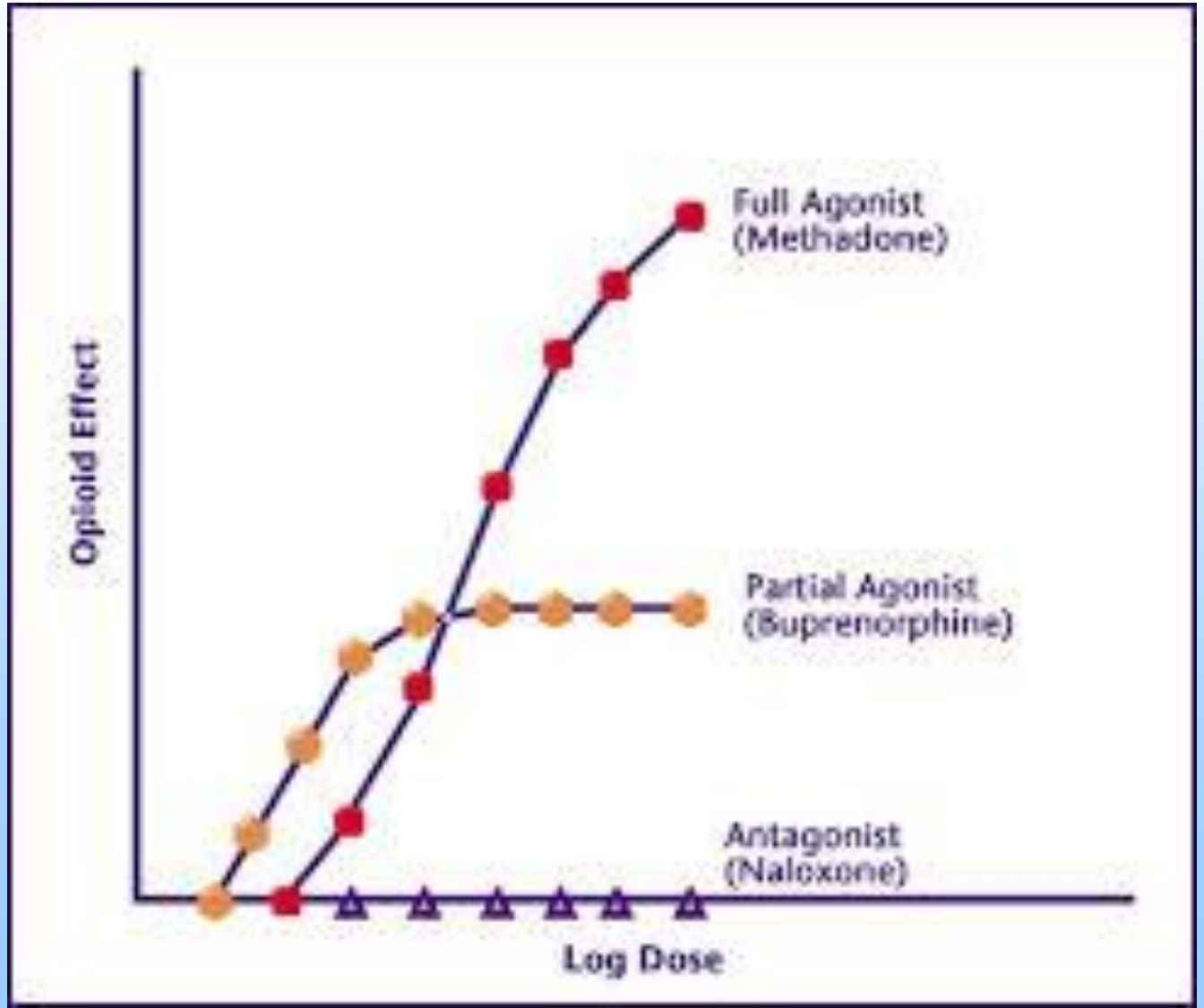
Medications to treat opioid addiction

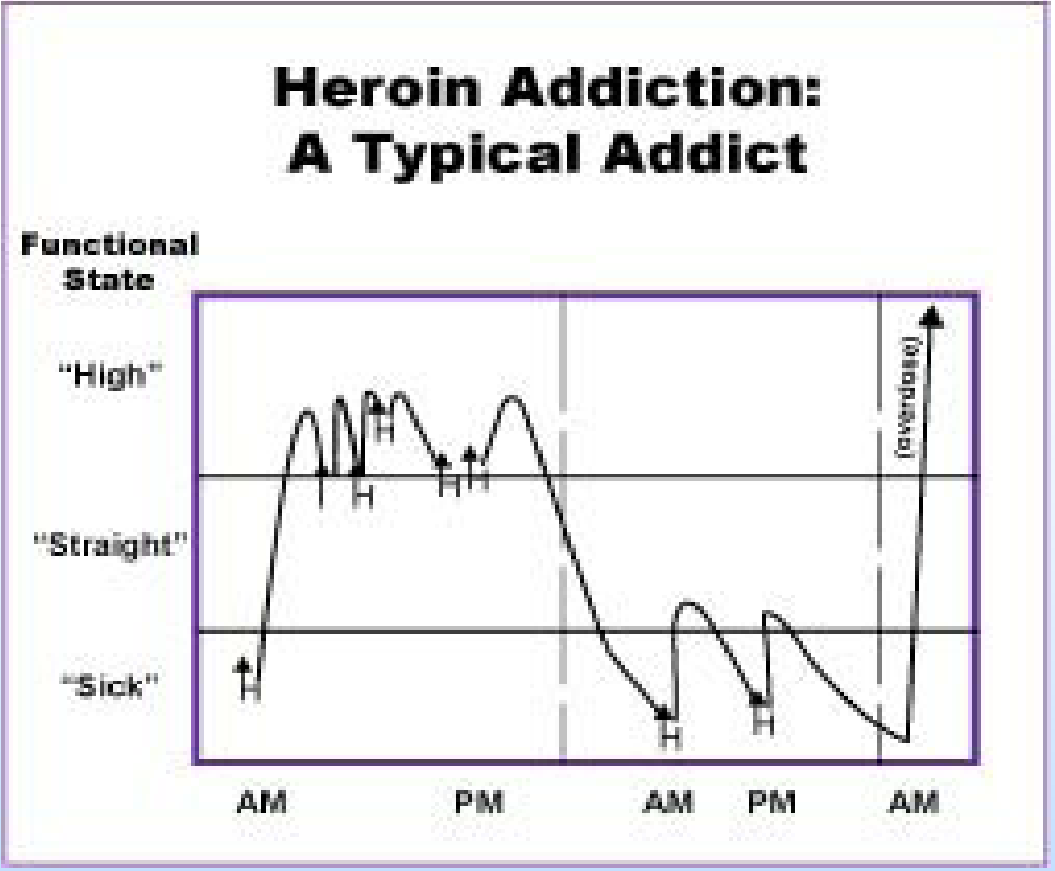
- Three medications approved by the FDA for this purpose
  - Opioid agonist medications – long-acting agents that act on *mu* opioid receptors to fully or partially activate them
    - **Methadone**
    - **Buprenorphine**
  - **Naltrexone -** Opioid antagonist medication – medication that attaches to *mu* opioid receptors but doesn't activate – opioid blockers

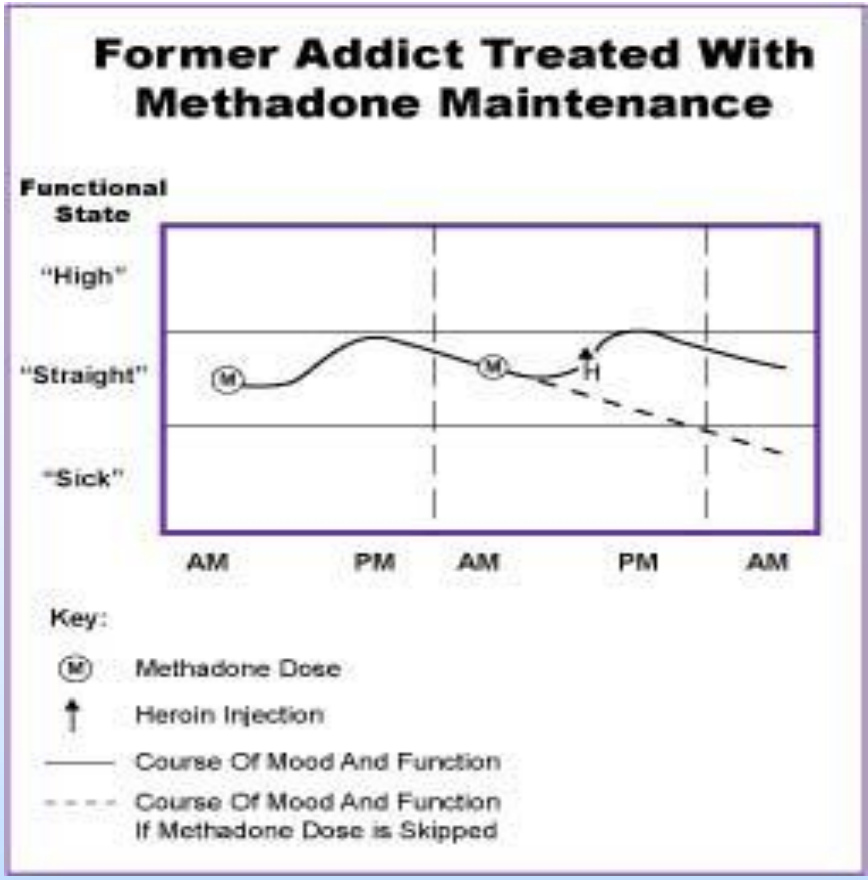
Summary graph of opioid effects of these three medications



Methadone

- Synthetic opioid first made in
- 1940's in Germany
- First used in 1960's to treat heroin addiction by Drs Dole and Nyswander
- Many studies show it is effective treatment for opioid dependency
- **Unique because of its very long duration of action**





From NIDA's Methadone Research Web Guide
http://international.drugabuse.gov

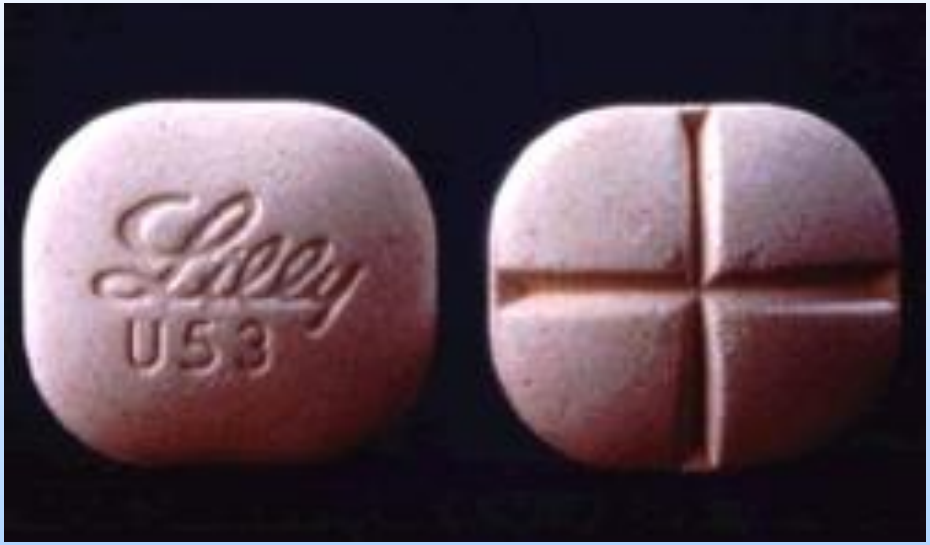
Medical uses of methadone

- **Treatment of pain**
  - Analgesic effect of each dose lasts 6-8 hours
  - Usually dosed three or more times per day
  - Any doctor with DEA license can prescribe for this purpose, though it is a more dangerous drug due to long duration of action

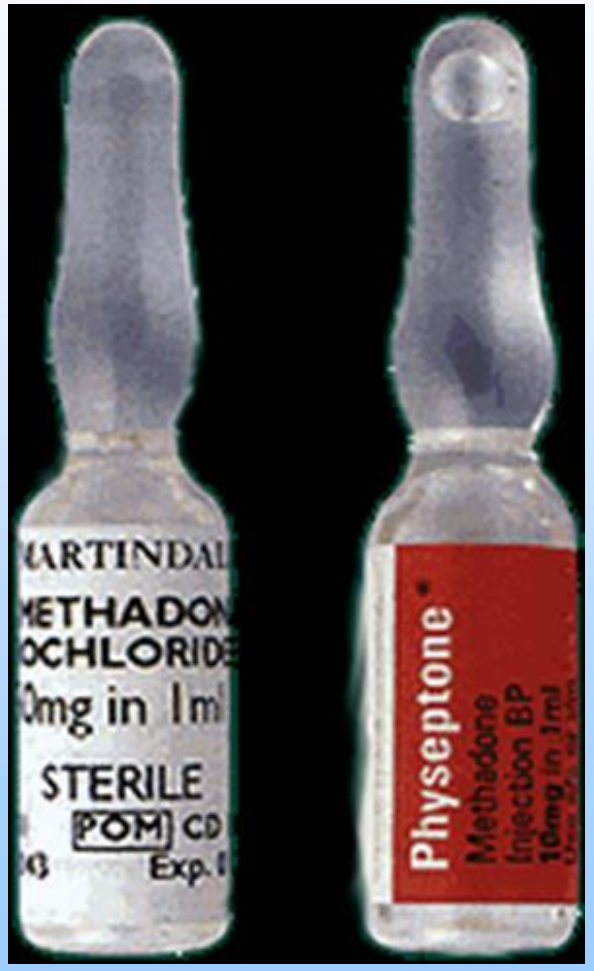
Medical uses of methadone

- **Treatment of addiction**
  - Dosed once daily, since the goal is to prevent withdrawal symptoms
  - Illegal to prescribe from a doctor's office for this purpose
  - Must be licensed by state methadone authority of that state, registered with DEA, SAMHSA, state's department of health and human services
  - Must follow strict state and federal regulations

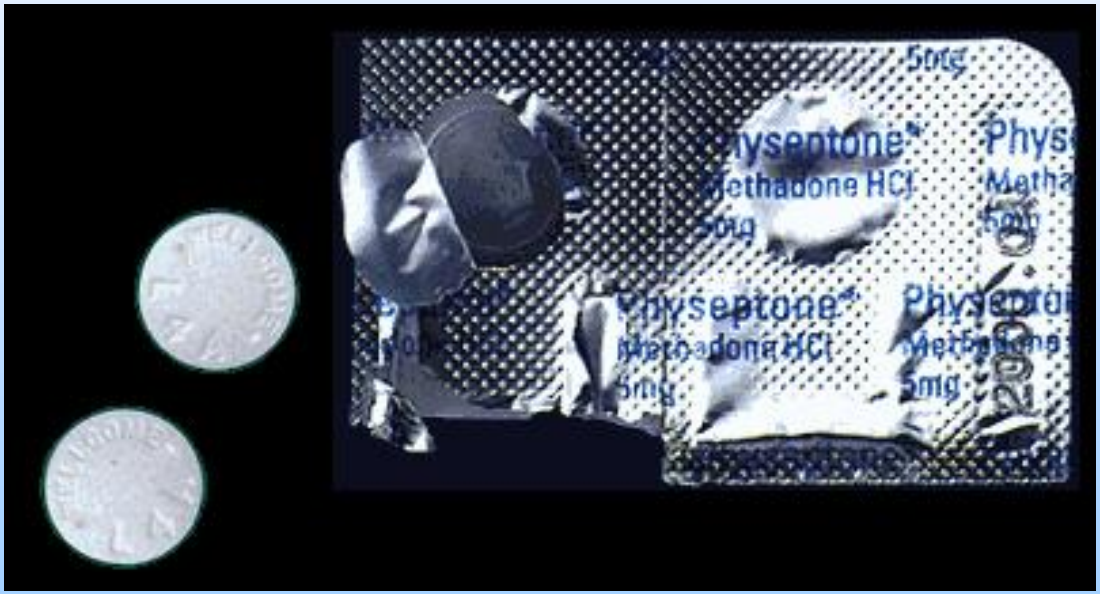
Different forms of methadone: only opioid treatment programs can use these two forms



Injectable methadone: for IV or IM use in hospital



Tablets: 5mg and 10mg – dispensed from community pharmacies for treatment of pain



How Does Methadone Work?

- Occupies opioid receptors in the brain
- Is long-acting
  - After induction period, patient gets a steady level of opioid instead of cycle of intoxication and withdrawal
- Blocks short-acting opioids such as heroin, oxycodone, hydrocodone
  - Eliminates the euphoria from these opioids

Methadone

- Full opioid receptor agonist
  - Gives pain relief, euphoria
- NMDA receptor antagonist
  - Other NMDA antagonists are used for anesthesia, animals & children
    - Ketamine
  - Other opioids have this property
    - Meperidine (Demerol)
    - Tramadol

Methadone

- Excellent bioavailability: 90% with oral administration
- Absorbed quickly from the stomach
  - Detectable in plasma 30 minutes after a dose
- Peak blood level occurs 2 to 4 hours after a dose
- Anti-pain effect lasts 6-8 hours
- **Peak respiratory depressant effect occurs later & persists longer**

Methadone

- Elimination half-life varies widely in patients: 8-59 hours
- Metabolized in the liver by the Cytochrome P450 enzyme system
- Other drugs and medications metabolized by CYP450 can affect methadone metabolism

Methadone

- Excreted in urine and feces
- Stored in the liver, released slowly, producing long duration of action
- Incomplete cross tolerance to other opioids
  - Cannot assume patients tolerant to other opioids will have the same tolerance to methadone

Evaluation of patient for methadone maintenance treatment

- Make sure the patient is really addicted to opioids!
  - Federal regulations say a patient entering methadone maintenance treatment must be **physically addicted for at least one year**
  - Determined by history, physical exam, urine drug screen, PMP database, collateral information from friends or family

Physically opioid dependency versus opioid addiction

- Anyone taking opioids regularly will develop tolerance, and withdrawal if opioid is stopped suddenly:
  - Symptoms: aching, low energy, insomnia, anxiety, irritability, stomach cramps, nausea, diarrhea
  - Signs: elevated blood pressure and heart rate, low-grade fever, runny nose, yawning, sneezing, dilated pupils, sweaty skin, goose bumps, restlessness

Physically opioid dependency versus opioid addiction

- Addiction – also has psychological component of obsession about the drug, compulsion to keep using
- Addiction is diagnosed by patient history, patient behaviors
- Tends to progress over time

Behaviors of addiction

- Taking more opioid than prescribed, running out of medication early
- Multiple doctors prescribing
- Get pills from illicit sources – friends, relatives, buy off street
- Take pain pills for reasons other than pain
  - Euphoria
  - Relieve stress, depression, anxiety, take to sleep

Behaviors of addiction

- Using pills in ways not intended
  - Chew for faster onset, snort, inject
- Use pills with other illicit drugs
- Use pills with alcohol, despite label warning not to do this
- Impaired ability to meet responsibilities
- Continued use despite bad consequences (health problems, legal problems, relationship issues)

Criteria for admission to methadone maintenance program

- Over age 18 (Unless there have been two documented unsuccessful attempts at treatment and parental consent) and more than **one year** of opioid physiologic addiction and current dependence, determined by history, physical signs & symptoms, urine drug screens
- Previous opioid maintenance treatment: may be readmitted for maintenance treatment for 2 years following last admission if opioid dependent or even if not dependent and return to drug use is imminent
- Opioid dependent and pregnant – do not have to meet the one year requirement because of the benefits to fetus and mother

Who should NOT be admitted for opioid-assisted treatment?

- Patients with no diagnosis of opioid addiction
  - Pain patient who does not meet criteria for addiction
  - Once-daily dosing won't help much with pain, other alternatives are available
- Patients who refuse to allow coordination of care with other providers
- Unstable medical condition
- Intoxicated at intake
  - Cannot give informed consent
  - Probably not safe to dose

Patients who may not qualify for admission to OTP

- Current physical dependence to alcohol, benzodiazepines or other sedatives
  - May be best to postpone OTP admission until after detoxification from these substances first
  - These drugs can cause overdose deaths when combined with any opioids but especially with methadone, due to its long duration of action

Induction Phase

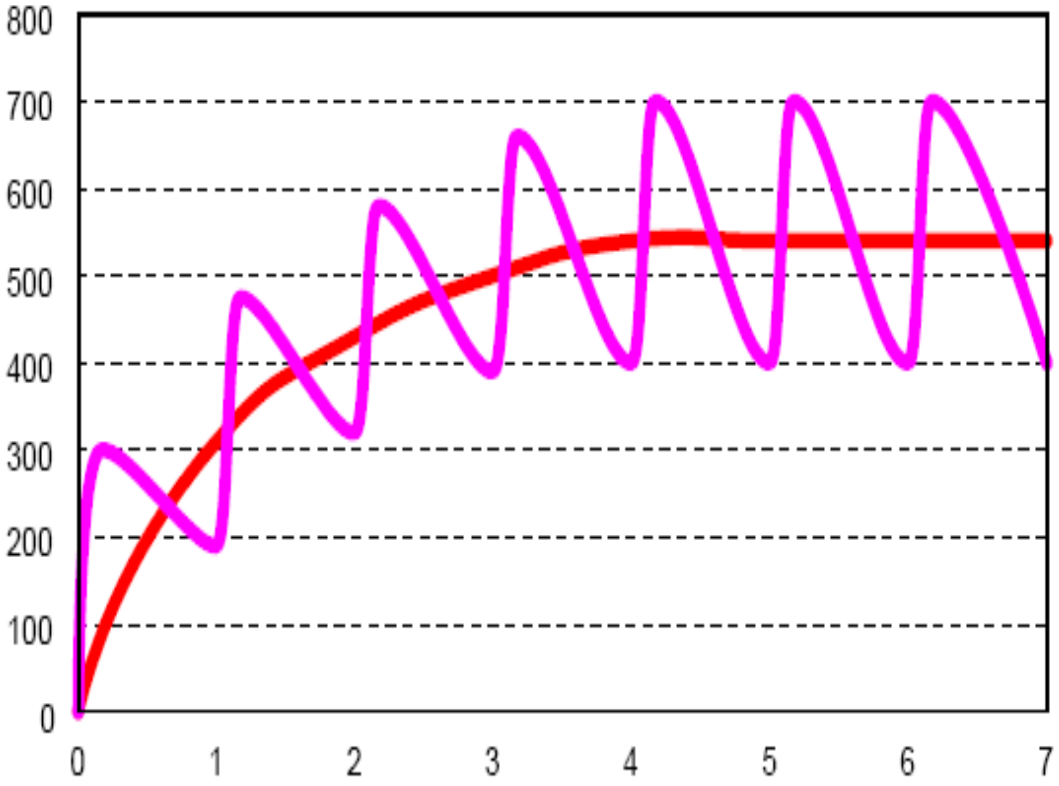
- Start at doses of 10 – 30mg per day
  - Can divide starting dose; e.g. 20mg, have patient return in 2 hrs for re-evaluation, possible second dose of 10mg
- Gradually increased until stabilization dose is reached
  - Increase every 3 – 7 days
  - Usually 5 – 10mg per increase

Induction phase

- Due to the long half life it takes 5 dosing cycles (in other words 5 days) to see the full benefit of a given dose

Steady State Simulation - Methadone Maintenance

Steady State attained after 4-5 half-lives -1 dose every half-life



Time in days (24 hrs.= methadone half-life)

Dose remains same - Effect increases

Induction dosing

- Degree of opioid withdrawal does not necessarily correlate with opioid tolerance
- Patient history gives only a rough idea of tolerance
  - Patients may exaggerate to get more methadone
  - Patients may minimize due to guilt/shame
  - Remember: incomplete cross tolerance with methadone

Patients who may need lower starting doses

- Older (>50 - 60)
- Low body weight
- Lower tolerance by history
- Liver failure
- Multiple medical problems
- Other sedating medications
- Abstinent for five days or more prior to dose induction (just released from detox or jail or other setting)

Induction

- Initially, we know the dose isn't going to last 24 hours
- Methadone blood level will rise even without a dose increase
- Patient may require a great deal of reassurance during this phase of treatment
- **Most important: how did the patient feel at 3 hours after dosing?**
- **If any sedation, dose MUST be reduced**

Induction phase

- Induction may take weeks
- May lose patients if dose isn’t taken up quickly enough
- Patient may overdose and die if dose is taken up too quickly
- First two weeks of induction - most dangerous time in treatment
- Most overdose deaths occur during the first 2 weeks

Induction

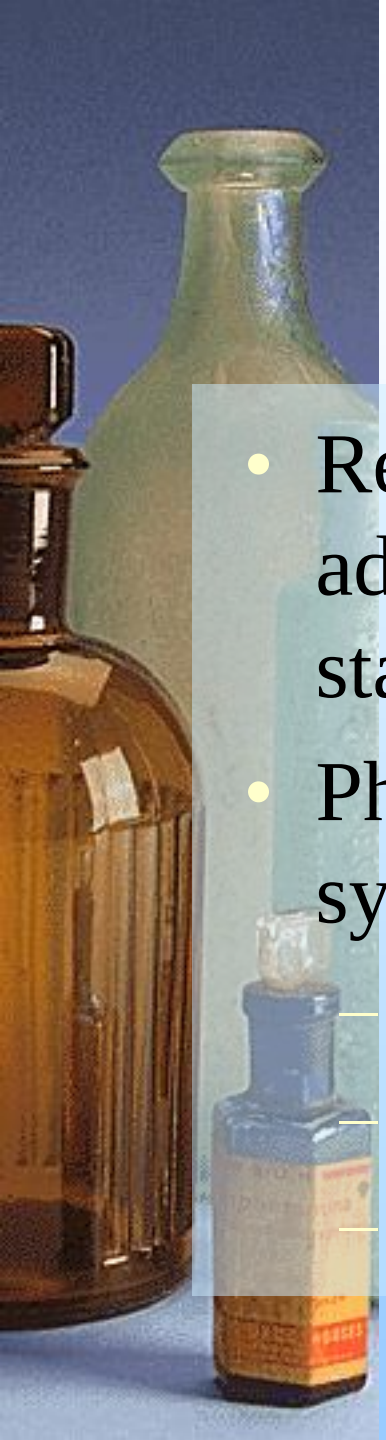
- Take home doses during induction can be fatal – patient still feels withdrawal and takes extra dose earlier than we want
- Co- occurring **benzodiazepine use, abuse, or dependency increases risk of overdose**
- Alcohol and barbiturates also dangerous with methadone

Induction

- Best precaution is constant re-assessment of the patient
- Educate family/people with whom the addicts live about overdose signs & symptoms
- Ask about sedation 3 hours after dose the previous day
- Ask about any other drug use each day during induction
- Document answers
- Call your program physician with any reports of sedation or drug use

Maintenance Phase

- Stable dose that eliminates withdrawal signs and symptoms
- Usually at doses between 80 – 120mg
- Little fluctuation of opioid levels during the day
  - Patients are able to function normally
  - No sedation **– if sedation is seen then either the methadone dose is too high or the patient is using another substance (benzodiazepines or alcohol)**
  - Can drive and operate machinery safely
  - Multiple studies show that patients **on a stable dose** have normal reaction times



Dosing during maintenance

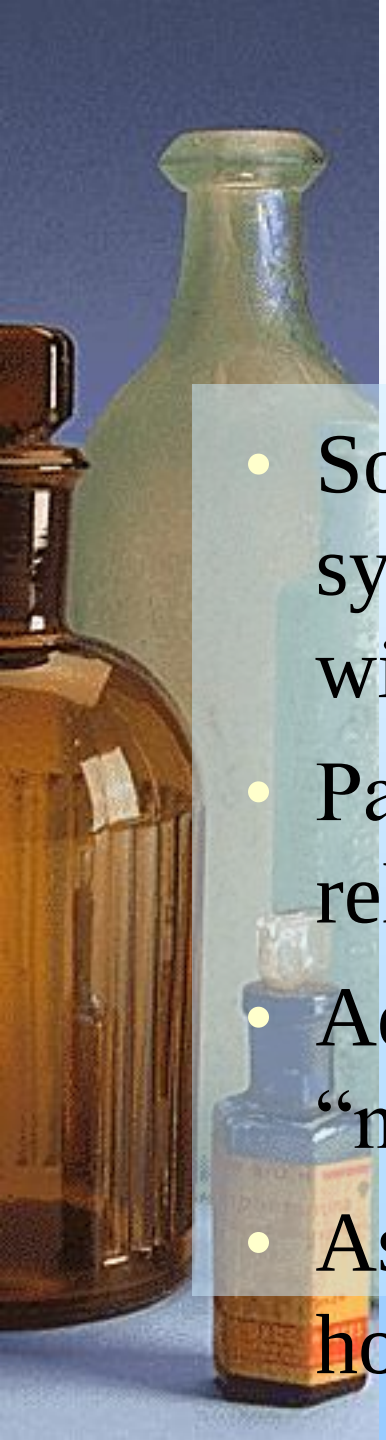
- Requests for dose increases need to be addressed by medical staff, not counseling staff
- Physician will ask patient about withdrawal symptoms
  - Aches, nausea, diarrhea
  - Timing of symptoms in relation to dosing
  - Ask about how they are sleeping – any restlessness, restless legs

Dosing during maintenance

- Use COWS: Clinical Opioid Withdrawal Scale
- Examine patient for withdrawal signs
  - Pre-dose: pupillary size and reaction, restlessness, goose bumps, yawning, tremor, sniffles, watery eyes
  - Post-dose: have the patient return 3hrs after dosing to assess for sedation

Dosing during maintenance

- Patients do better in their recovery when on an adequate dose of methadone/buprenorphine
- No benefit to keep a patient at a lower dose if they still have withdrawal
- Vast difference in the blood levels of different patients on the same dose of methadone
- Patients usually can be stabilized on basis of patient report, clinical exam, drug screens



Determining maintenance dose

- Sometimes, the patient reports withdrawal symptoms, but has no signs of opioid withdrawal
- Patient symptoms don’t make sense is relation to timing of dose
- Addiction is a disease that tells the patient “more is better”
- Ask patient about his/her expectations for how they should feel on methadone

Dosing during maintenance

- Do methadone peak and trough levels help?
  - Draw blood from the patient right before dosing
  - Draw blood again 3 hours later
- The ratio of peak to trough helps
  - Peak more than twice the trough means the patient may feel better on split dosing
  - Half to two-thirds of dose in morning, half to one-third given in a take home bottle for evening

Dosing during maintenance

- What about trough level alone?
- Debate about what a single trough level means
  - Tolerance – our patients obviously have tolerance to methadone
  - Enantiomers of methadone – blood levels measure active and inactive forms of methadone

Dosing during maintenance

- Trough levels generally expected to be at least 600, or .6 depending on your lab
- Remember we treat the patient, not the lab number
- Many of our patients function normally at what the lab may call a “toxic” dose
- Many patients can stay at the same dose of methadone for years, don’t usually develop tolerance to the blocking effects of methadone

Maintenance phase tasks: when the real work is done

- Patient on a stable dose
- Focus on individual and group counseling
- Abstinence from all illicit drugs – confirmed with random urine drug screens
- Identify relapse triggers
- Change lifestyle, avoid criminal activities, substitute positive activities
- Address untreated physical and mental health issues
- Encourage family counseling if needed

Factors which may cause decrease in methadone blood levels

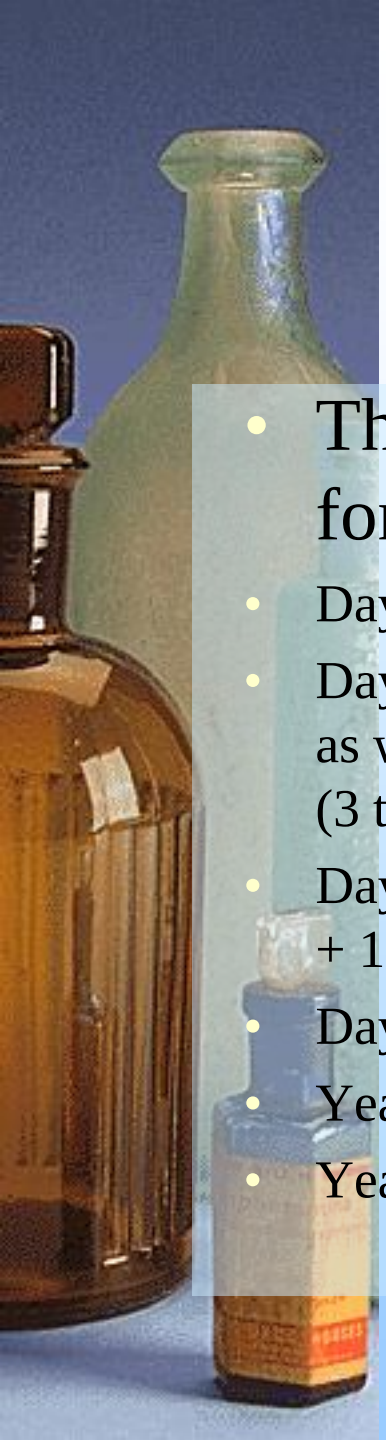
- Pregnancy
- Alcohol consumption
- New medications: some anti-seizure meds, HIV meds, rifampin, stimulants like cocaine, amphet/methamphetamines
- Increase in ambient temperatures
- Manic phase of bipolar disorder
- Increase in activity levels
- **Untreated** hyperthyroidism

Factors which may indicate methadone dose should be lowered

- Medical conditions –cirrhosis with liver failure, untreated sleep apnea
- Medications – Tagamet (cimetidine), erythromycin, ciprofloxacin
- Relapse to sedatives: benzodiazepines, barbiturates, sleeping pills
- Lower levels of physical exertion, cooler weather for outside workers

Take home doses

- Can be granted “take home” doses after months of proven stability.
- Must still frequently dose in front of the nurse
- Must dose at clinic every day for the first ninety days
- Many clinics are open 365 days per year
- Some are closed on Sundays and holidays



Time requirements for take home doses

- The following are mandatory minimum standards for the allowance of take home doses.
- Days 1-90 – no take home doses except Sundays if clinic is closed
- Days 90-180 – A maximum of 2 scheduled take home doses per week as well as a take home dose for the one day a week the clinic will close (3 total per week)
- Days 180-270 – A maximum of 3 scheduled take home doses per week + 1 for days the clinic is closed. (4 total per week)
- Days 270-365 – Up to 6 take home doses per week.
- Year 2 – up to two weeks of take home doses
- Year 3 – up to 28 take home doses

Take home criteria: must meet all of these for take home doses

- Time in treatment
- Free from illicit drug use
- Free from criminal activity
- No serious behavioral problems
- Attends clinic regularly, sees counselor on a regular basis
- Able to store methadone safely, preferably in a locked container
- Stable home environment
- Physician determines that the benefit to the patient will outweigh the risks – usually discussed with staff

More regulations

- Random urine drug screens
  - At least 8 per year
  - Most clinics do drug screens at least every month, often more frequently
  - Portion of these must be observed
- Random “call backs” on take home bottles
  - Patient is called by the clinic to return within 24 hours with their take home bottles, to make sure they are intact
  - Assures patient isn’t taking medication early
  - Assures patient isn’t diverting medication

Should patients who are doing well on methadone attempt a taper?

- Philosophy of the clinic
  - Abstinence-based vs harm reduction
- Desires of the patient
  - Cost, inconvenience, stigma
- Co-existing mental and physical health problems, chronic pain issues
- **Tapering off methadone is difficult!**
- Previous history of successful abstinence
- **Has the patient done the work of recovery?**

Tapering Phase

- Undertaken after progress has been made with the psychological treatment of addiction
- Usually takes a period of months before the patient is ready
- Best if done over 4 – 6 months
- Slowly decrease the dose of methadone
  - Slower is better
  - At doses higher than 40mg, no faster than 5mg per week,
  - At lower doses, no faster than 2mg per week
  - Patients' tolerance for speed of taper differs greatly between individuals

Tapering off methadone

- We serve as our patients' consultants
- We give them the best advise possible
- As long as it is not medically dangerous, they ultimately decide when and how fast they will come off methadone

Patients who taper off methadone have worse outcomes than those who continue medication

- Higher rates of death
  - overdoses
  - other medical illnesses
- Worse physical health
- Worse mental health
  - more suicides
- More illicit drug use

The bottom line: Evidence based data from 45 years of studies: Methadone treatment…

- Improves health
- Improves rates of employment
- Retains patients in treatment
- Reduced risk of overdose death
- Reduced rates of suicide

Evidence based data from 45 years of studies: methadone treatment reduces:

- Reduces criminal activity
- Reduces use of illicit drugs
- Reduces commercial sex work
- Reduces rates of HIV infection
  - May not reduce risk of Hepatitis C
  - Hep C usually transmitted very early with needle sharing
- Reduces rates of needle sharing
- Is (very) cost effective

Disadvantages of methadone: Methadone overdose deaths

- Methadone overdose increased five-fold from 1999 to 2005
  - No significant increase of deaths at OTPs
- Easier to overdose on methadone than other opioids
- Longer-acting – abusers may not feel a high from methadone until they've taken a fatal dose
- Majority of methadone overdose deaths were seen with other drugs like benzos, barbiturates (Soma), alcohol,

Studies of methadone overdose deaths concluded:

- Methadone overdose deaths were related to the increased availability of methadone dispensed from pharmacies for the treatment of chronic pain
- Opioid treatment programs did not contribute to the rise in methadone overdose deaths (National Assessment of Methadone-Associated Mortality, SAMHSA, 2003)
- **In 2006, Centers for Disease Control concluded the rise in methadone overdose deaths was related to methadone prescribed for pain**

Diversion and misuse of methadone

- Most opioid treatment programs (methadone clinics) use red liquid
- Less value on black market than pills or discs of methadone
  - Can’t inject or snort due to the sugar added
  - Can’t tell how many milligrams you’re buying

Methadone treatment reduces the risk for death

- Patients on waiting lists for methadone clinics have a death rate **3 times higher than patients on methadone.** (Trachtenberg, A., Cone, EJ, & Leavitt, S.)
- Patients who left methadone maintenance treatment had a death rate of **8.2% per year; patients who stayed in treatment had a death rate of 1% per year.** (Zanis and Woody, 1997)

Characteristics of successful methadone clinics:

- Evidence-based dosing policies (use blocking doses, don't under-dose)
- Sufficient staff with experienced counselors
- Staff training
- Availability of a variety of psychosocial services that meet needs of patients
- Communication between medical, counseling, and administrative aspects of treatment
- Low staff turnover
- **Good therapeutic relationship between staff and patient**

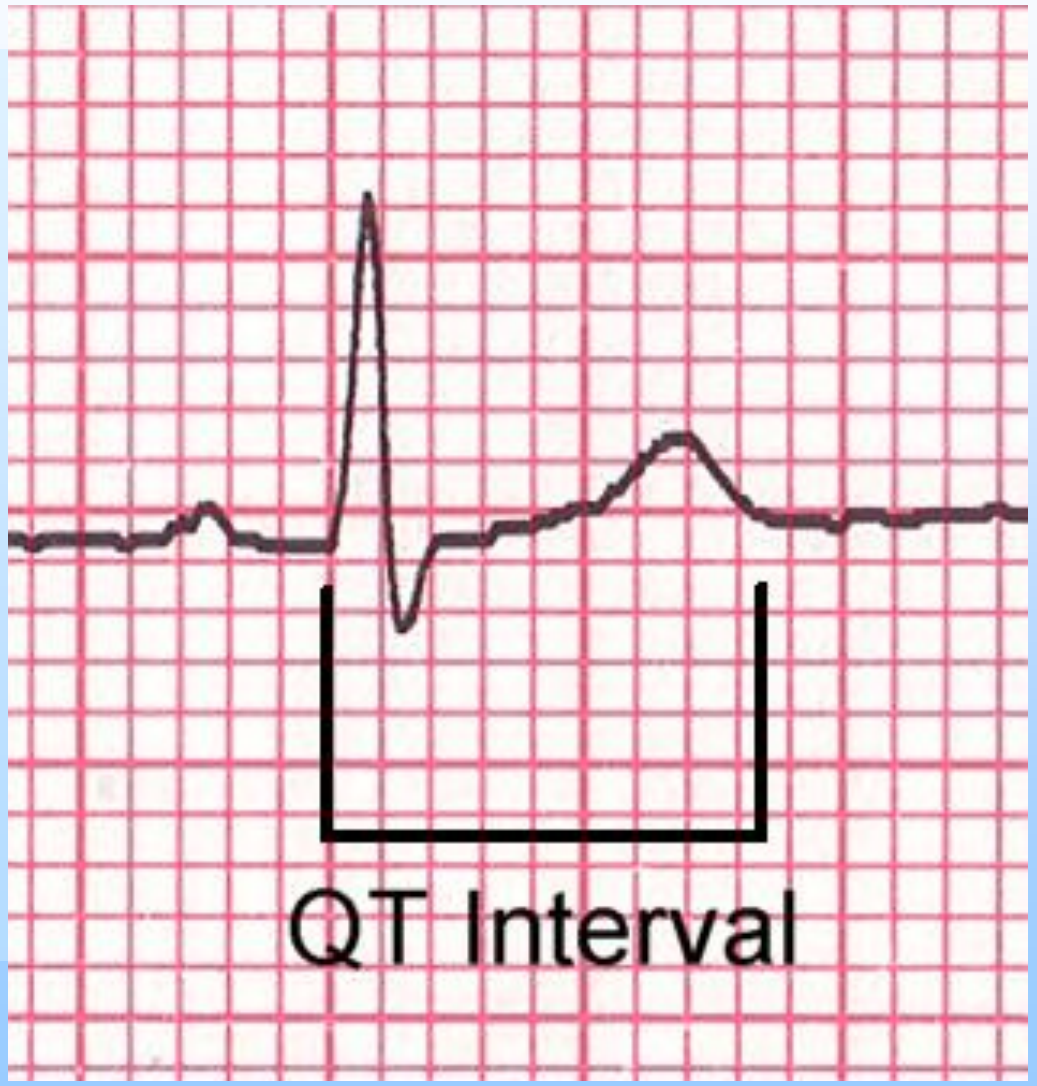
Common myths about methadone

- Methadone does **no**t rot your teeth
- Methadone does **not** “get in your bones”
- Methadone was **not** named after Adolph Hitler (one brand name is Dolophine, for the Greek “dolor” meaning pain)

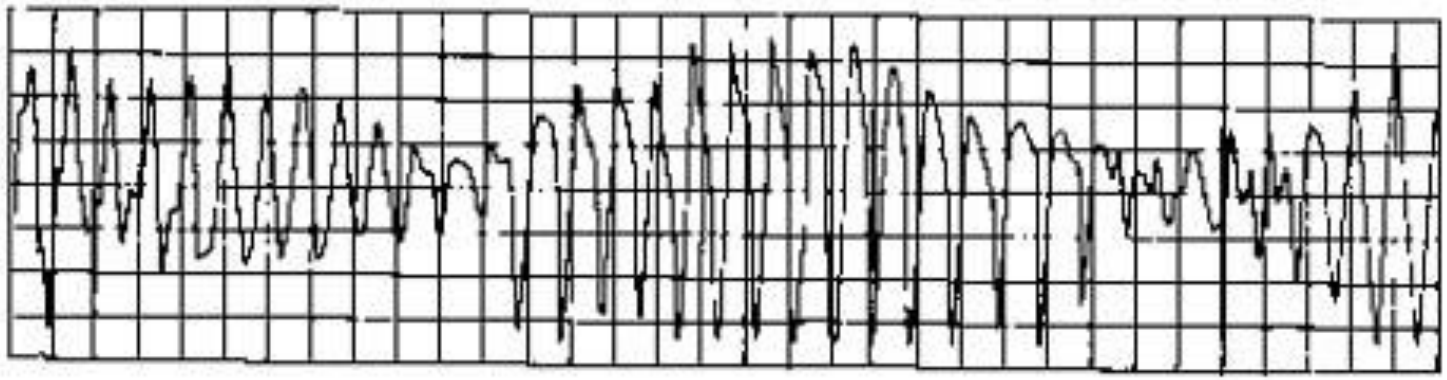
Side effects: same as seen with other opioids

- Constipation
- Weight gain –
  - Possibly from more regular nutrition
  - Some patients can develop food addiction
- Sweating – usually dose related
- Reduced sex drive – reduces production of sex hormones, often causes low testosterone with hypogonadism in males
- Long-acting opioids do interfere with the hypothalamus/pituitary hormones
- Itching

Methadone and QT interval prolongation



Prolonged QT interval increases risk of a fatal heart arrhythmia: torsade de pointes



Torsade de pointes ventricular tachycardia

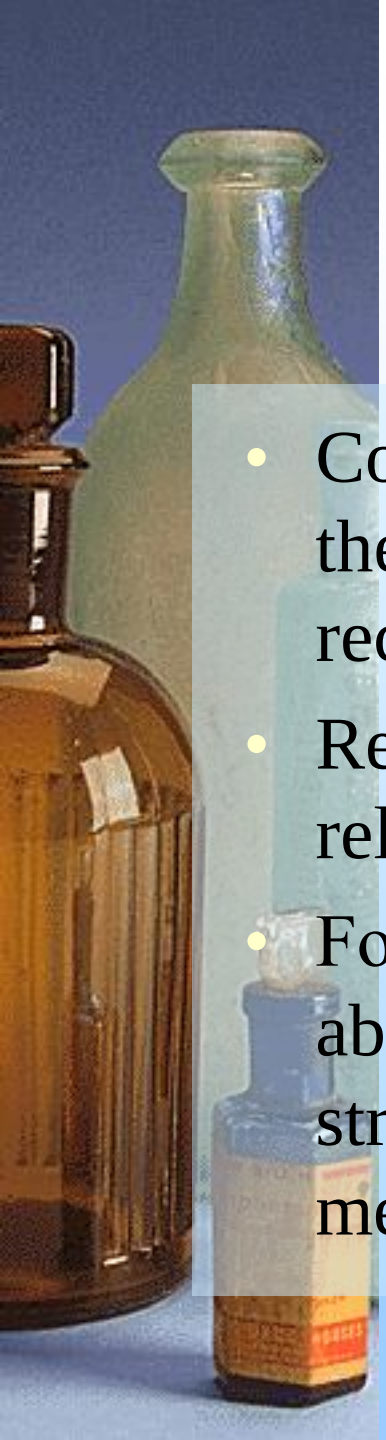
- The longer the QT interval, the higher the risk
- Cut off for serious risk is more than 500msec

When should we do EKG screening?

- We don’t know….
- Risk of TdP rises with QT over 500msec, to an estimated 1% per year
- Risk of untreated opioid addiction is probably higher than that
- We do not want to keep people out of treatment, either

EKG screenings for patients on methadone

- Some sources recommend screening higher risk patients:
  - Doses over 100mg
  - Age of 50
  - Personal history of cardiac illness
  - Family history of sudden cardiac death
  - Patient on other medications that can cause prolonged QT



EKG screening for patients on methadone

- Cochrane Review - internationally recognized as the gold-standard in evidence-based recommendations
- Reviewed all available literature on this subject, released their conclusion in July of 2013:
- Found that, “it is not possible to draw conclusions about the effectiveness of ECG-based screening strategies for preventing cardiac mortality in methadone-treated opioid addicts.”

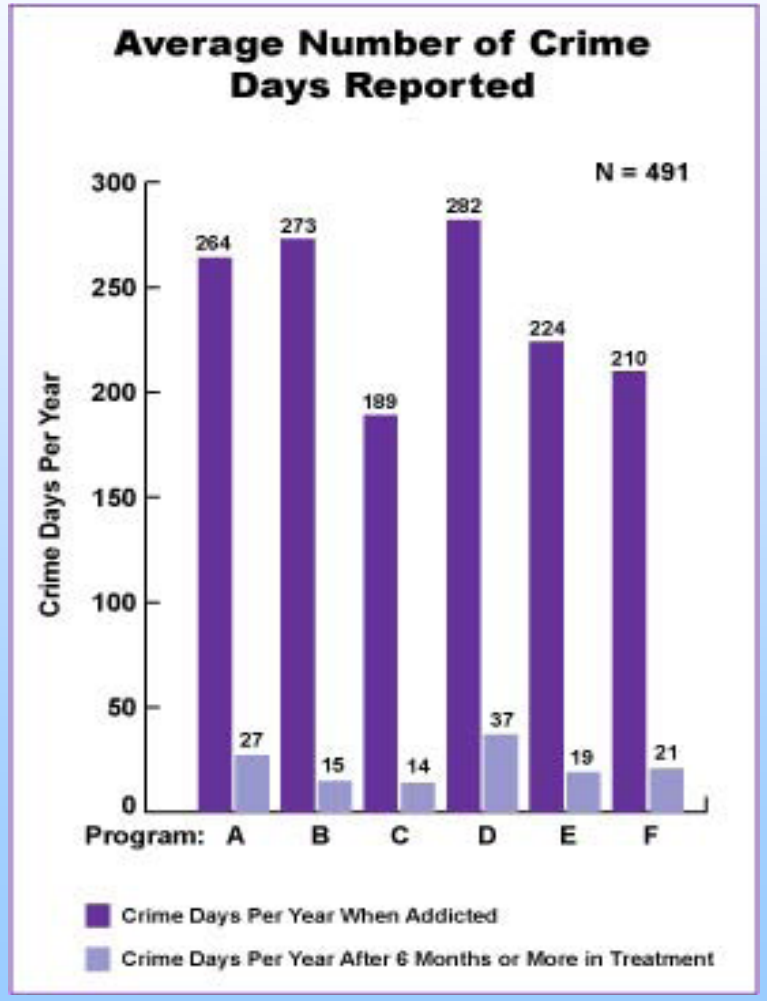
Main points

- Opioid addiction is a potentially fatal disease and markedly increases risk of death
- Prolonged inpatient treatments aren't available or acceptable for most of these addicts
- Ineffective treatments are over-used (outpatient alone, detox alone)
- Medication-assisted treatment is evidence-based; proven effective
- Methadone's negative reputation is based less on facts than on "feelings"

Reduction in criminal activity

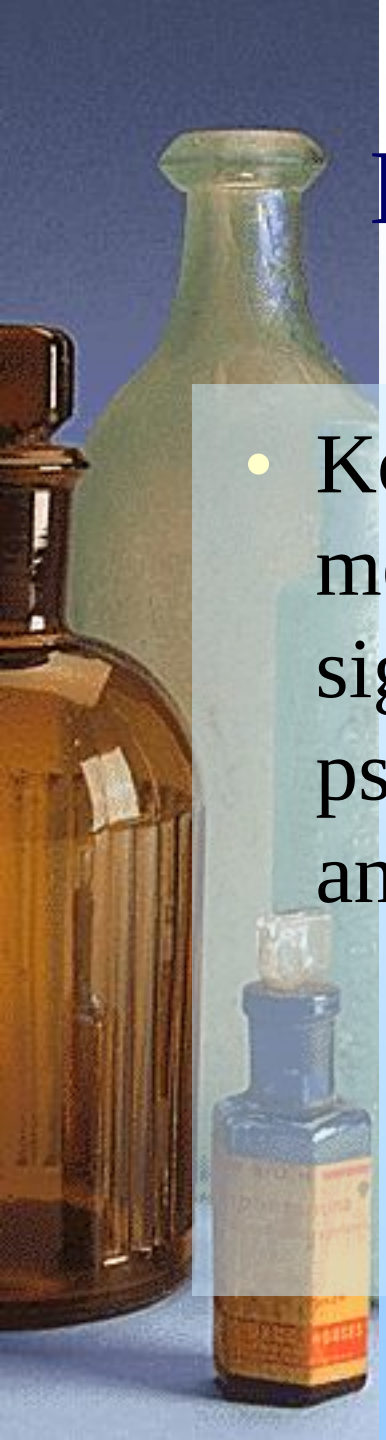
- Hubbard, Marsden, Rachal, et al., 1989 – TOPS – methadone maintained patients retained for at least 3 months had marked reduction of daily illicit opioid use, **predatory crime**, and cocaine use
- Mattick, Breen, Kimber et al.2003: treatment with methadone improved treatment retention**, reduced criminal activity** and heroin use – in different countries and populations

Illustrates the average number of crime-days reported by patients in six methadone maintenance treatment programs. This shows dramatic decrease in crime-days before and during methadone maintenance treatment occurs for all six programs. The average reduction in crime for those in methadone maintenance treatment was just over 91 percent (Ball and Ross, 1991).



Methadone maintenance reduces crime, increases employment

- Powers and Anglin, 1993: methadone maintained patients showed significantly less drug dealing, arrests, criminality; **increased rates of employment**
- McGlothlin and Anglin, 1981: methadone maintenance patients showed fewer days of illicit opioid use, less involvement in crime, fewer days dealing drugs, **more days of employment,** less time of incarceration



Methadone maintenance improves health and employability

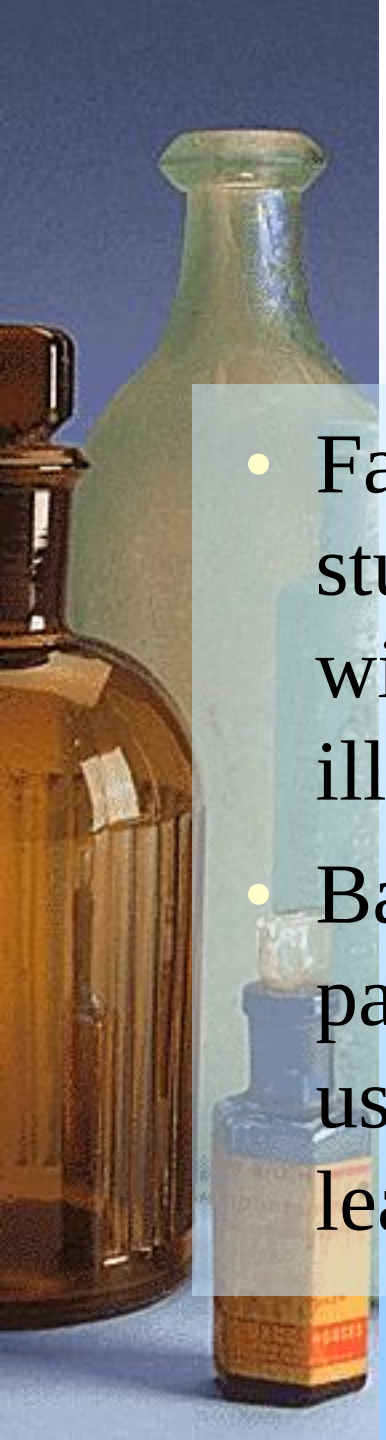
- Kosten, Rounsville, Kleber, 1987: methadone maintained patients had significant improvement in medical and psychological health, fewer legal problems and **higher rates of employment**

Methadone reduces use of illicit drugs

- Strain, Bigelow, Liesbon, et al., 1999: patients on methadone maintenance show **reductions in illicit drug** that is related to the **dose** (higher is better), amount of **counseling** (more is better), and the **time** patients are retained in treatment (longer time in treatment shows more improvement)

Methadone reduces use of illicit drugs

- DARP (Drug Abuse Reporting Program Study) – methadone maintenance **reduces illicit drug use and crime**; longer time in treatment correlates with better outcomes
- Ball and Ross, 1991:methadone maintained patients had significantly less illicit drug use; patients with **doses above 71mg had the least illicit drug use**



Higher methadone doses correlate with better outcome

- Faggiano et al., 2003: meta-analysis of 21 studies: higher methadone doses correlate with better retention in treatment and less illicit drug use
- Ball and Ross, 1991:methadone maintained patients had significantly less illicit drug use; patients with doses above 71mg had the least illicit drug use

Methadone reduces behavior associated with HIV transmission

- Gowing, Farrell, Bornemann, et al., 2004: review of 28 studies of methadone patients shows significant reduction in behaviors risky for HIV transmission
- Metzger, Woody, McLellan, et al., 1993: study of injection drug users: group on methadone had conversion to positive HIV at a rate of **3.5%.** Control group converted to HIV positive at a rate of **22%**

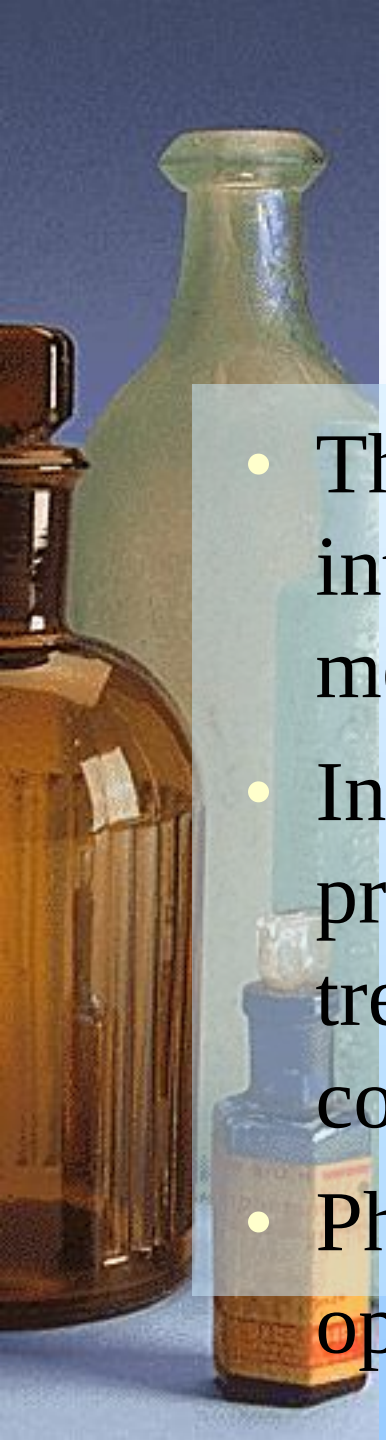
Don’t take my word for it…

- Check it out for yourself
- For all this information and more:
- NIDA’s Methadone Research Web Guide
- **http://international.drugabuse.gov**
- And read my blog about opioid addiction and treatment:
- **http://janaburson.wordpress.com**

Buprenorphine: A New Option for the Treatment of Opioid Addiction

Harrison Narcotics Tax Act of 1914

- Prior to 1914, in the U.S., opiates/cocaine could be sold without a prescription or a license
- Many patent medicines contained opiates, sold over the counter
- Incidence of opiate addiction rose – average addict was middle-class white female
- Public viewed this problem with alarm, clamored for legal intervention - easy access to opioids caused addiction and crime
- This law regulated and taxed opioids



Harrison Narcotic Tax Act of 1914

- This was the first law in the U.S. that was interpreted as criminalization of the non-medical use of some medications and drugs
- Interpretation was that doctors could prescribe opiates to treat pain, but **not** to treat addiction (because addiction was not considered to be a disease)
- Physicians were jailed for prescribing opiates to opiate addicts

Harrison Narcotics Tax Act

- Markedly diminished supply of opioids in the U.S.
- Number of opioid addicts dropped within 25 years
  - Addicted civil war vets died off
  - Middles class white female addicts, addicted by prescriptions or patent meds, gradually died off
- Remained illegal to prescribe maintenance opioids to opioid addicts until 1960’s

Drs. Dole, Nyswander, and Creek used methadone in 1960's under IND

- Still was illegal to prescribe for this purpose, unless IND (Investigational New Drug) was obtained
- Several successful methadone maintenance clinics were set up in the U.S., with special permission from the government:
  - New York
  - Washington D.C.
  - Illinois

Controlled Substances Act

- Passed in 1970, it set federal drug policy on importation, manufacture, distribution and possession of potentially addictive drugs
- Divided drugs/medications into 5 categories, schedule I through V
- Schedule I : drugs with no medical use, could not be prescribed
- Schedule II through V have varying laws

Methadone maintenance

- Eventually could be prescribed with strict federal and state regulations in a specially licensed clinic
  - Scrutinized by SAMHSA, DEA, SOTA (state methadone authority in each state), each state's DHHS
- Until DATA 2000, it was still illegal for a physician in an office setting to prescribe maintenance opioid medications, including methadone

Buprenorphine

- **DATA (Drug Addiction Treatment Act) of 2000 was a big deal!**
- For the first time in more than 80 years, this legislation made it legal for doctors to prescribe FDA-approved, Schedule III opioid medication to treat opioid addiction from their offices
- FDA approved buprenorphine in sublingual form as the first (and thus far only) drug for this purpose, in 2002

What's the difference between Suboxone and Subutex?

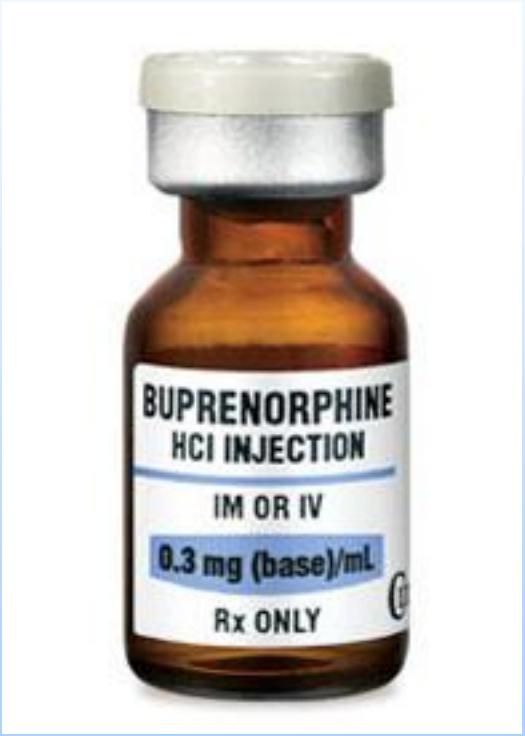
- Safety.
- Suboxone: is a bi-product, less likely to be misused by injection
  - Buprenorphine, the active ingredient
  - Naloxone, inactive sublingually
    - Active if injected, puts addict into withdrawal
- Subutex: monoproduct
  - Contains only buprenorphine
  - Can be injected

Buprenorphine

- Only the sublingual form is approved to treat opioid addiction
  - Tablet monoproduct
  - Table – bi-product
  - Film – no generics yet
- Several generics & name brand forms on the market besides Suboxone and Subutex
- More appropriate to call this medication by its generic name

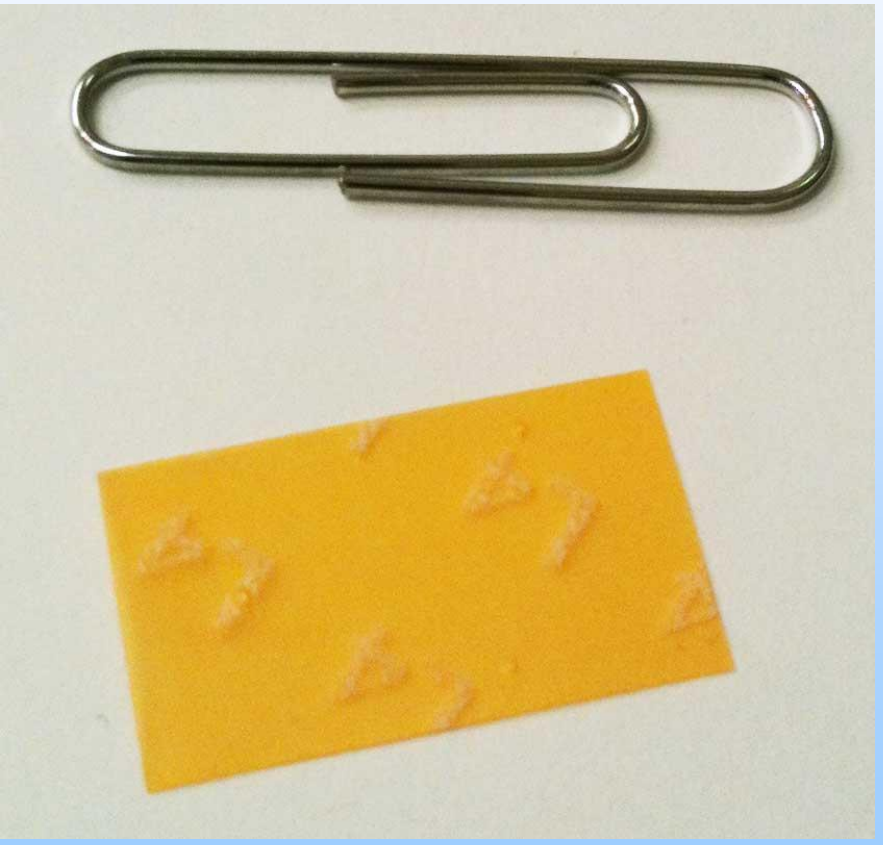
Other forms of buprenorphine that are **NOT** approved to treat addiction

- Butrans patch



Buprenorphine injectable

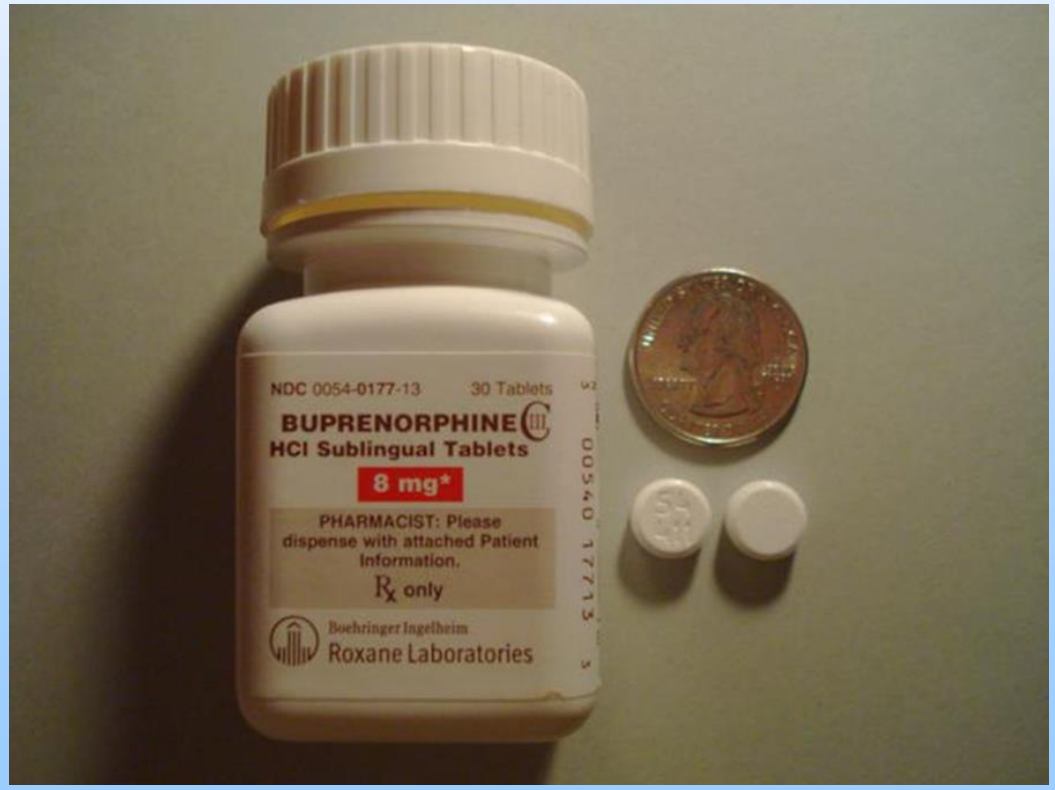
Suboxone: name brand of film form of buprenorphine/naloxone combination product; company stopped manufacturing the tablet form of the name brand product.



Probably no longer available

Generics

- No generic films, still under patent
- Generic tablets exist for monoproduct **and** bi-product (Subutex & Suboxone brands):



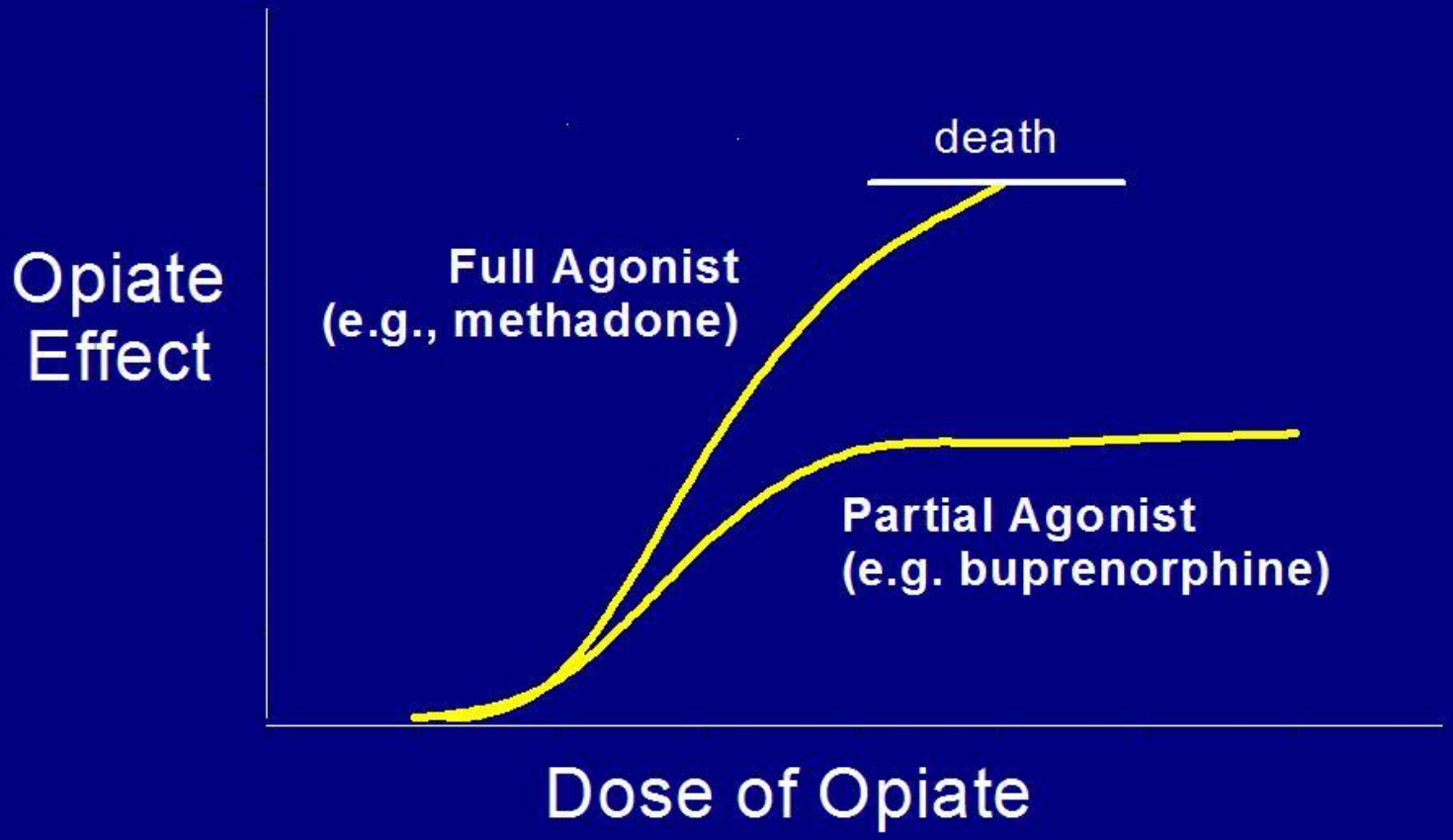
Buprenorphine: What is it?

- Is a unique opioid, man-made
- Long half-life – 24 to 60 hours
- Partial opioid agonist
  - Acts on the opioid *mu* receptors just as morphine, oxycodone, methadone, but it has a weaker action
  - Can still cause euphoria, sedation, even death in an opioid-naïve patient

Buprenorphine

- Can be fatal if mixed with alcohol or benzodiazepines, due to respiratory depression
- Metabolized by the liver
  - Metabolized into norbuprenorphine by the cytochrome P450 3A4 enzymes
  - Appear to be fewer medication interactions than with methadone
- It has a high affinity to the receptors
  - It sticks to them vigorously
  - It will kick other opioids off the opioid receptors
  - It will block the action of other opioids

Partial vs Full Opiate Mu Agonist



Buprenorphine

- Dosed at from 2 to 24mg per day, rarely up to 32mg per day
- Beyond 32mg there is a ceiling effect – higher doses have no more effect than the 32mg
- **Is much safer than methadone for this reason**
- Much more difficult to overdose from buprenorphine alone –but in combination with benzodiazepines and/or alcohol it can be fatal

Buprenorphine stable dose

- Average dose is 8-16mg
- Usually there's little benefit from increasing from 24 to 32mg
- If patients need 24-32mg it's prudent to check for diversion more frequently
- Some studies suggest a little better treatment retention at higher doses (POATS, Weiss et al)

Buprenorphine induction can be tricky

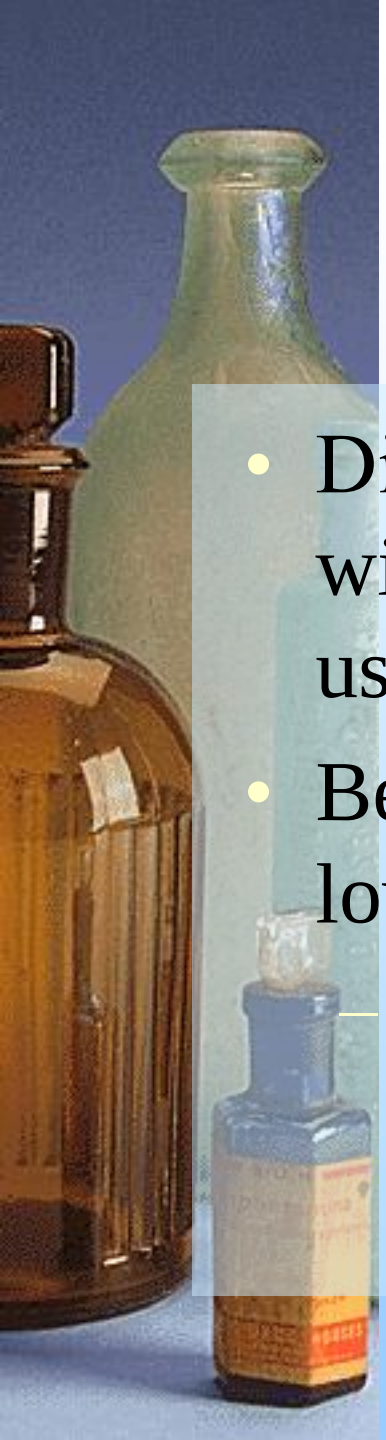
- Since buprenorphine is a partial agonist, the opioid addicted patient must wait until he/she is in at least moderate withdrawal prior to starting this drug**.**
- **If the patient is not in withdrawal, buprenorphine administration can precipitate withdrawal**
- If the patient has been taking methadone, patient should wait at least **72 hours after last methadone dose**
- For short acting opioids, 12 - 24 hours is usually long enough

Buprenorphine induction

- Make sure the patient is in at least moderate withdrawal (COWS of 12-15)
- Starting dose of 2 to 4 mg, can re-asses 1-3 hours after this dose & if still significant withdrawal, may give a second dose
- May increase dose every 1 to 5 days, by 2 to 4mg
- Just as with methadone, it does take about 5 days to see the full effect after a dose change
- Returning patients – can increase daily
- New patients – may want to wait days between dose increases

Judging the severity of opioid withdrawal

- COWS - Clinical Opioid Withdrawal Scale
- Easy-to-use check list of common withdrawal signs and symptoms
  - Asks about subjective symptoms (nausea, irritability, etc.)
  - Asks for objective data (pulse rate, pupil size, presence of yawning or gooseflesh)
  - Prefer to have a score of around 15 prior to first buprenorphine dose



From Weiss et al, "Adjunctive Counseling During Brief and Extended Buprenorphine/naloxone Treatment for Prescription Opioid Dependence" *Gen Arch of Psychiatry*, Vol 68(12) 12/11

- Difficult inductions are rare, don't correlate with which opioid the patient has been using
- Best predictor of difficult induction is a lower COWS score
  - 10 or less – significantly more likely to have difficulty than 13 and above

Buprenorphine induction

- Much safer than methadone induction
- Able to reach a stable dose more quickly than with methadone in most cases
- Many new patients have used buprenorphine on the street
  - Many patients already know their stable dose from licit or illicit use
  - Should still start with a low dose

Proper dosing

- Buprenorphine is absorbed through the thin skin under the tongue:

Proper dosing

- If patient chews and swallows the tablet or film, he/she isn't going to absorb the medication
- Acid inactivates this medication
- Any acidic food or beverage should be avoided for 15 minutes prior to dose
  - No coffee, tea, juice, soft drink
  - Water is OK
  - Patients often get a dry mouth from this medication, as with other opioids

Buprenorphine stable dose

- Patient should feel relief of withdrawal symptoms for the whole dosing cycle
- No need to divide the doses when treating addiction
- Divided doses may work better for a patient who also has chronic pain
  - OTPs must ask for exception in order to split dose
  - Many patients split dose on their own when they get take homes

During buprenorphine maintenance: the real work

- Need to address the same counseling issues as methadone maintenance patients
  - Address physical and mental health issues
  - Individual CBT/Motivational Interviewing
  - Avoiding people/places/things associated with addiction
  - Engage in positive activities
  - Identify relapse triggers
  - Family therapy if needed

Side effects of buprenorphine

- Mostly the same as with other opioids: sweating, constipation, decreased sex drive (opioids lower sex hormone levels)
- Possibly see less weight gain than with methadone
- Liver inflammation: START (Starting Treatment with Opioid Replacement Therapies, Saxon et al) study showed buprenorphine no more likely than methadone to be associated with liver dysfunction

Buprenorphine drug testing

- Can test for buprenorphine or norbuprenorphine, (to assure patient is taking the medication)
- Just like with methadone, must test specifically for buprenorphine/norbup.
- **Buprenorphine/norbuprenorphine will not test positive as an opiate**
- Employers rarely do drug tests for buprenorphine
- Parole/probation are starting to test for this in some cities

Two settings where buprenorphine can be prescribed

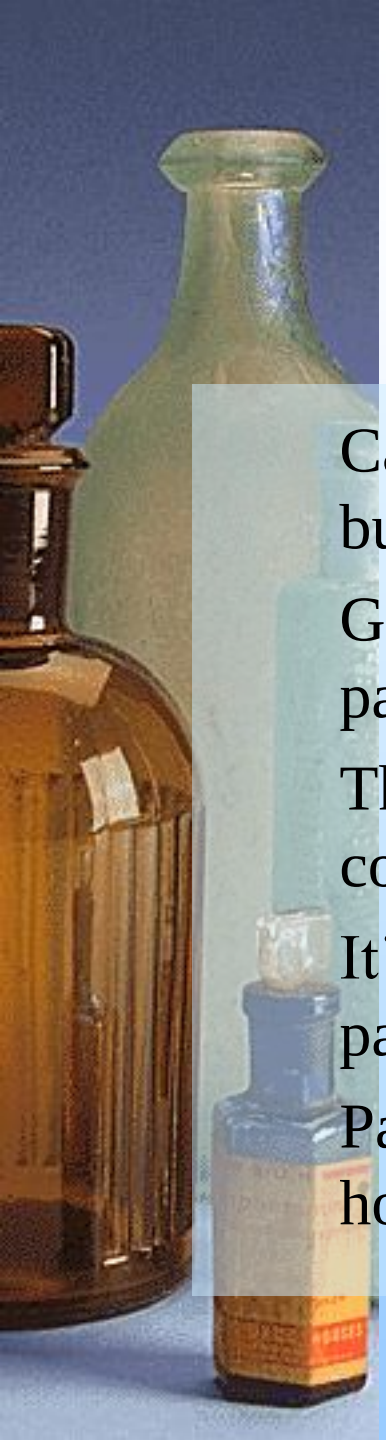
- **Private doctor's office, under the DATA 2000 law,**
  - Must have a special DEA number, called an "X" number
  - It's illegal for a doctor to prescribe buprenorphine for addiction without an "X" number
  - Better for more stable patients, more flexibility on frequency of visits
  - Each doctor can treat up to 100 patients at any one time

Two settings where buprenorphine can be prescribed

- **Opioid treatment program**
  - Physician does not need a DEA “X” number, only a valid DEA
  - No limit to the number of patients treated under the OTP license
  - As of January 2013, OTPs no longer need to adhere to the time in treatment guidelines for take homes
  - Must adhere to other criteria for take home doses, same as methadone

Buprenorphine in the Opioid Treatment Program

- OTPs must still obey their states' laws regarding take homes, which may be stricter than federal
  - Some states have endorsed guidelines for when to request take home exceptions for buprenorphine
- Change in law was meant to give more flexibility in the number of take homes with this relatively safer medication



Exceptions to take home regulations are possible

- Can ask for exceptions to get earlier take homes, since buprenorphine is much safer
- Guidelines have been produced in NC for buprenorphine patients in OTPs
- These give OTP doctors some guidance about when they could ask for extra take home exceptions
- It’s ok to wait to give take homes, depending on the patient and his/her progress
- Patients still must meet all of the 8-point criteria for take homes except time in treatment

Voluntary Consensus Recommendations for NC OTP Physicians regarding Buprenorphine Best Practice Treatment Protocols for OTP Patient Visits and OTP Medication Take-Home Privileges

The following are proposed voluntary consensus recommendations that have developed by the OTP Physician Conference Call Group for use as buprenorphine treatment practice guidance for physicians in North Carolina's Opioid Treatment Programs (OTPs). These recommendations do not change the federal regulations for applying for or granting exceptions, but rather provide consultative towards the development of standards to be evaluated for Extranet Exception Requests following the normal process, for approval by the NC State Opioid Treatment Authority and the federal CSAT-DPT.

Recommended Minimum Time in Treatment & Patient Status	Recommended Frequency of Visits with Physician*	Recommended Minimum # of Medication In-Office Doses	Recommended Maximum # of Medication Take-Home Doses	Recommended Frequency and Amount of Time of Counseling Sessions	Recommended Frequency of Alcohol and Drug Urine Testing	Recommended Frequency of Review of Patient Profile in NC CSRS	Other Comments Regarding Patient Clinical Factors or Conditions for Consideration
Federal and State Requirements →	Upon Admission	Required in Federal and State Schedules	Required in Federal and State Schedules	Required Twice per Month in Year 1; Once per Month After Year 1	Required Once per Month	NA	*No consensus recommendations to date on frequency of physician visits. Range of opinions presented extend from seeing the physician every two weeks or once a month, to seeing the physician prior to phase advancement, to seeing the physician annually.
Day 1 Admission		**6 or 7** Doses Per Week	0 or 1 Dose per Week	Upon Admission	Upon Admission	Upon Admission	
Days 2-7		**6 or 7** Doses Per Week	0 or 1 Dose per Week	Once per Week	Once per Week		
Days 8-30 Stable and		**3** Doses	**4**	Twice per Month	Twice per Month		

Recommended Minimum Time in Treatment & Patient Status	Recommended Frequency of Visits with Physician*	Recommended Minimum # of Medication In-Office Doses	Recommended Maximum # of Medication Take-Home Doses	Recommended Frequency and Amount of Time of Counseling Sessions	Recommended Frequency of Alcohol and Drug Urine Testing	Recommended Frequency of Review of Patient Profile in NC CSRS	Other Comments Regarding Patient Clinical Factors or Conditions for Consideration
Compliant		(Every Other Day dosing)					
After 1 Month Stable and Compliant		1 Dose	6	Twice per Month	Once per Month		
After 3 Months Stable and Compliant		1 Dose	13	Twice per Month	Once per Month		
After 6 Months Stable and Compliant		1 Dose	20 Doses	Twice per Month	Once per Month	Once every Six (6) Months or Annually	
After 9 Months Stable and Compliant		1 Dose	30 Doses	Twice per Month	Once per Month		
After 12 Months through Treatment Completion		1 Dose	30 Doses	Once per Month	Once per Month	Once every Six (6) Months or Annually	

Guidelines for when to ask for take home exceptions:

- Other states have promulgated other guidelines
- New Jersey:
  - After 1 month stability, 1 week of take homes
  - After 2 months stability, 2 weeks of take homes
  - After 3 months of stability, 3 weeks of take homes
  - After 4 months of stability, 4 weeks of take homes

Why use generic buprenorphine?

- Expense – name-brand Suboxone is about twice the cost of generic
- Private Suboxone doctors are unaffordable for many opioid addicts, for whom buprenorphine may be a better choice than methadone
- Lower prices means more people can afford buprenorphine treatment

Why use generic buprenorphine?

- Opioid treatment programs are able to monitor the patient more closely
- Even acknowledging the increased risk of diversion for generic buprenorphine, compared to Suboxone, this medication is MUCH safer than methadone

Advantages of Buprenorphine

- Patients experience it as being a “lighter” drug, with less fatigue, less of a medicated feel than methadone
- **Safer: much less potential for fatal overdose**
- Less stigmatization
- *Surprising number of patients come for admission for buprenorphine who say they would **NEVER** want to be on methadone, due to stigma, misperceptions about methadone

Advantages of buprenorphine

- More flexibility with take home doses in both doctor's office and opioid treatment program
  - In 2013, federal regulations dropped the time-in-treatment requirements for take homes in OTP
  - State regulations may still require this, however
- Buprenorphine is a partial opioid; most patients find it is easier to taper off of, if/when appropriate

Advantages of methadone

- Buprenorphine may not be strong enough for many patients; methadone dose can be increased to get more effect – there's no ceiling on it.
- Expense: methadone is pennies per dose
- Proven track record – 40 years of data
- Easier to manage acute pain situations
  - Give short-acting opioids on top of maintenance dose
  - With buprenorphine, may need to stop maintenance dose due to blocking of other opioids needed for acute severe pain

Buprenorphine versus methadone

- Methadone will always have a role
- Buprenorphine doesn't work for all patients
- It's nice to have more choices
- We already know some genes predict worse outcome with buprenorphine
  - Maybe we will use genetic info to pick best medication in the future??

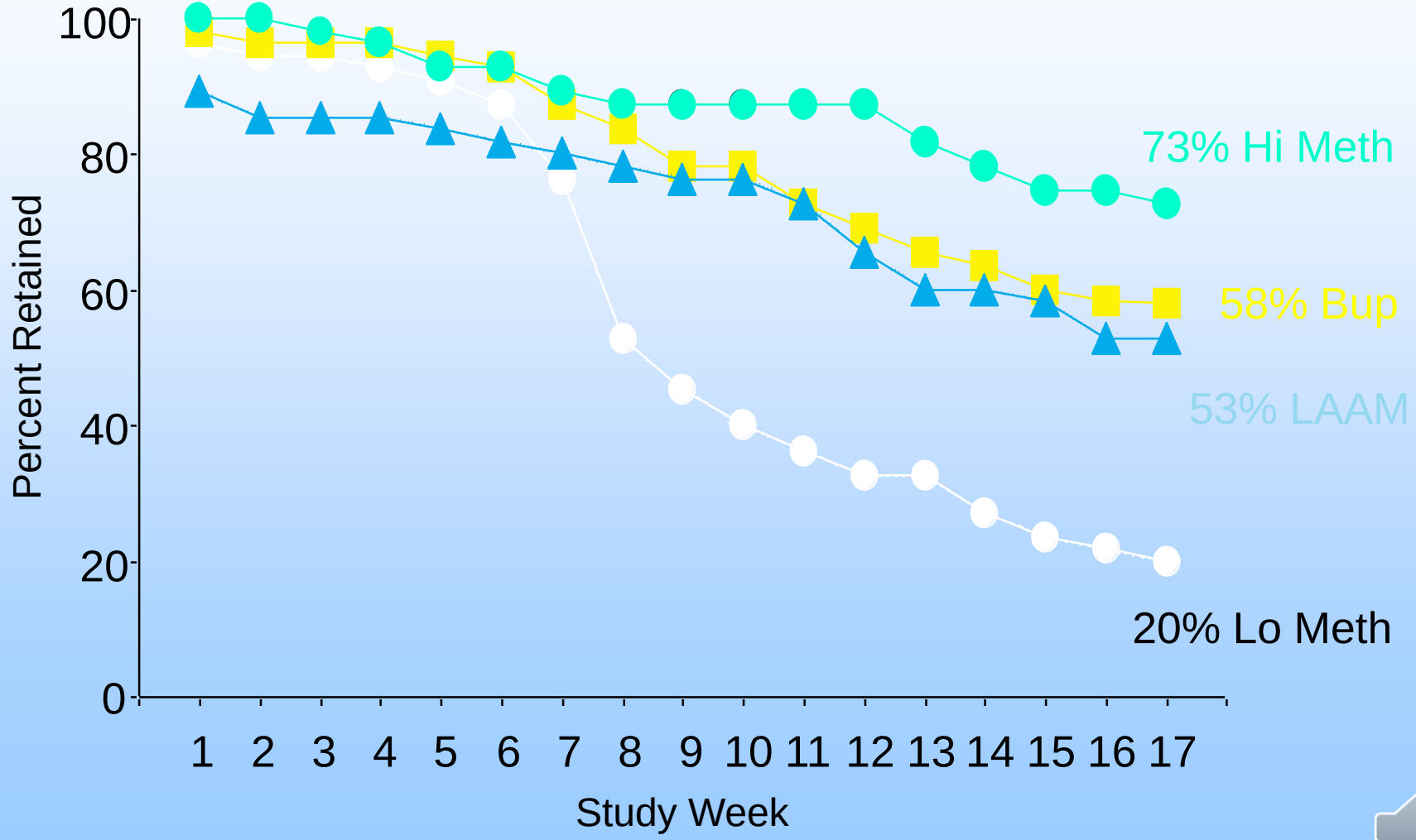
Buprenorphine versus methadone: retention in treatment

- Methadone patients have higher retention in treatment (Cochrane review)
- Hser et al, Addiction, 2013
  - Relatively large study of >1200 patients randomized to buprenorphine or methadone
  - Retention rates at 24 weeks:
    - 74% for methadone
    - 46% for buprenorphine

Buprenorphine versus methadone: retention in treatment

- Buprenorphine patients had a significantly higher rate of opioid-free UDS
- Higher doses of both medications produced higher rate of opioid-free UDS
  - More than 60mg of methadone
  - 16 or more mg of buprenorphine

Buprenorphine, Methadone, LAAM: Treatment Retention



Johnson et al. (2000), NEJM

Buprenorphine in the opioid treatment program

- Nearly 300,000 patients enrolled in OTPs in the U.S. who dose with methadone
  - That number has been steady over the past years
- From 2011 data, around 7,000 patients in OTPs are on buprenorphine (NSSATS data, 2011)
- This number probably will increase with the new rule (January 2013) relaxing time in treatment criteria for buprenorphine take homes

Buprenorphine in the opioid treatment program

- Recently, more OTPs have added buprenorphine to their treatment, or plan to do so soon
- Financial challenges remain, due to the increased cost of medication compared to methadone

Latest buprenorphine facts (office-based treatment):

- 21,000 physicians have the special DEA license needed to prescribe buprenorphine
- Only two thirds of these physicians prescribe buprenorphine
- Patients:
  - 224,000 patients on Suboxone film
  - 151,000 patients on Suboxone tablets
  - 52,000 on generic buprenorphine

Data presented by Dr. Michele Loftwall at ASAM 2012 Med-Sci Conference, 4/16/2012
"Buprenorphine Diversion: Enhancing Access While Preventing Diversion"

Why don't more physicians prescribe buprenorphine in their office?

- Physicians often don't want to treat addiction - view addiction as bad behavior, not as a disease
- Believe patients with addiction will be disruptive in their practice
- Don't feel like they have support staff to adequately treat (addiction counselors, etc.) addiction

- Reimbursement issues – many addicts have Medicaid or no insurance
- Have to attend an eight hour training course before government will grant a license to prescribe
- Even after an eight-hour course, some docs feel they don’t have the expertise to treat this disease

Weiss et al, "Adjunctive Counseling During Brief and Extended Buprenorphine-naloxone Treatment for Prescription Opioid Dependence," *Archives of General Psychiatry, 2011; 68 (12) 1238-1246*

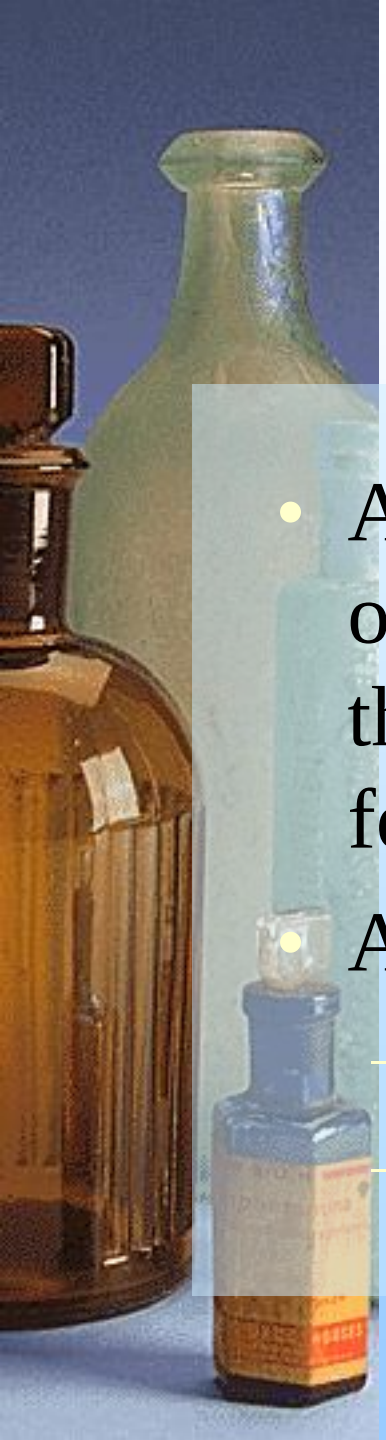
- Also called the POATS study
- First large study of prescription pain pill addicts (653 patients)
- Many studies have been done with heroin addicts
- Many doctors thought pain pill addicts would fare better, be more successful after tapering off maintenance medication

POATS Phase one

- Phase one: two randomized groups of patients
  - One group had standard medical management
  - Second group had opioid addiction counseling in addition to medical management – manual guided, 45-60 min twice per week
  - Both groups were maintained on buprenorphine for two weeks, then tapered for two weeks
  - In both groups, only 6-7% were successful (less than 4 days of opioid use per month) when evaluated at 12 weeks

POATS phase one

- The group with more intense counseling didn't do any better than medication management
- Both groups did poorly
- Patients did poorly when buprenorphine was used for only one month, even with relatively intense counseling
- Even patients with good prognostic factors like stable employment, stable home life, higher educational status had poor outcomes



POATS Phase two

- All the patients who relapsed were put back on buprenorphine, kept on it for 12 months, then tapered over 4 weeks, then followed for 8 more weeks
- Again randomized into two groups
  - Standard medical management
  - Standard medical management plus opioid addiction counseling

Poats Phase two

- Evaluated both groups at twelve weeks, before taper started
- Both groups had around 50% doing well (abstinent from opioids for more than 3 of the last 4 weeks)
- Additional counseling didn’t appear to add benefit

POATS Phase two

- At twelve weeks, both groups tapered over the next 4 weeks
- Around two-thirds of both groups had relapsed when evaluated two months after taper
- After twelve weeks of treatment and a four week taper, only around 9% were still doing well

POATS Phase two

- Showed dismal outcome for patients who tapered, even after 12 weeks
- Patients did well until they tapered off buprenorphine/naloxone
- The addition of fairly intense counseling did not improve outcomes

POATS secondary analysis

- Most common opioids in these patients were oxycodone, hydrocodone, and methadone
- Outcome didn’t vary according to favorite opioid used
- Difficult inductions were rare, best predictor of complication is COWS lower than 10
- Induction wasn’t more difficult in patients with chronic pain, depression, or other demographics

POATS secondary analysis

- What were predictors of patient success in Phase 2?
  - Older patients
  - Reason for first use was for pain control
  - Got first opioid medication from a doctor
  - Current or lifetime history of major depression

POATS secondary analysis

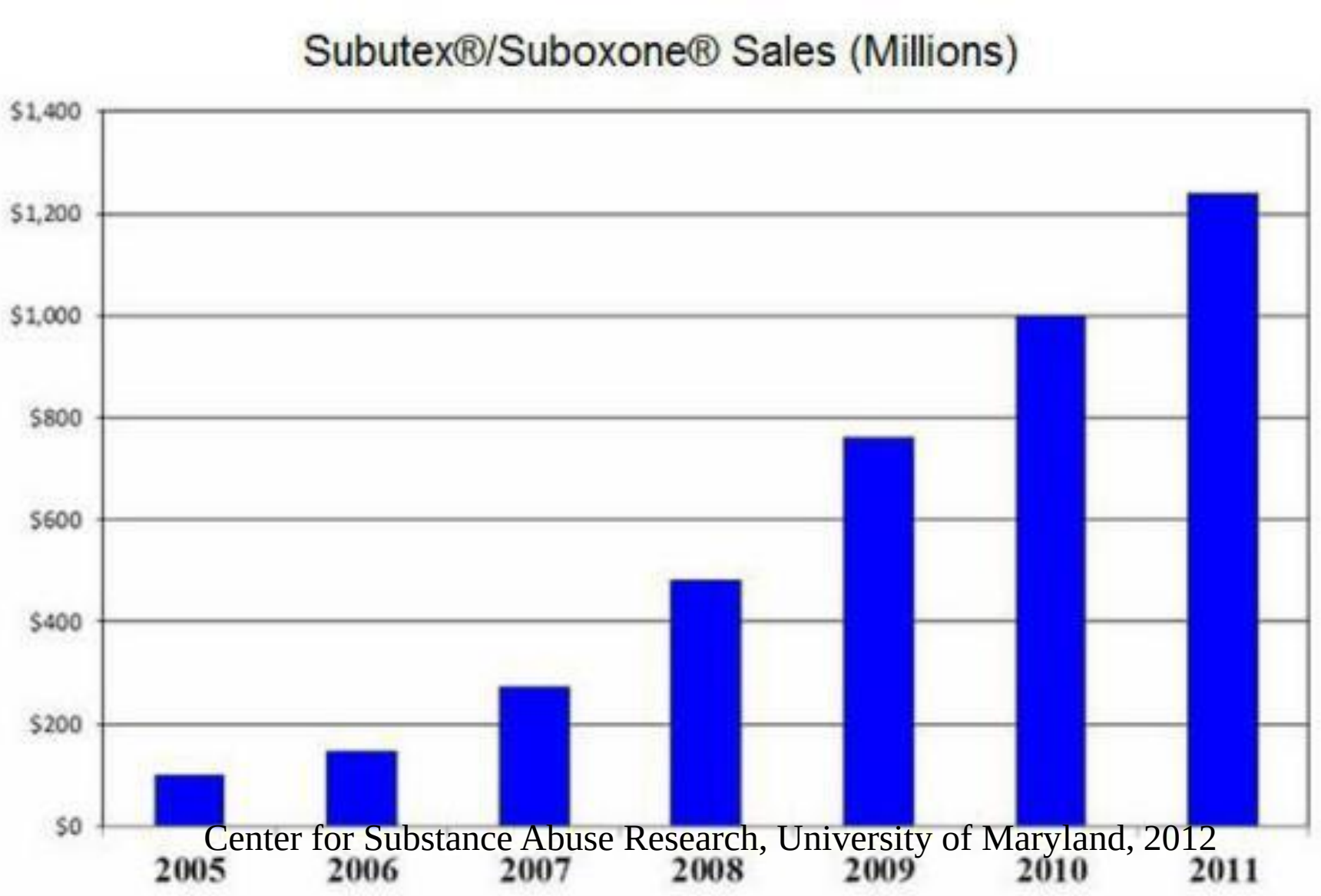
- What were predictors of patient failure in Phase 2?
  - Younger
  - Got first opioid from a drug dealer
  - First use of opioid was to get high
  - Use of OxyContin brand
  - Prior treatment experience
  - History of 12-step attendance
  - Snorted/injected/chewed opioids
  - Had dabbled with heroin in the past

How long should a patient be on buprenorphine?

- We don’t know, but research shows consistently better outcomes for patients who remain on medication for maintenance
- Highly individualized decision
- Has the patient done the work of recovery?
- Are there chronic pain issues and if so, can they be managed without opioids?

Diversion

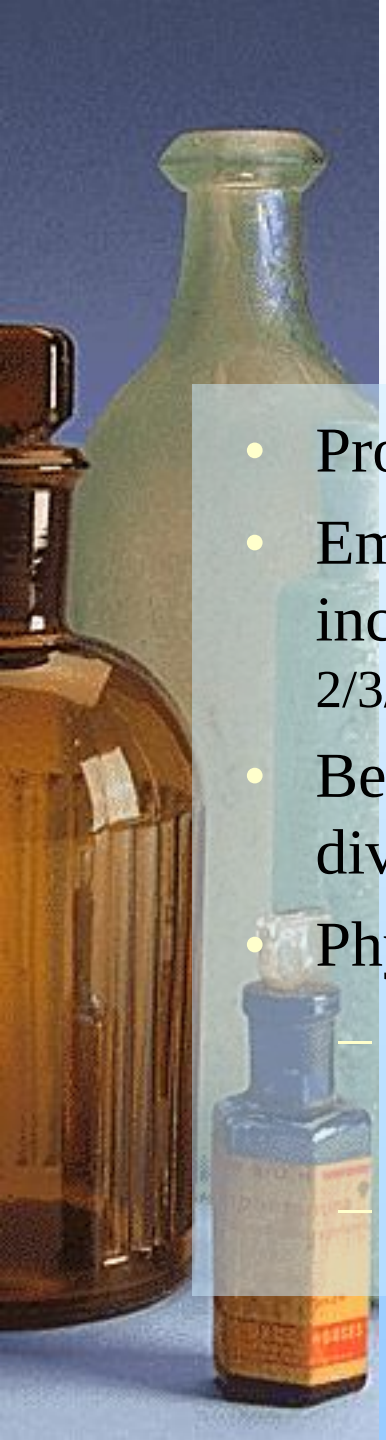
- Buprenorphine is now a common black market drug
- Some addicts snort or inject their prescription of Suboxone/Subutex
- The 8mg Suboxone tablet or film now sells for anywhere from $5 to $25 on the black market
- Many studies suggests most illicit use is self-treatment, not for intoxication



Center for Substance Abuse Research, University of Maryland, 2012

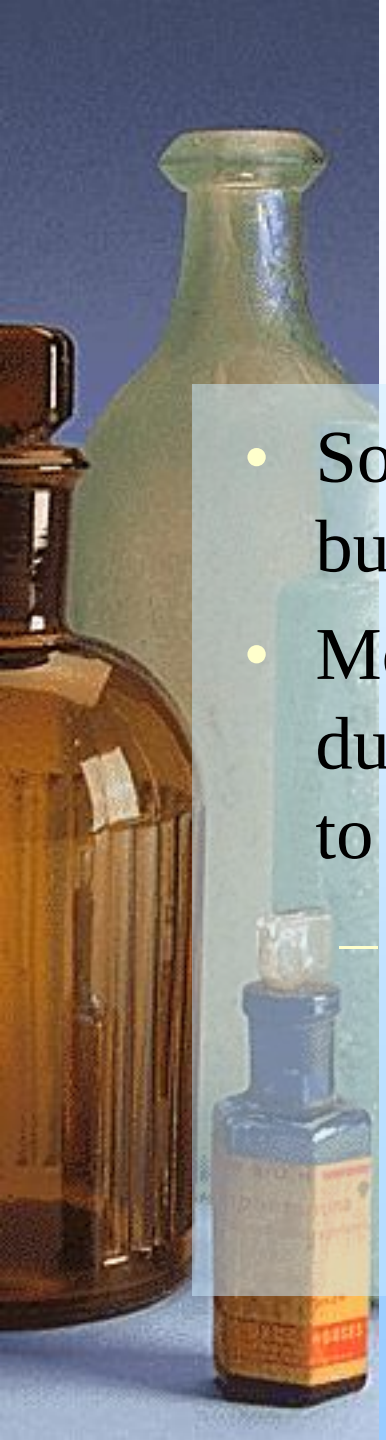
Buprenorphine

- Sales of buprenorphine in grams: nearly quadrupled from 2007 to 2012
- Now around 800,000 patients on buprenorphine, OTP and OBOT combined
- More buprenorphine is being prescribed, more being diverted, more on the black market
- Proportion of diversion is about the same



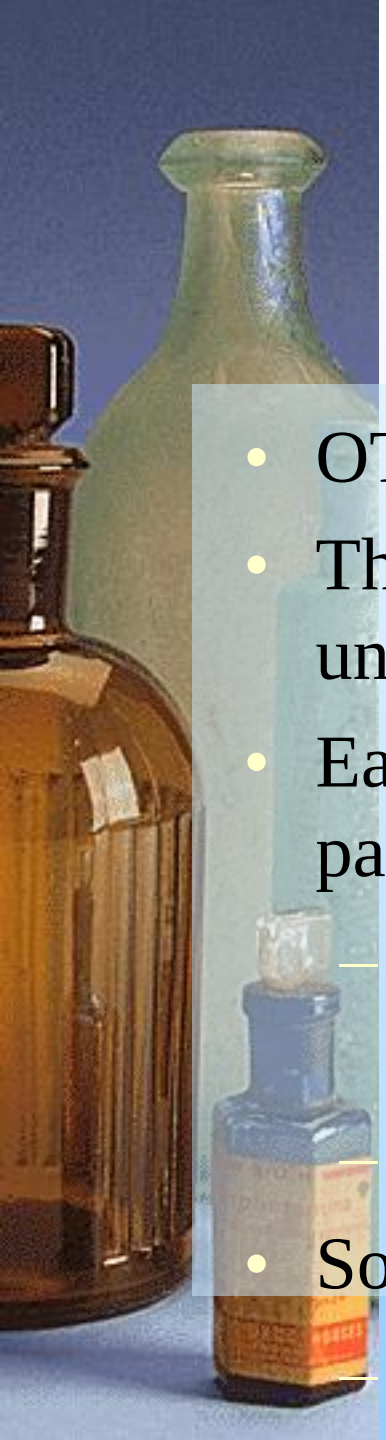
Diversion of buprenorphine

- Problematic in many areas
- Emergency department visits involving buprenorphine increased almost ten times from 2005 to 2010 (CESAR FAX 2/3/13)
- Better access of buprenorphine treatment may reduce diversion
- Physicians, OTPs need to be more vigilant
  - Unstable patients aren't appropriate for office based treatment
  - Physicians/OTPs need to do take-home bottle recalls, pill/film counts, urine drug screens



Mountain Health Solutions: some of our experiences

- Some new patients attempt to divert buprenorphine, often on their first day of treatment
- Most patients suspected of diversion dropped out during the first week, after we crushed their tablets to prevent diversion
  - No data to support crushing tablets



Diversion in the OTP

- OTPs must do observed dosing
- This means each patient must stay on premises until dose has dissolved
- Each clinic needs a monitored location for these patients
  - Staff should observe patients until dose is dissolved
  - Up to 20 minutes
- Some diversion has been seen
  - Put hands to mouth to cough, sneeze, etc.

Our monitored location, at Mountain Health Solutions, North Wilkesboro

Diversion prevention

- Do frequent bottle recalls on patients with take home levels 3-7
- We changed packaging: now use one bottle for each day's dose, just like for methadone, rather than one bottle with all pills in it
- Shrink wrap around the top of the bottle further deters tapering

Switching from buprenorphine to methadone and vice versa

- Sometimes patient still feel significant withdrawal even on a buprenorphine dose of 24mg
- No need to wait to switch from buprenorphine to methadone
- Since the patient has been on partial opioid, probably prudent to start on a lower dose of methadone than ordinary
- Consider 20mg or less

Switching from methadone to buprenorphine

- Methadone patients: many who are doing well on methadone have asked to switch to buprenorphine
- Many methadone patients like to switch to buprenorphine when they are tapering
- Taper dose slowly to 40mg or less before making the switch – don’t rush this!!!
- Last dose on Friday, miss Sat. and Sun., start bupe on Monday if COWS greater than 15
- More difficult to switch from methadone to buprenorphine

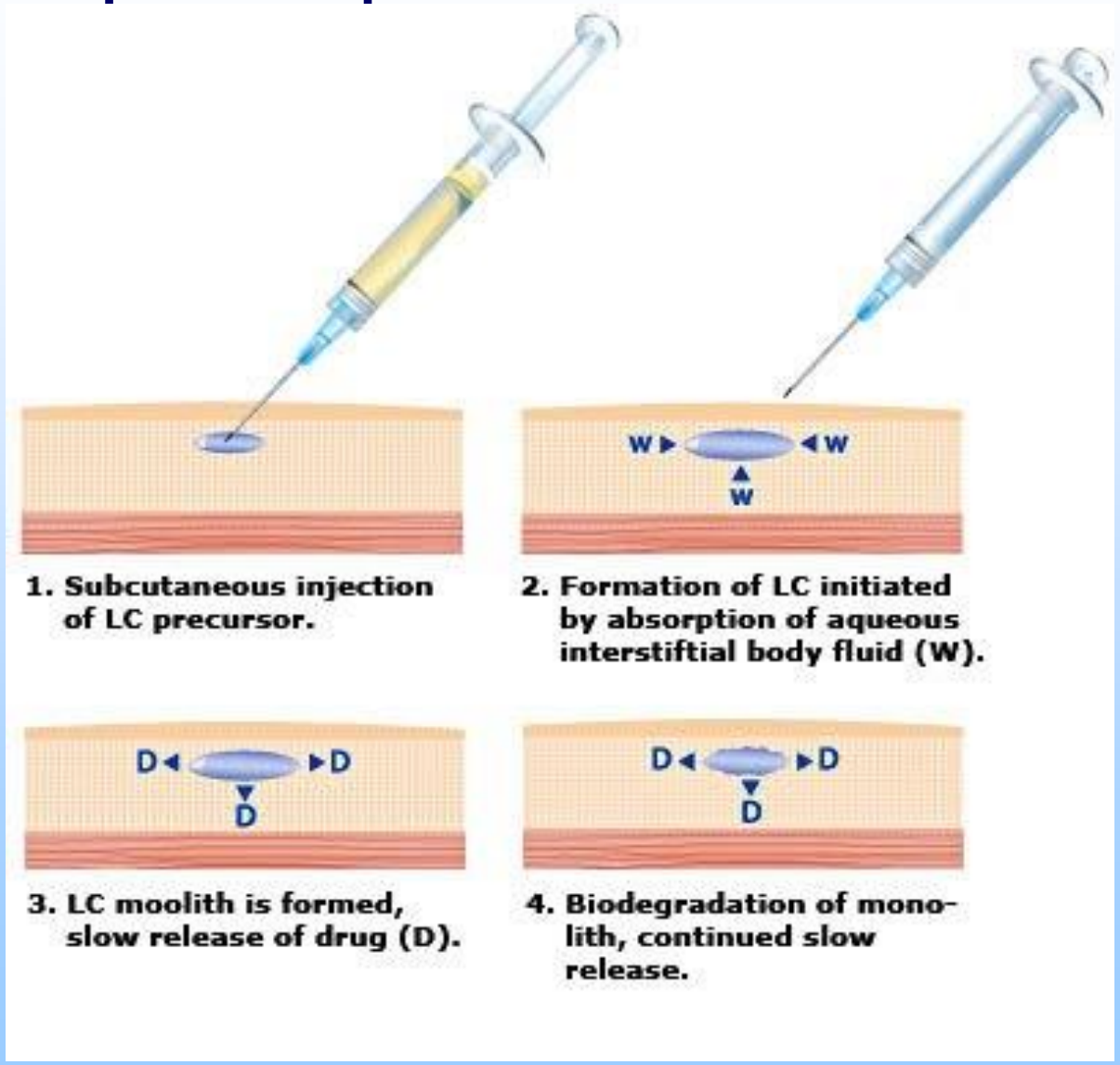
One the horizon: Probuphine

New formulations of buprenorphine

- Probuphine: implantable buprenorphine
- Similar to Norplant technology
- Implanted cylinders that release buprenorphine over six months
- FDA didn't approve this medication
  - Probably because blood levels achieved were significantly less than with sublingual
  - Complicated system for surgical placement and removal

On the horizon…new formulations of buprenorphine

- "CAM 2038"
- Camarus Pharmaceuticals
- Varied doses
- Once weekly
- Once monthly
- Injected subQ
- Now in Phase II trials



Newer forms of buprenorphine

- Depot injections and implants are less likely to be diverted
- Injections and implants may give higher retention rates
- Less chance for pediatric exposure – medication will not be in the patient's house

Role of buprenorphine

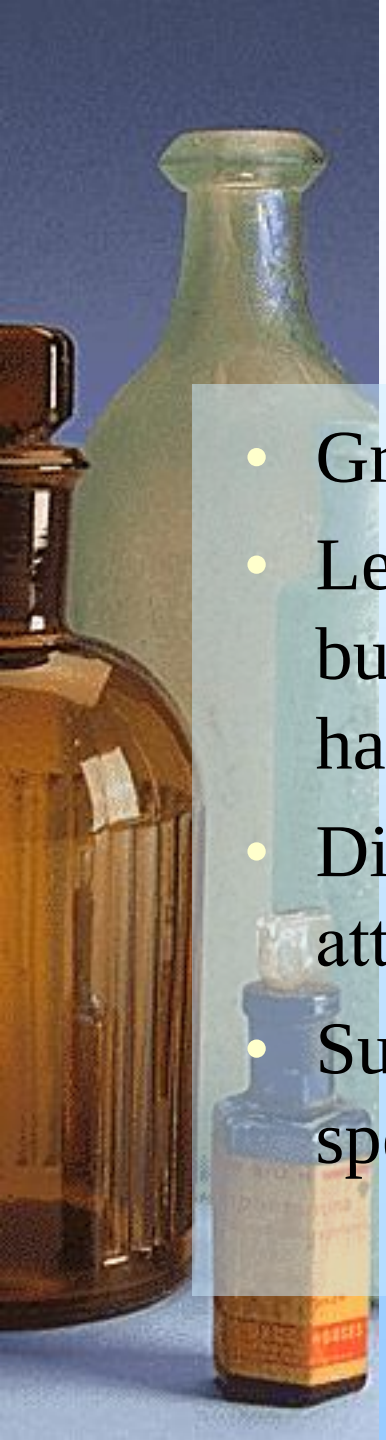
- DATA 2000 was passed to give better options to more stable opioid addicts to have better access to maintenance meds
- Some patients who want buprenorphine are too unstable for office-based practice
- OTP can provide more structure for these patients
  - Have the ability to dose the patient daily
  - Counseling is built into the system
  - Pay-as-you-go may be more attainable financially for many patients

Roles of buprenorphine

- Can be part of a care continuum
  - These patients may switch to office -based program in the future, after making progress in recovery
- Compared to methadone:
  - Safer medication
  - Perhaps easier to taper off of, if taper is indicated

Obstacles to the use of buprenorphine in OTP

- Inertia, lack of knowledge on the part of OTP owners/staff
- In the past, not much advantage to the patient since daily dosing is still required
- Federal guidelines dropped the time in treatment criteria for take homes as of 1/13
- We still must meet NC's requirements



My experience & feelings:

- Grateful for the safer induction, faster stabilization
- Less worry about fatal overdose with buprenorphine and benzos, though it still can happen
- Disappointed and angry about the high rates of attempted diversion we've seen
- Surprised so many people come to our OTP specifically because we offer buprenorphine

- Many people see buprenorphine as completely different from methadone
- Ability to offer buprenorphine complements methadone program, offers more options
- It’s another tool, but it will not replace methadone
- There are special precautions to be taken with buprenorphine relative to diversion

Patient experiences

- Seem grateful buprenorphine is an option
- Somewhat higher price is a deal-breaker for patients with financial difficulties
  - Many switch to the cheaper methadone
- Most have tried buprenorphine films or tabs prior to coming to treatment
- Some patients vehemently opposed to buprenorphine (“It made me sick!”)

- More information on buprenorphine can be found at: www.buprenorphine.samhsa.gov
- Order TIP 40, about buprenorphine
- Patients can go to this website to read more about this medication and find a doctor in their area
- Drug manufacturer's website http://suboxone.com which also provides assistance locating doctors licensed to prescribe
- See my blog: http://janaburson.wordpress.com
- Email me : bjana42@bellsouth.net

The Opioid Blockers:

Naltrexone and Naloxone

Naltrexone

- Is an oral form of an opioid blocker
  - opioid receptor antagonist – binds to *mu* receptors, does not activate them, blocks all other opioids from attaching and activating
- The pill form has been marketed for years to promote abstinence from opioids by blocking the effects of abused opioids - Trexan
- Approved in 1994 for treatment of alcohol dependency (brand name ReVia)

Naltrexone

- Part of alcohol's pleasurable effect is from stimulation of opioid receptors by natural endorphins; this is blocked by naltrexone
- It seems to work by reducing the emotional response to alcohol
- May be more effective in patients with a strong family history of alcoholism
- Dosed at 50mg per day, costs ~$130/month

Naltrexone has been shown to reduce

- **Percentage of drinking days**
- **Amount of alcohol consumed if drinking occurs**
- **Excessive or destructive drinking**
- Use with caution in acute hepatitis/liver failure (however alcohol is much more likely to cause liver damage)
- Common side effects: nausea, fatigue, constipation

Oral naltrexone for opioid addiction…

- Lackluster results.
- Only effective if the patient takes the medication
- Unless forced to do so by relative, employer, licensing board, opioid addicts tend to stop taking the medication, can then relapse
- It does not produce any pleasurable feelings
- It blocks all opioids, even endorphins

Naltrexone

- Before starting this medication, an opioid addict needs to have completed acute withdrawal from opioids
- **If the first dose is given too soon, this medication will cause withdrawal**

Naltrexone

- For short-acting opioids, may be 3-5 days
- For long-acting opioids (methadone, buprenorphine, depot patch form of fentanyl or morphine) patient may need to be off the medication 5-7 days

Naltrexone in Russia

- Epidemic of IV heroin addiction and HIV starting in the late 1990's
- May be a unique cultural situation
  - Most heroin addicts are young people who live with their parents
  - These addicts usually don't use other illicit drugs
  - No methadone/buprenorphine allowed in the country

Oral naltrexone in Russia

- In one small study (Krupitsky et. al., 2004), naltrexone definitely more effective than placebo
- Observed dosing of naltrexone by parents
- At six month, 44% of patients on oral naltrexone were still in the study and had not relapsed, compared with 16% of patients on placebo
- Much better results than in other cultural situations

- Review article: “Use of Naltrexone to Treat Opioid Addiction in a Country in Which Methadone and Buprenorphine are not Available” Krupitsky et al, *Current Psychiatry Reports*, October, 2012, Vol. 12 pp 448-453
- http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3160743/

Naltrexone, depot injection

- Brand name is Vivitrol
- Once-monthly injection into gluteal muscle
- Medication is released over the month
- Usually a good idea to do a test with oral dose first
- Compliance is less of an issue
- Medication costs around $300-$400

Naltrexone implant in Russia

- Sustained-release implant, Prodetoxon
- Contains 1000mg naltrexone
- Implanted into abdominal wall
- Releases medication over 2-3 months
- Russian study of this implant of 306 recently detoxed heroin addicts showed 63% on naltrexone implant had heroin positive UDS compared to 87% with placebo implant

Naltrexone, depot injection

- The ideal time to talk about naltrexone is in a medical detox facility
- After the patient is finished with opioid withdrawal, start him on oral/IM naltrexone before leaving the treatment facility
- Many relapses happen if there is any delay administering naltrexone dose.

Why don't opioid treatment programs use naltrexone?

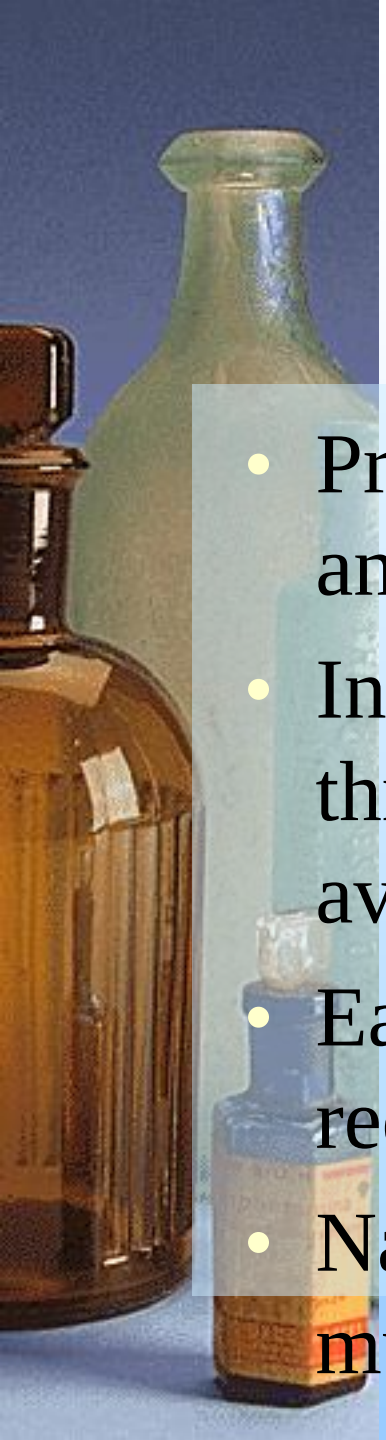
- Reimbursement issues
- Logistics: patient needs to complete acute opioid withdrawal first
- OTPs use long-acting opioids
  - We would have to wait at least a week, perhaps more, to administer naltrexone
  - Difficult for patients to get through that time without relapsing, even with a slow taper

Why don't opioid treatment programs use naltrexone?

- Opioid treatment programs could work with inpatient detox programs who do not offer naltrexone
  - This could improve the outcome of patients who only want to do a detox admission
  - Start with oral naltrexone for a day or two
  - Administer depot naltrexone monthly
- Would have to be done in such a way that coming to OTP would not be a relapse trigger
- **Ongoing counseling is essential**

Naloxone

- IV form of the opioid blocker
- Brand name is Narcan
- Used by medical personnel to rapidly reverse and opioid overdose
- Naloxone kits are becoming available for opioid addicts, their families, patients on opioids for pain – to reduce opioid overdose deaths



Naloxone

- Project Lazarus – started in Wilkes Co., NC and has become a model for other programs
- Intranasal naloxone kits were dispensed through Project Lazarus while funds were available
- Easy-to-use intranasal doses, no needle required
- Naloxone is rapidly absorbed from nasal mucosa


PROJECT
LAZARUS
Opioid Overdose Prevention
336-667-8100
NALOXONE RESCUE KIT
P.O. Box 261 Moravian Falls, NC 28654
www.projectlazarus.org
Store in accessible location at room temperature

Project Lazarus

- Grass roots organization dedicated to reducing overdose deaths in Wilkes County, NC: http://projectlazarus.org/
- Spread to other counties
- Project also has other programs: educate physicians about safe prescribing, drug take-back days, encouraging the use of our state's PMP

Naloxone

- Two addicts were saved with Project Lazarus kits, medication administered by a patient of MHS with a kit
- Cost about $50 per kit
- Not yet easily commercially available
- Good Samaritan law, passed in 2013, made it legal for doctors to prescribe naloxone kits to people who are not their patients, if it is reasonable to assume they are at risk for overdose from opioids

Medication-assisted treatments

- We are no longer “methadone clinics”
- Better term is “Opioid treatment program”
- We now have three FDA-approved medications to use for opioid addiction treatment
- Newer forms of these medications are being developed
- We will have ever more choices available
- No one medication works for everyone

Thank you for your attention!

Any questions, Email me at bjana42@bellsouth.net
Read my blog at http://janaburson.wordpress.com