Medication Assisted Treatment (MAT) in Family Dependency Treatment Drug Courts (FDTCs) & other Courts

Beyond the Bench Conference

December 18-20, 2017

San Diego, CA

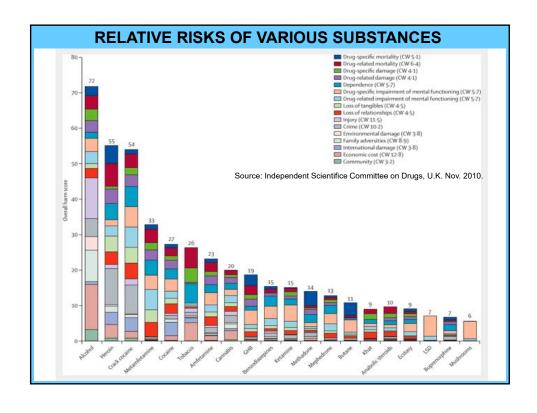
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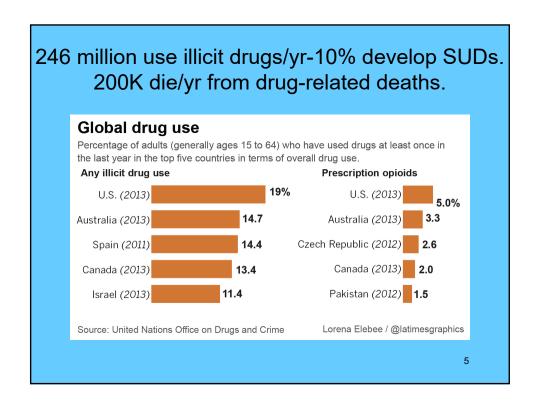
SESSION GOALS

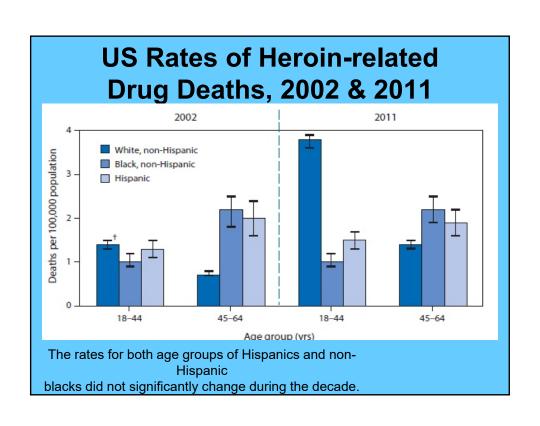
- 1. Review the biological basis for physical drug dependence and characteristics of addiction
- 2. Describe medications currently FDA-approved for Substance Abuse treatment focusing on Opioid Dependence
- 3. Understand the key indications, contraindications, and diversion risks with for medications used to treat Opioid Use Disorders
- 4. Discuss Implementation of MAT in California and the "meaning" of MAT in your courts

Part One

- · Quick Review of Problem:
 - Physical Dependence on Addictive Substances
 - Addiction: Why? What? A matter of will?
 - Treating Substance Use Disorders: Challenges







ADDICTION

- NIDA Definition -

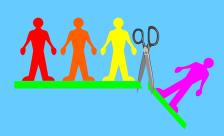
A DISEASE CONSISTING OF A NUMBER OF BRAIN CHEMISTRY DISORDERS

Addiction is related to pleasure/reward pathway activation by drugs of abuse and includes maladaptive behavioral response to neurological dependence

Continuum toward Addiction:

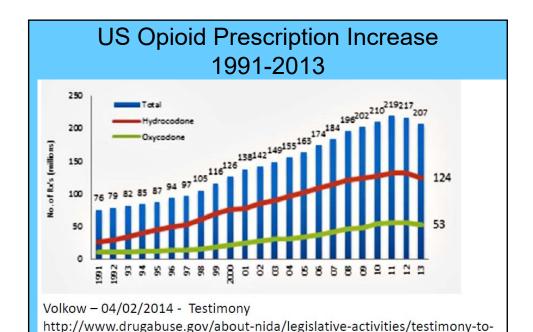
Use, Abuse, Physical Dependence, Psychological Compulsion

- Tobacco
- Alcohol
- Legal & Prescription Drugs (eg: caffeine)
- Illicit Drugs
- Other Behaviors (eg: gambling, sex, internet use/ gaming, buying, - minimal physical dependence per se, but compulsive actions with brain changes)



American Society of Addiction Medicine, American Pain Society, American Academy of Pain Medicine – *Recommended Definitions*:

- I. <u>Addiction</u> is a primary, chronic, neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations. It is characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving.
- II. <u>Physical Dependence</u> is a state of adaptation that is manifested by a drug class specific withdrawal syndrome that can be produced by abrupt cessation, rapid dose reduction, decreasing blood level of the drug, and/or administration of an antagonist.
- III. <u>Tolerance</u> is a state of adaptation in which exposure to a drug induces changes that result in a diminution of one or more of the drug's effects over time.



Prescription Medications

In 2012 accounted for more deaths than from cocaine & heroin combined

- Abuse increasing;
 2000 12-18 y/o p/day
- Cough & cold meds are most commonly abused OTCs (dextromethorphan)
- DXM's similar to ketamine & PCP (dissociative) affecting memory, feelings, thoughts

- Opioids act on same sites as heroin
- Overdose deaths typically are from polypharmacy – esp alcohol and opioids
- Risk of stopping abruptly, not only withdrawal but other neurologic & physiologic symptoms

Opioid Use & Deaths

- 2 distinct but intertwined trends are driving America's overdose epidemic:
 - a 15-year increase in deaths from prescription opioid pain reliever overdoses as a result of misuse and abuse, and
 - a recent surge in illicit drug overdoses driven mainly by heroin
 - Both of these trends worsened in 2014 resulting in more than 47,000 overdose deaths with 10,574 attributable to heroin (opiate) & most others to opioid overdoses
 - Many of these involve illicitly-made fentanyl, a short-acting opioid, that is 50-100x more potent than morphine, often in combination with heroin

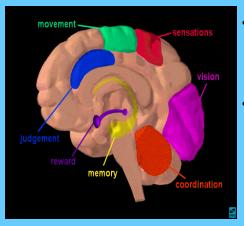
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Tolerance & Physiologic Dependence Precedes Addiction

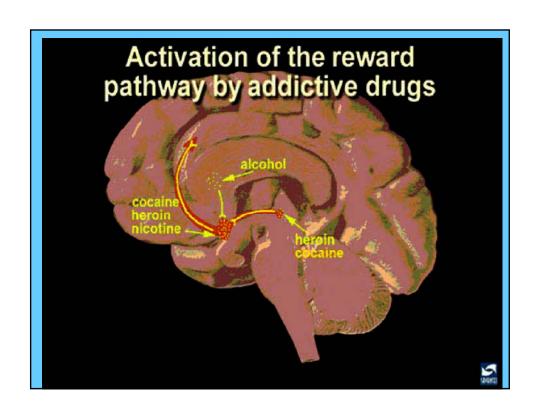
- EG: physical dependence to opioids means that the body relies on a external source of opioids to prevent withdrawal.
- Many substances ie: caffeine, nicotine, sugar, antidepressants - can cause physical dependence, it is not a property unique to opioids or alcohol.
- This is a normal adaptive neurologic response to ongoing opiate exposure (which is NOT normal for the brain).
- This physical dependence can be managed more helpfully with Medications (MAT) to enable the client/patient to better focus on the difficult work of overcoming and healing from their addiction.

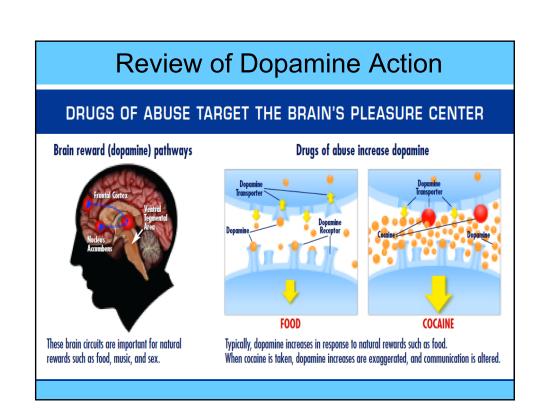
(most people who are dependent do not suffer from addiction)

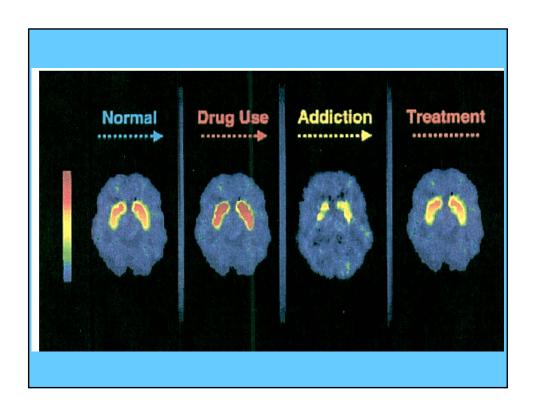
DOPAMINE REWARD SYSTEM: Essential to Neurologic Reinforcement System



- Every substance of abuse has some effect on the limbic (dopamine) reward system
- Dopamine, one of 100+ neurotransmitters, is found in several regions of the brain; is involved in pleasurable feelings, activity reinforcement, movement, motivation, & emotions







Characteristics of ADDICTION

- Pathological, compulsive use; loss of control over use
- Continued Use, despite negative consequences (DENIAL)
- Increased Tolerance to drugs of abuse

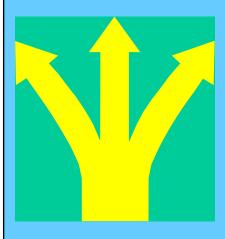


Characteristics of ADDICTION

- Cravings for drug and
 Withdrawal Symptoms –
 if/when drug use stops
- Genetic Predisposition up to 50% - Intergenerational Family Patterns
- -Chronic Disease, characterized by relapse

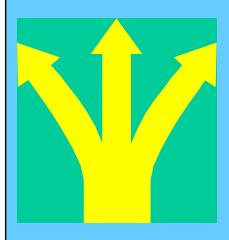


Brain Chemistry is Changed in Drug Dependence



- P Neurotransmitter
 production is "turned
 off", receptor sites are
 "desensitized", (neuroadaptation occurs) and in
 some drugs, re-uptake
 system is damaged
- Client is chemically depressed
- External chemical supply needed to address depression and stave off withdrawal

Brain Chemistry & Behavior is Changed in Addiction



- Environmental cues trigger need to use + physical craving
- At next use (relapse), the brain responds differently
- Relapse Prevention Requires Planning
- Cognitive functioning is impaired during initial recovery
- Brain recovery takes time (min. 12-15 months-in the case of some drugs)

Brain Changes are Long-Lasting

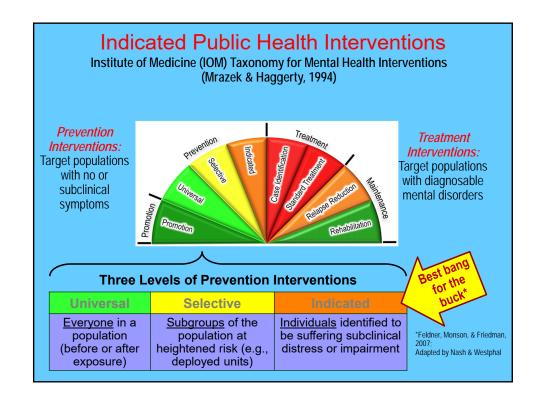
- The pathways between cue and activation don't go away, rather a new pathway is established to dampen cue/use path
- This can be (re)activated at any time by use
- "Orienting to use" starts outside the person's central consciousness----Bypassing prefrontal cortex of reasoning and judgement
- Most addictive drugs are 10-20x greater than natural rewards
- Some synthetic opiates (ie fentanyl) are 50-80x more potent than morphine, but dominated by analgesic and sedative effect versus euphoria
- W-18 is an opioid reputed to be 100x stronger than fentanyl with very high rates of fatality

Part Two

How to Address Physical Dependence More Effectively to allow Addiction Issues to be Better Treated:

MAT -

Medication Assisted Treatment



Inability to Comply Is Different than "Non-Compliance"

Good Initial & Ongoing **Assessment**Is Essential to Distinguishing Difference

MTBI = Increased Risk for Addiction

- Within first 30 days post mTBI, the hazard ratio for drug dependence is 7.7; for Opioid dependence is 6.1; for amphetamine is 4.8; for alcohol is 3.5
- All hazard ratios EXCEPT for ALCOHOL & Opioid Dependence/Abuse decrease over time
- ETOH, drug, nicotine, caffeine, & nondependent abuse of drugs/ETOH were all elevated in 1-30 days; ALCOHOL persisted longest
- TBI survivors are known to have blunted dopamine systems -

NADCP Best Practice Standards re: MAT

- ".... numerous controlled studies have reported significantly better
 outcomes when addicted offenders received medically assisted
 treatments including opioid antagonist medications such as
 naltrexone, opioid agonist medications such as methadone, and
 partial agonist medications such as buprenorphine (Chandler et al.,
 2009; Finigan et al., 2011; National Institute of Drug Abuse, 2006).
- Therefore, a valid prescription for such medications should not serve as the
 basis for a blanket exclusion from a Drug Court (Parrino, 2002). A
 unanimous resolution of the NADCP Board of Directors provides that Drug
 Courts should engage in a fact-sensitive inquiry in each case to
 determine whether and under what circumstances to permit the use
 of medically assisted treatments.
- This inquiry should be guided in large measure by input from physicians
 with expertise in addiction psychiatry or addiction medicine [see also
 Standard V, Substance Abuse Treatment]." p.8, ADULT DRUG COURT
 BEST PRACTICE STANDARDS VOLUME I. NADCP, 2013.

NADCP Best Practice Standards re: MAT

- Medically assisted treatment (MAT) can significantly improve outcomes for addicted offenders (Chandler et al., 2009; National Center on Addiction & Substance Abuse, 2012; National Institute on Drug Abuse, 2006).
- Buprenorphine or methadone maintenance administered prior to and immediately after release from jail or prison has been shown to significantly increase opiate-addicted inmates' engagement in treatment; reduce illicit opiate use; reduce rearrests, technical parole violations, and re-incarceration rates; and reduce mortality and hepatitis C infections (Dolan et al., 2005; Gordon et al., 2008; Havnes et al., 2012; Kinlock et al., 2008; Magura et al., 2009). These medications are referred to as agonists or partial agonists because they stimulate the central nervous system (CNS) in a similar manner to illicit drugs. Because they can be addictive and may produce euphoria in nontolerant individuals, they may be resisted by some criminal justice professionals.
- Positive outcomes have also been reported for antagonist medications, such as naltrexone, which are non-addictive and non-intoxicating. Naltrexone blocks the effects of opiates and partially blocks the effects of alcohol without producing psychoactive effects of its own.
 Studies have reported significant reductions in heroin use and re-arrest rates for opiate-addicted probationers and parolees who received naltrexone (Cornish et al., 1997; Coviello et al., 2012; O'Brien & Cornish, 2006).
- In addition, at least two small-scale studies reported better outcomes in DWI Drug Courts or DWI probation programs for alcohol-dependent participants who received an injectable form of naltrexone called Vivitrol (Finigan et al., 2011; Lapham & McMillan, 2011).

Medication Assisted Treatment (MAT) is Recommended

Why?

Because SUDs are chronic, potentially fatal, brain diseases, and medications are available for opiate/opioid addictions!

- -Similar to treatment of hypertension or Type 2 Diabetes
- •Medications + psychosocial treatment saves & restore lives

USE SPECIFICALLY FOR:

- Intoxication/overdose
- Withdrawal/detoxification
- Abstinence initiation/use reduction
- Relapse prevention
- SUDS sequelae (psychosis, agitation, etc.)

Substances for which Medications are FDA-approved

- Opioids
- Alcohol
- Benzodiazepines
- Tobacco (nicotine dependence)

Substances for which Medications are NOT FDA-approved

- Cocaine
- Methamphetamine
- Hallucinogens
- Cannabis
- Solvents/Inhalants

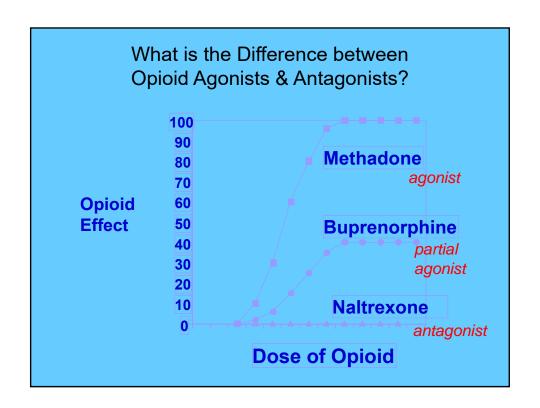
When to Consider Medications for SUDs

Assess patient for:

- Severity of Concomitant Medical Illness: Patient's ability to tolerate medication?
- Pregnancy: opioid therapy should be offered to pregnant opioid/heroin addicts; medications that can be associated with adverse physical effects should be avoided (e.g. naltrexone, disulfiram (Antabuse))
- Phase of Recovery: Medications for medical withdrawal or medication to assist with maintenance of abstinence following withdrawal

FDA Approved Medications for SUDs

- Opioid use disorder
- -Buprenorphine/naloxone (Suboxone®) used to treat/prevent withdrawal and block opiate receptors; has long half-life so is much less addictive; but can cause WD
- -Methadone must be administered at specially licensed clinics
- -Naltrexone (Vivitrol®) opiate blocker must be detoxed for 7-10 days before starting; stops craving & causes no WD
- Opioid overdose
- -Naloxone (Evzio®, Narcan)blocks opiate receptors; reverse overdose
- Alcohol use disorder
- -Naltrexone (Revia®, Vivitrol®) MUST be detoxed before starting; benzodiazepines generally used to support alcohol detox
- -Disulfiram (Antabuse®)
- -Acamprosate (Campral®) -helps maintain sobriety among sober



MAT for Opioid Use Disorders

Methadone and buprenorphine are first-line treatment for opioid use disorders

- -Methadone better for treatment retention
- -Buprenorphine/naloxone more widely available
- Both opioid agonist therapy (OAT) medications consistently and significantly improve outcome versus placebo, no treatment, or oral naltrexone

Extended-release Injectable Naltrexone

- -Superior to placebo in double-blind, RCT(trial)
- -Further research needed to directly compare to OAT

Opioid Dependence Therapy: Antagonist Treatment

Naltrexone

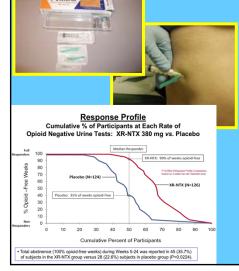
Why antagonist therapy?

- Block effects of a dose of opiate (Walsh et al. 1996)
- Prevent impulsive use of drug
- Relapse rates high (90%) following detoxification with no medication treatment
- Dose (oral): 50 mg daily, 100 mg every 2 days, 150 mg every third day
- Biggest issue is lack of compliance; but those who "test" naltrexone by taking a dose of opioid and experiencing no effect do better with the medication (Cornish JW, et al. 1997)
- Injectable naltrexone (Vivitrol) provides a viable alternative, higher compliance rates
- Side effects: hepatotoxicity, monitor liver function tests every 3 months
- Clinical lore/biasthat not as effective as buprenorphine but may not be true if using injectable formulation (vivitrol)

Who is a Candidate For Naltrexone?

- The patient is opioid free for 7-10 days
- The patient does not have severe or active liver or kidney problems (Typical guidelines suggest liver function tests no greater than 3 times the upper limits of normal, and bilirubin normal)
- The patient is not allergic to naltrexone, and no other contraindications are present (rarely would someone be allergic to naltrexone, but opioid addicted individuals sometimes may report an allergy as this is not a preferred treatment or they may have started naltrexone before being completely withdrawn from opioids and experienced precipitated withdrawal—ask patient about the time frame of adverse events when trying to evaluate)

Extended-Release Naltrexone (Vivitrol): opioid antagonist approach



BLOCKS OPIOID ACTION via monthly intramuscular injection by nurse, PA, MD, or pharmacist

- Non-narcotic, not a controlled substance
- Must detox off opioids first!!
 - In rehab/detox, prison/ jail, or other safe setting
- Not for use if:
 - Pregnant
 - Chronic pain requiring opioids

Drug Abuse Treatment Act (DATA) changed possible maintenance landscape in 2000

Title XXXV, Section 3502 of the Children's Health Act of 2000 permits physicians who meet certain qualifications to treat opioid addiction with Schedule III, IV, and V narcotic medications that have been specifically approved by the FDA for that indication. Such medications may be prescribed and dispensed by waived physicians in treatment settings other than the traditional Opioid Treatment Program (methadone clinic).

TRAINING ON DATA 2000 AVAILABLE AT:

- American Academy of Addiction Psychiatry
- American Osteopathic Academy of Addiction Medicine
- American Psychiatric Association
- American Society of Addiction Medicine http://buprenorphine.samhsa.gov/data.html

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Maintenance Therapy with Buprenorphine

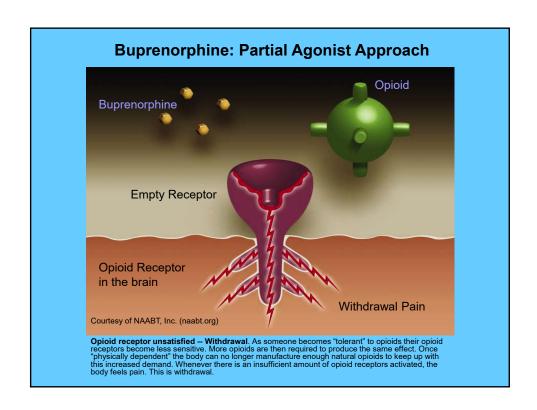
Benefits:

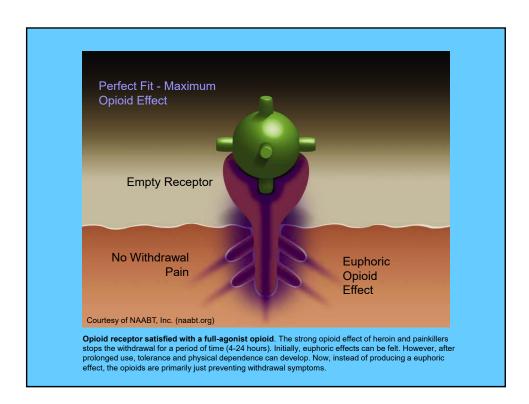
- Lifestyle stabilization
- Can be provided in a doctor's office by someone licensed to prescribe it (blocks for 24 hrs; then partially for up to 64 hrs)
- Available by prescription
- Withdrawal more easily tolerated
- One physician for patients with multiple illnesses

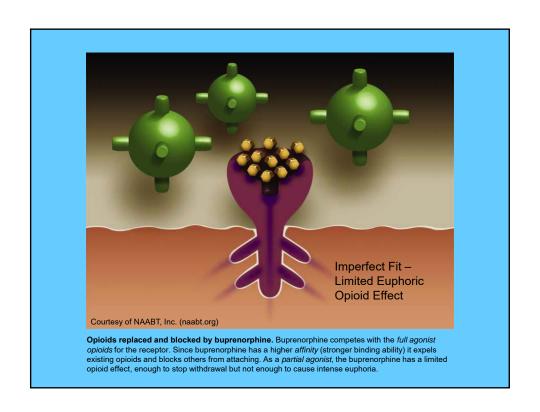
Downsides:

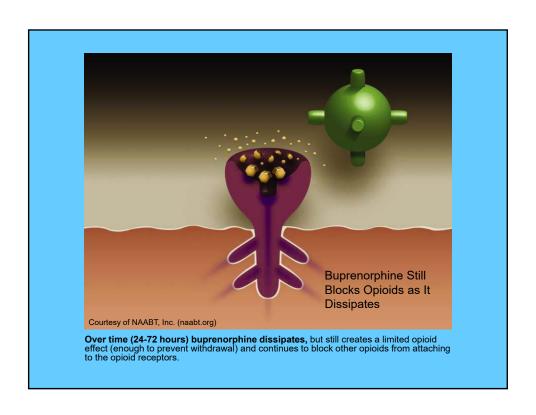
- Diversion (+/-)
- Withdrawal
- Meaning of maintenance treatment

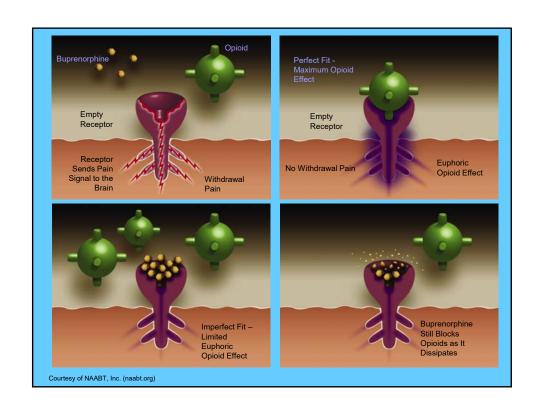
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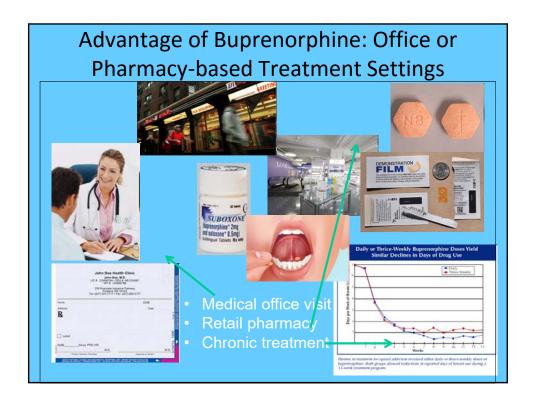












Maintenance Therapy with Methadone

Methadone (must be administered through a registered narcotic treatment program)

- Characteristics
 - Long acting mu agonist
 - Duration of action: 24-36 h
 - Dose: important issue and philosophical issue for many programs
 - 30-40 mg will block withdrawal, but not craving
 - Illicit opiate use decreases with increasing methadone dose
 - 80-100 mg is more effective at reducing opioid use than lower doses (e.g.: 40-50 mg/d)

Strain et al., 199

Maintenance Therapy with Methadone

Benefits:

- Lifestyle stabilization
- Improved health and nutritional status
- Decrease in criminal behavior
- Employment
- Decrease in injection drug use/shared needles

Downsides:

- Overdose possible
- Oversedation possible
- Withdrawal
- EKG changes
- Diversion
- Meaning of maintenance treatment

2005 TA22

Stigma & Myths Re: Methadone Persists







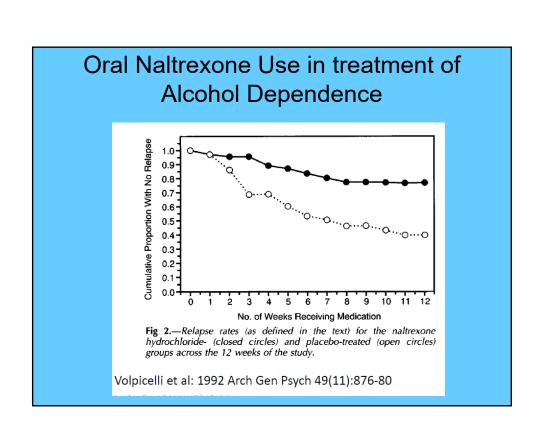


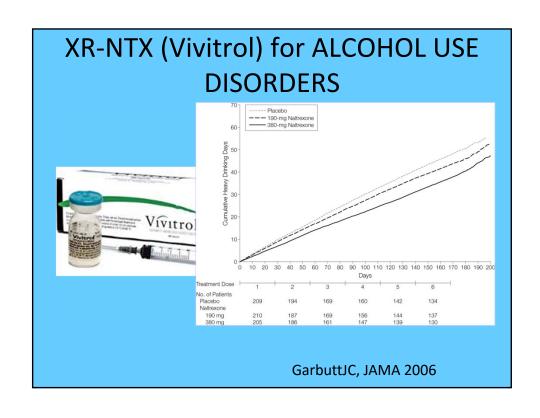
Problems:

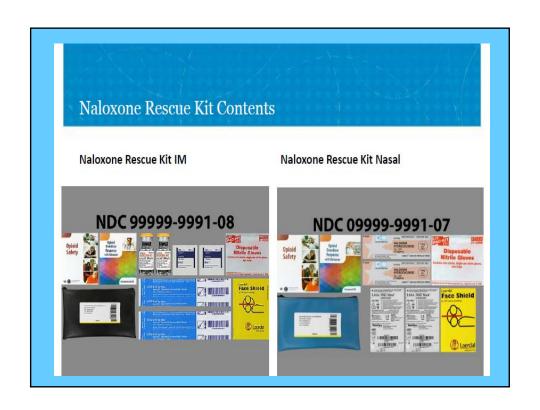
- Federally-licensed clinics treating opioid dependence only
 - limited locations
 - limited number of treatment slots
 - may only take insurance
 - daily directly observed therapy (DOT)
- Patients have negative views (being sedated, 'rotting teeth/bones', forced withdrawal, 'handcuffs')
- Providers have negative views of methadone patients and clinic settings aren't conducive to therapeutic interactions

ALCOHOL MAT

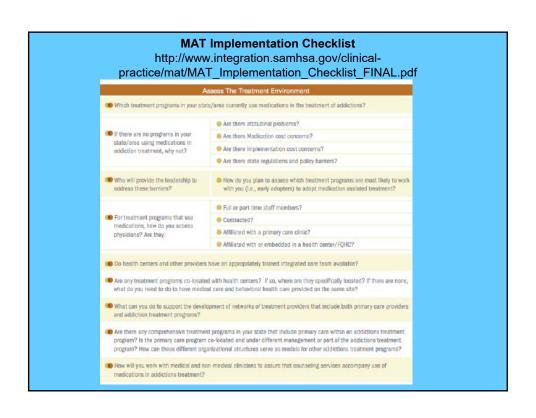
- Extended release injection of Naltrexone (Vivitrol) associated with reduced mortality & hospital readmissions for alcohol dependence
- Overall, alcohol MAT improves outcomes at small to moderate rate
- No particular ETOH MAT is consistently better than another - depends on individual case
- ALL clients do better when supervised and with consistent EB-manualized counseling











Principles of Effective Treatment

National Institute of Health (NIH)

- Addiction is a complex but treatable disease that affects brain function and behavior.
- No single treatment is appropriate for everyone.
- Treatment needs to be readily available.
- Effective treatment attends to multiple needs of the individual, not just his or her drug abuse.
- Remaining in treatment for an adequate period of time is critical.
- Counseling—individual and/or group—and other behavioral therapies are the most commonly used forms of drug abuse treatment.
- Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioral therapies.

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http://www.drugabuse.gov/publications/drugfacts/treatment-approaches-drug-addiction

Principles of Effective Treatment continued...

- Many drug-addicted individuals also have other mental disorders.
- An individual's treatment and services plan must be assessed continually and modified as necessary to ensure that it meets his or her changing needs.
- Medically assisted detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug abuse.
- Treatment does not need to be voluntary to be effective.
- Drug use during treatment must be monitored continuously, as lapses during treatment do occur.
- Treatment programs should assess patients for the presence of HIV/AIDS, hepatitis B and C, tuberculosis, and other infectious diseases as well as provide targeted risk–reduction counseling to help patients modify or change behaviors that place them at risk of contracting or spreading infectious diseases.

http://www.drugabuse.gov/publications/drugfacts/treatment-approaches-drug-addiction

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Implementation: current treatment realities

- •<u>Buprenorphine</u>, <u>Buprenorphine-Naloxone</u> (Suboxone, <u>Zubsolv</u>)
- any provider with an 'X' DEA#...can only enlist 100 patients per MD
- · Office or program-based prescribing
- · the most common form of opioid medication treatment in US
- Methadone
- only available at an licensed Opioid Treatment Program (OTPs)
- · more stigma
- XR-Naltrexone (Vivitrol)
- only recently FDA approved
- most expensive costs per month
- antagonist requires patient to detox first...the 'detox hurdle'

Implementation: Which medications to use? For which patient?

Use the MAT CHECKLIST to Determine:

- Is there a methadone provider in the county?
- Is there a buprenorphine provider? Reimbursement?
- Is there coverage/reimbursement for selected medication?
- •What is the patient motivated for?
- ...any type/choice of MAT is likely to be more effective than none
- •To date, no well-defined criteria **dictate** which medication should be used for which patient.
- A specific assessment must be done with each patient.

Prescribing Medications

- Misuse/Diversion/Abuse/Addiction are inherent risks of prescribing controlled substances
- A risk assessment has to be conducted for a specific patient at a specific time
- All patients prescribed controlled substances should be assessed at each visit for signs of misuse or addiction
- Ask questions using a matter-of-fact and nonthreatening manner

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References & Resources

http://www.naabt.org/documents/TimeForChangeNAABT.pdi

<u>https://dmh.mo.gov/ada/provider/docs/methadonemyths.pdf</u>

Primary Care—Based Buprenorphine Taper vs Maintenance Therapy for Prescription Opioid Dependence: A Randomized Clinical Trial JAMA International Action 10, 1001 (Immaintenance 2014, 5302)

The Neurobiology of Opioid Dependence: Implications for Treatment, Thomas Kosten, MD, Tony George, MD

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2851054

Naltrexone Information Sheet

http://familydoctor.org/online/famdocen/home/common/addictions/alcohol/130.htm

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For further information

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