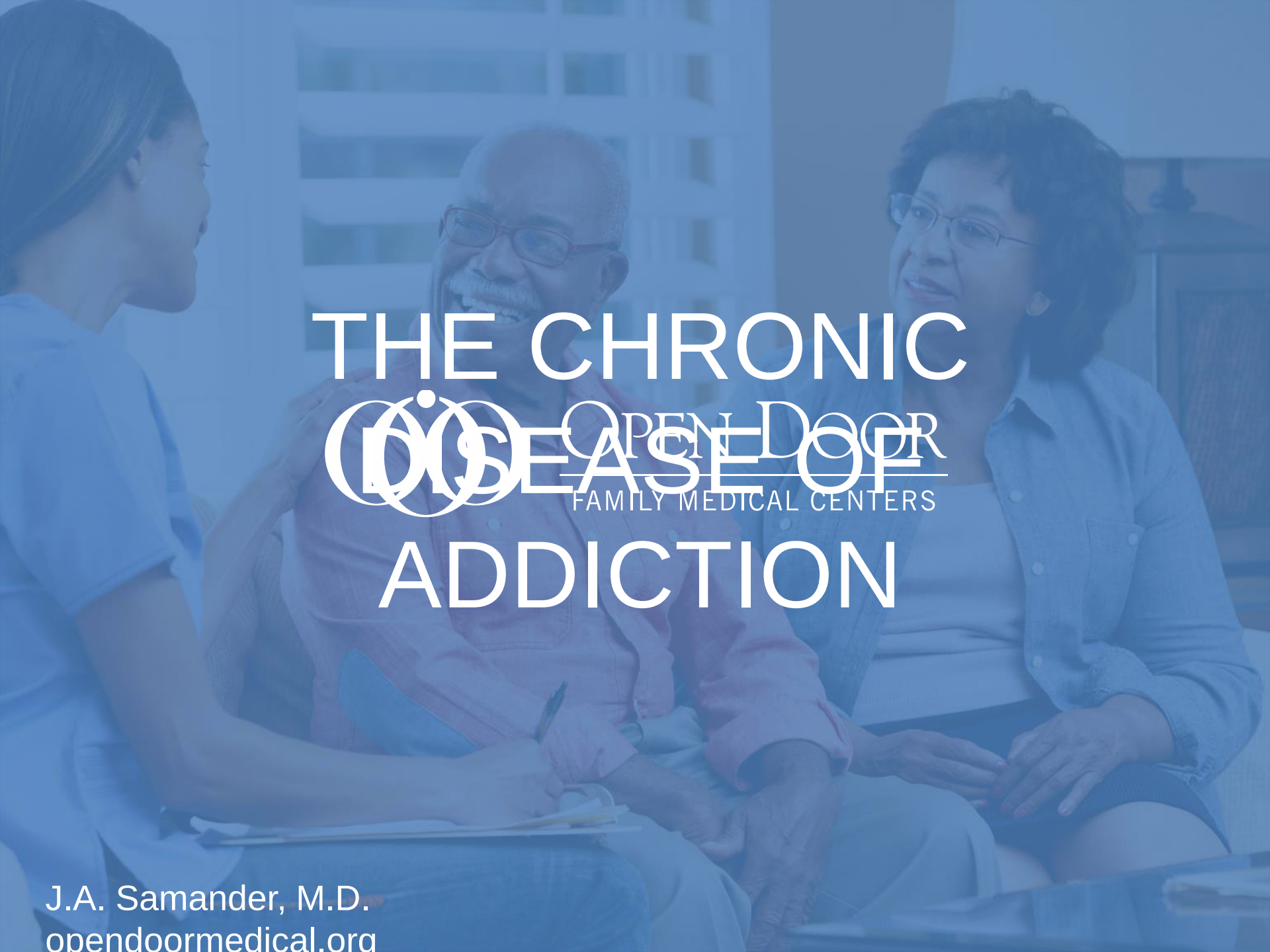


THE CHRONIC DISEASE OF ADDICTION

OPEN DOOR
FAMILY MEDICAL CENTERS

J.A. Samander, M.D.
opendoormedical.org

OBJECTIVES

Review of chronic, relapsing model of addiction

Comparison with other chronic diseases

Lessons from patients

Addiction

- 24.6 million adults age 12+ live with a Substance Use disorder
- Only 10%, or 1/10 individuals, sought or received treatment for their addiction
- Opioid overdose is now the #1 cause of preventable death
  - higher than car accidents
  - higher than gun violence.
- We are 3 times more likely to die of an opioid overdose than a car accident and most car accidents are substance related.

NSUDH-2013 (national survey on drug use and health)


FACT:
ADDICTION IS NOT A WEAKNESS. IT IS A DISEASE.
NATIONAL RECOVERY MONTH

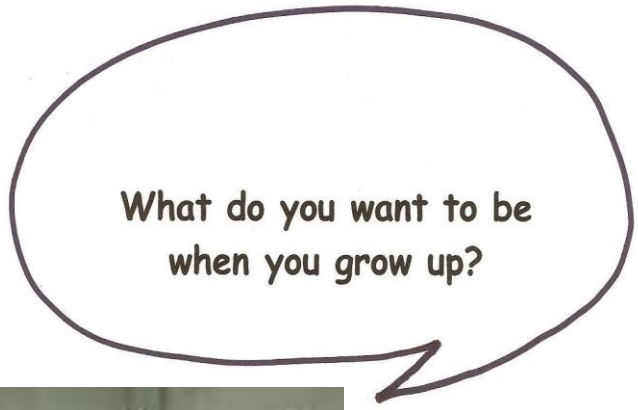
"Addiction Is Irrational"

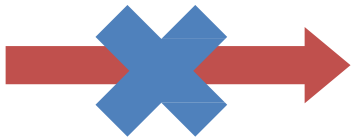
- Primary, chronic brain disease is characterized by compulsive drug seeking and use *despite harmful consequences*

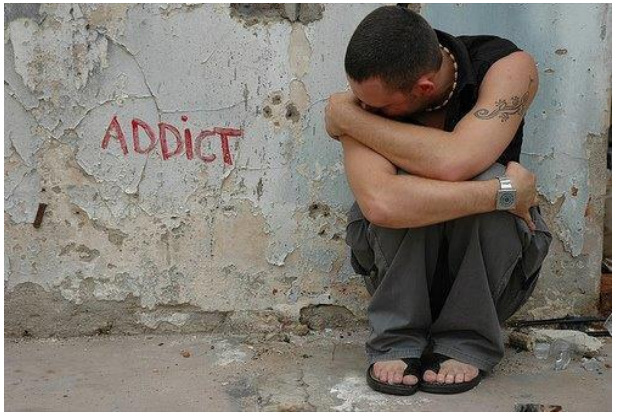
  - Involves cycles of relapse and remission
  - 40-60% genetic
  - Without treatment addiction is progressive and can result in disability or premature death

American Society of Addiction Medicine. April 12, 2011.www.asam.org
NIDA. August, 2010http://www.drugabuse.gov/publications/science-addiction

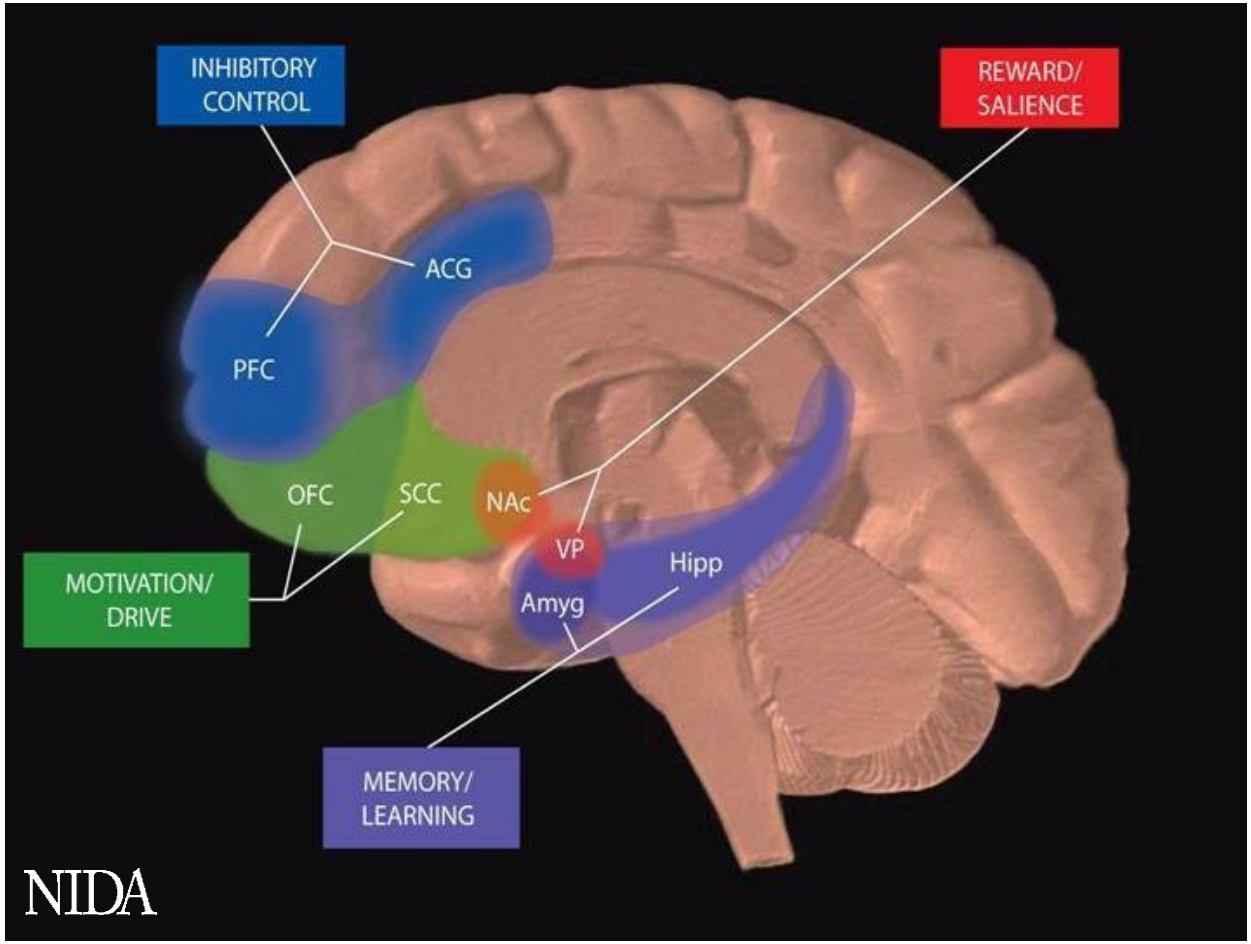
Childhood Dreams and Aspirations





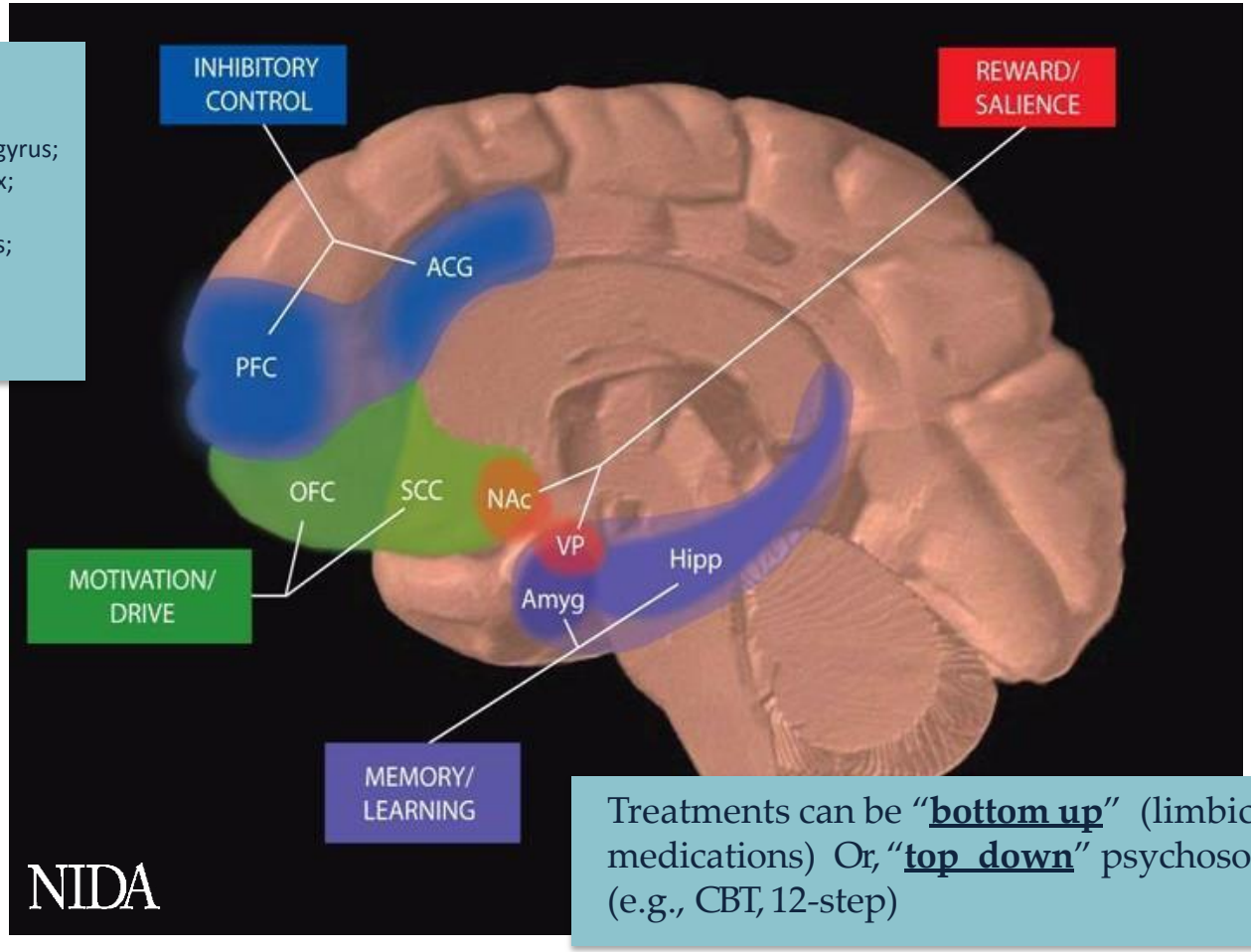


Circuits Involved in Addiction



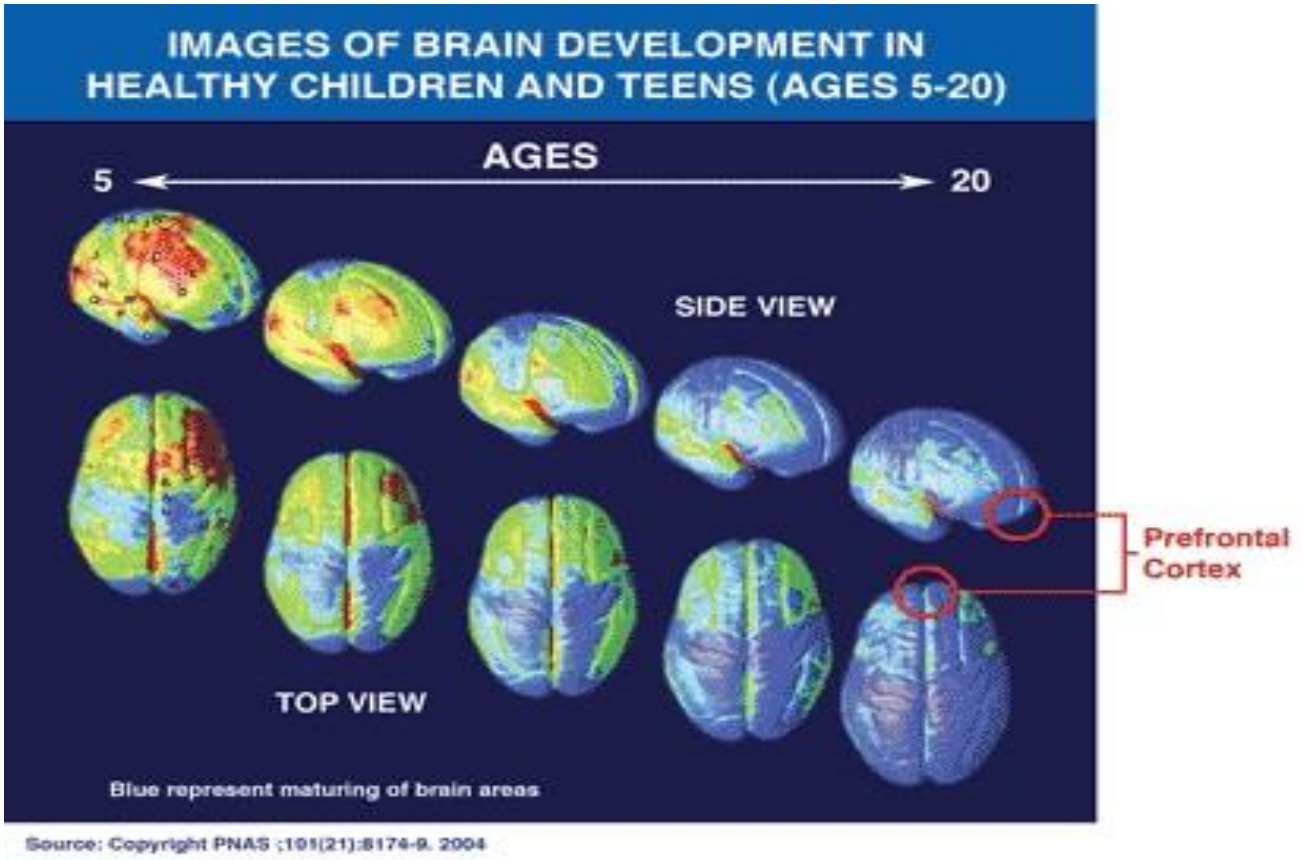
Circuits Involved in Drug Abuse and Addiction

Key:
PFC – prefrontal cortex;
ACG – anterior cingulate gyrus;
OFC – orbitofrontal cortex;
SCC – subcallosal cortex;
NAc – nucleus accumbens;
VP – ventral pallidum;
Hipp – hippocampus;
Amyg – amygdala.

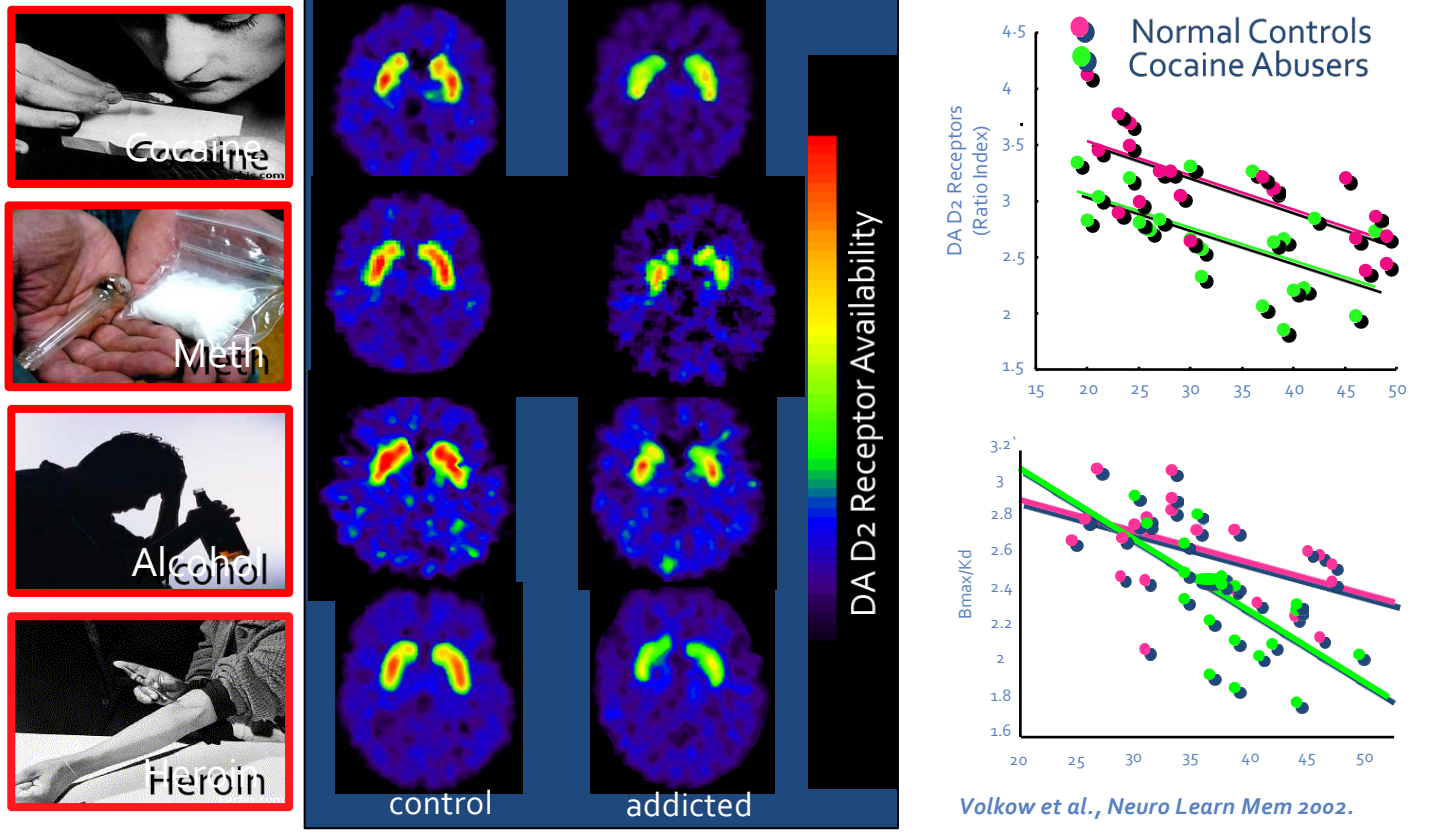


Treatments can be "**bottom up**" (limbic system; e.g., medications) Or, "**top down**" psychosocial treatments (e.g., CBT, 12-step)

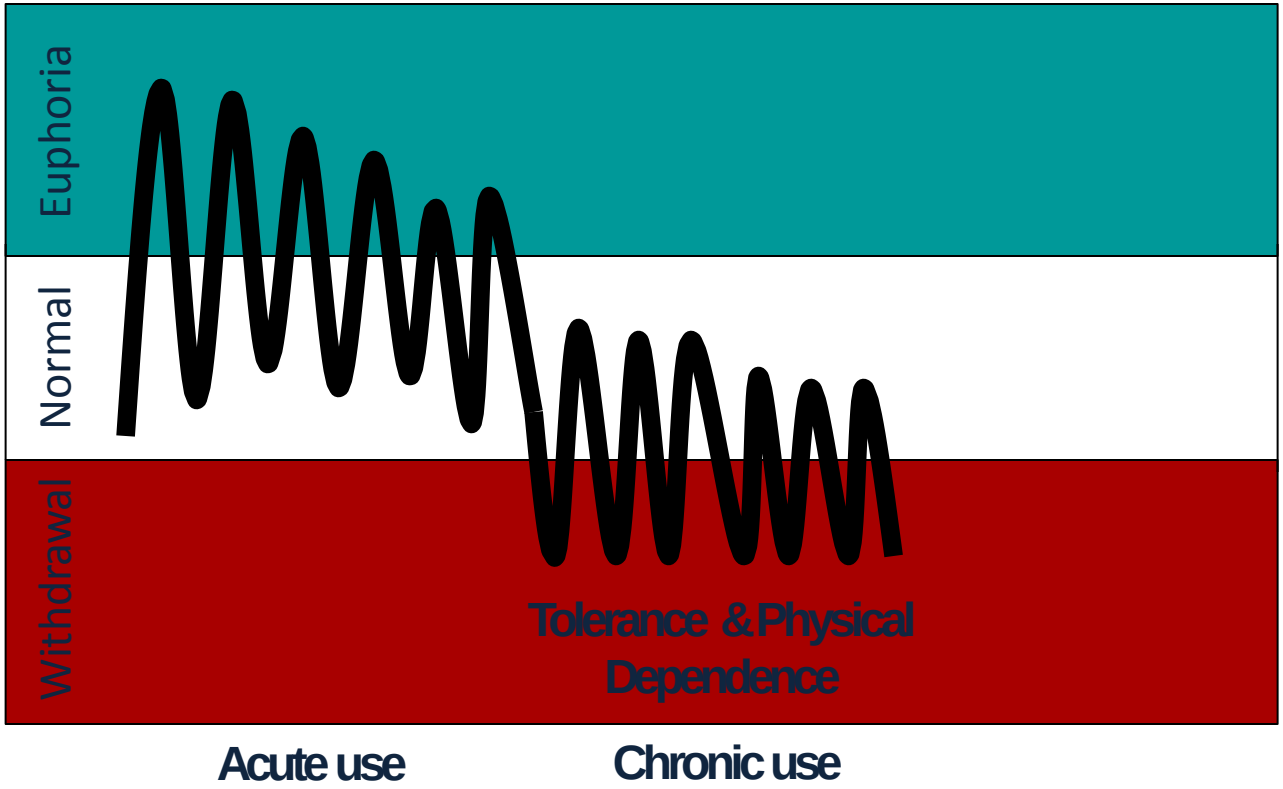
Addiction is a Developmental Disease



Dopamine D2 Receptors are Lower in Addiction



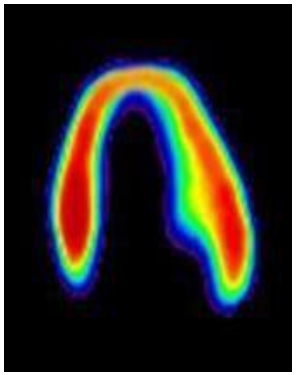
Natural History of Opioid Use Disorder



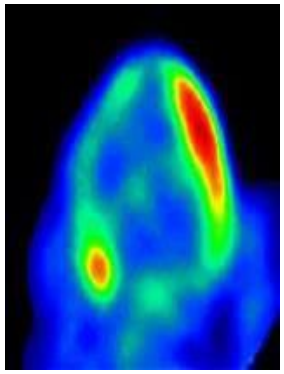
Slide courtesy of Dan Alford, 2012

Addiction is Similar to Heart Disease

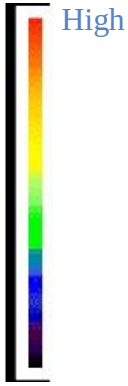
Decreased Heart Metabolism in Coronary Artery Disease



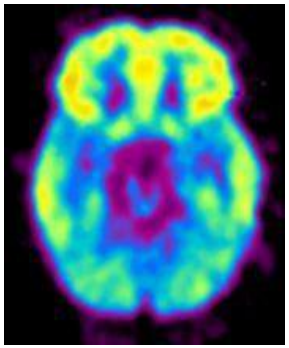
Healthy heart



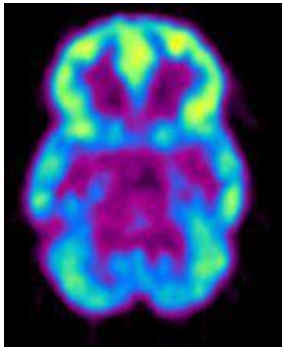
Diseased Heart



Decreased Brain Metabolism in Addiction

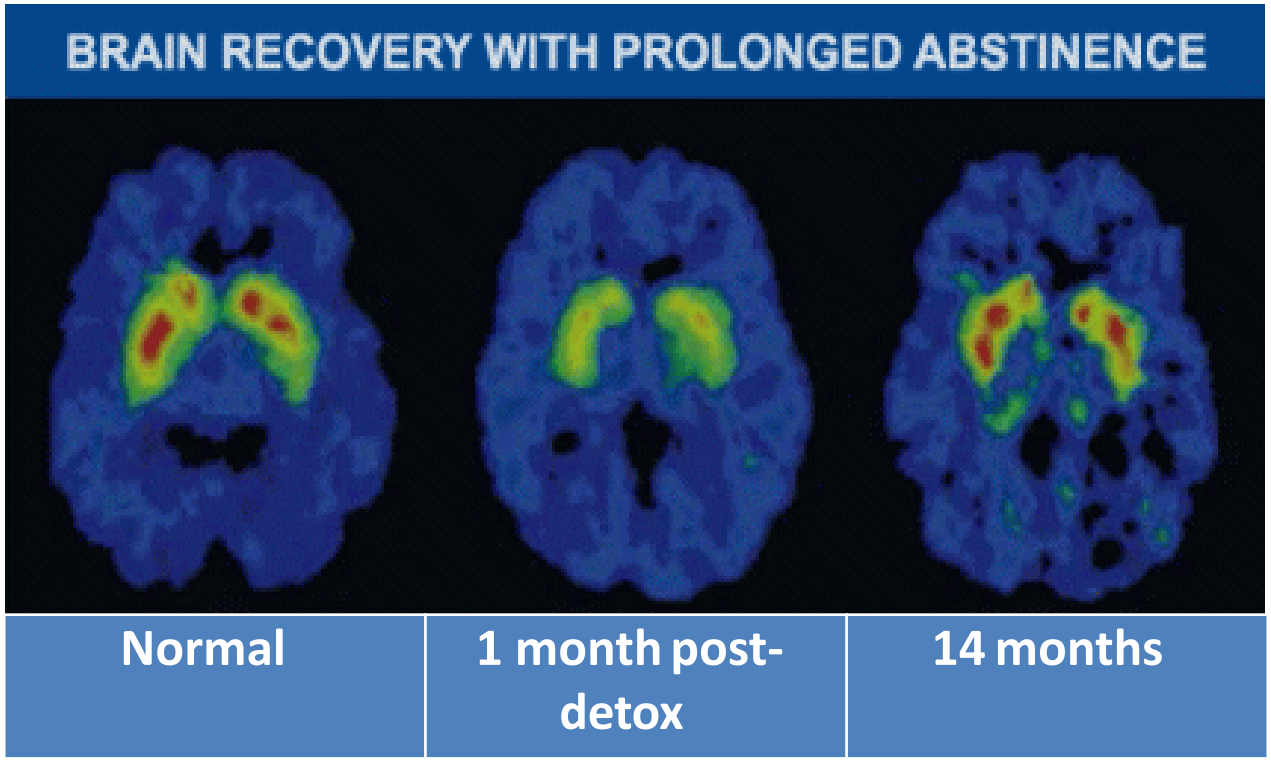


Healthy Brain

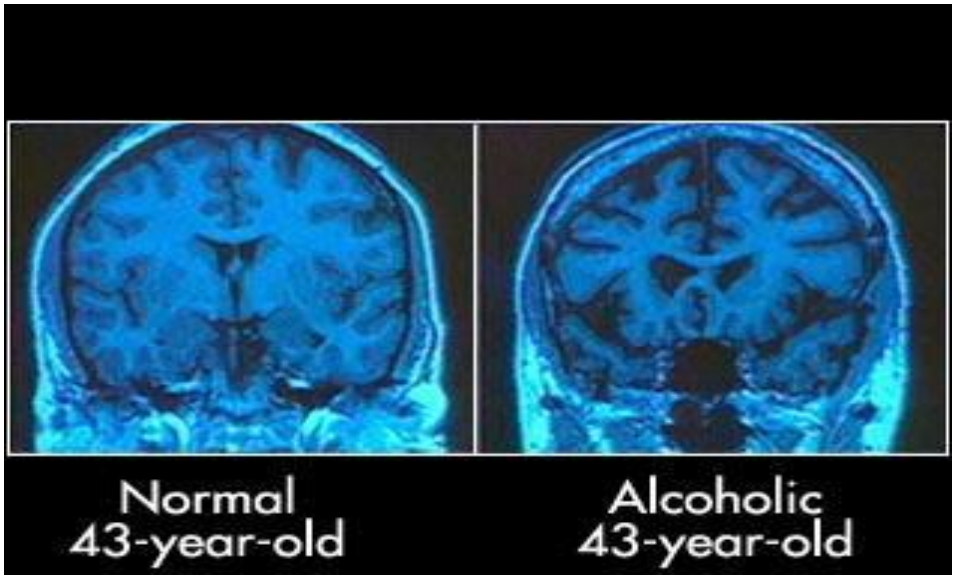


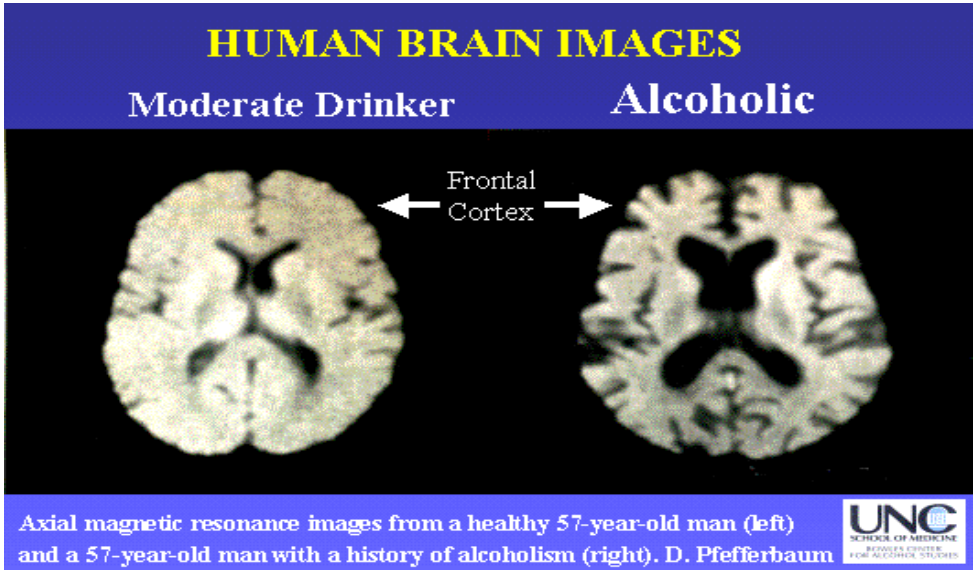
Diseased Brain

Functional Recovery Takes Time

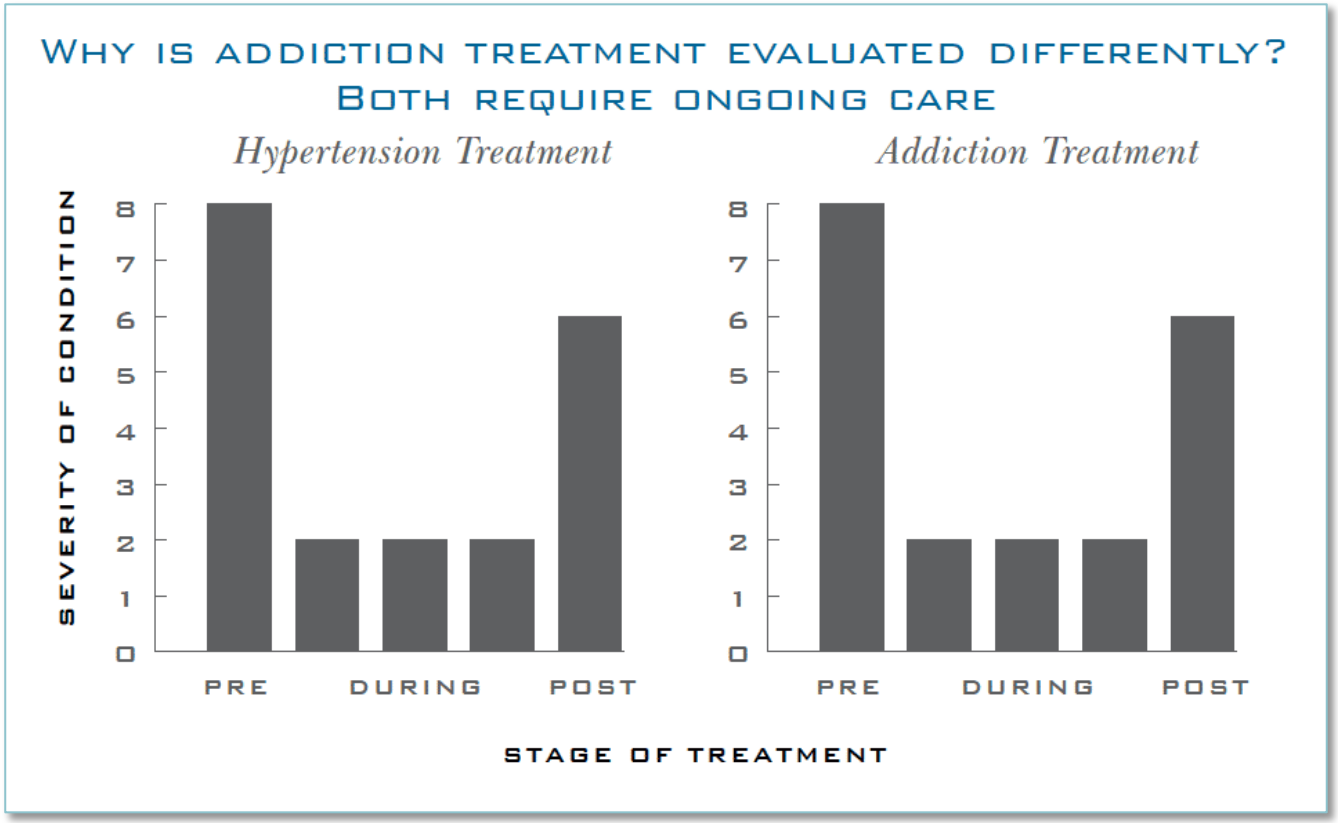


Source: Volkow, ND et al., Journal of Neuroscience 21, 9414-9418, 2001


Normal
43-year-old
Alcoholic
43-year-old

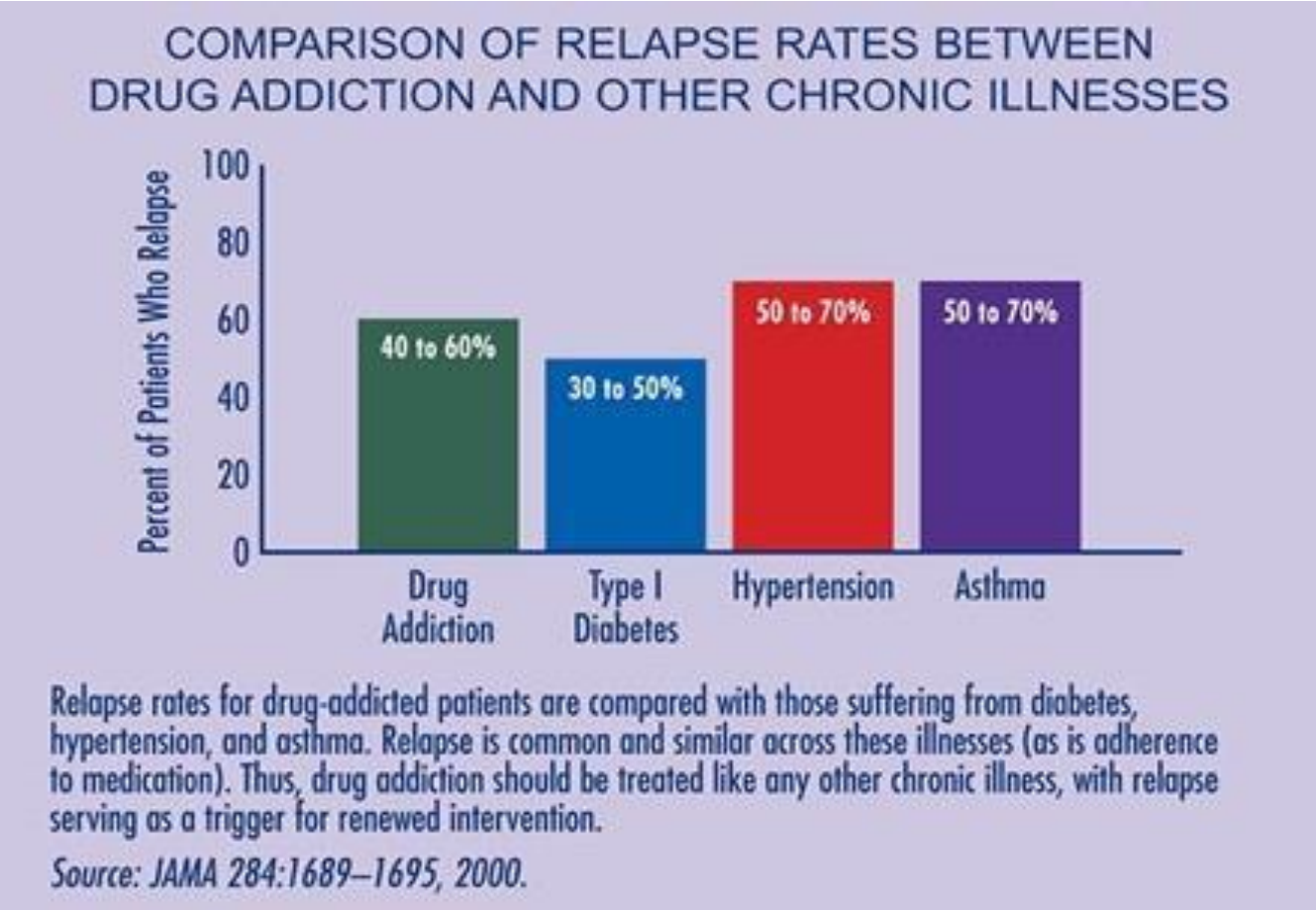

HUMAN BRAIN IMAGES
Moderate Drinker
Alcoholic
Frontal
Cortex
Axial magnetic resonance images from a healthy 57-year-old man (left)
and a 57-year-old man with a history of alcoholism (right). D. Pfefferbaum
UNC
SCHOOL OF MEDICINE

Addiction is a Treatable Disorder



NIDA. Principles of Drug Addiction Treatment. 2012. McLellan et al., JAMA, 284:1689-1695, 2000 .

Comparable Relapse Rates

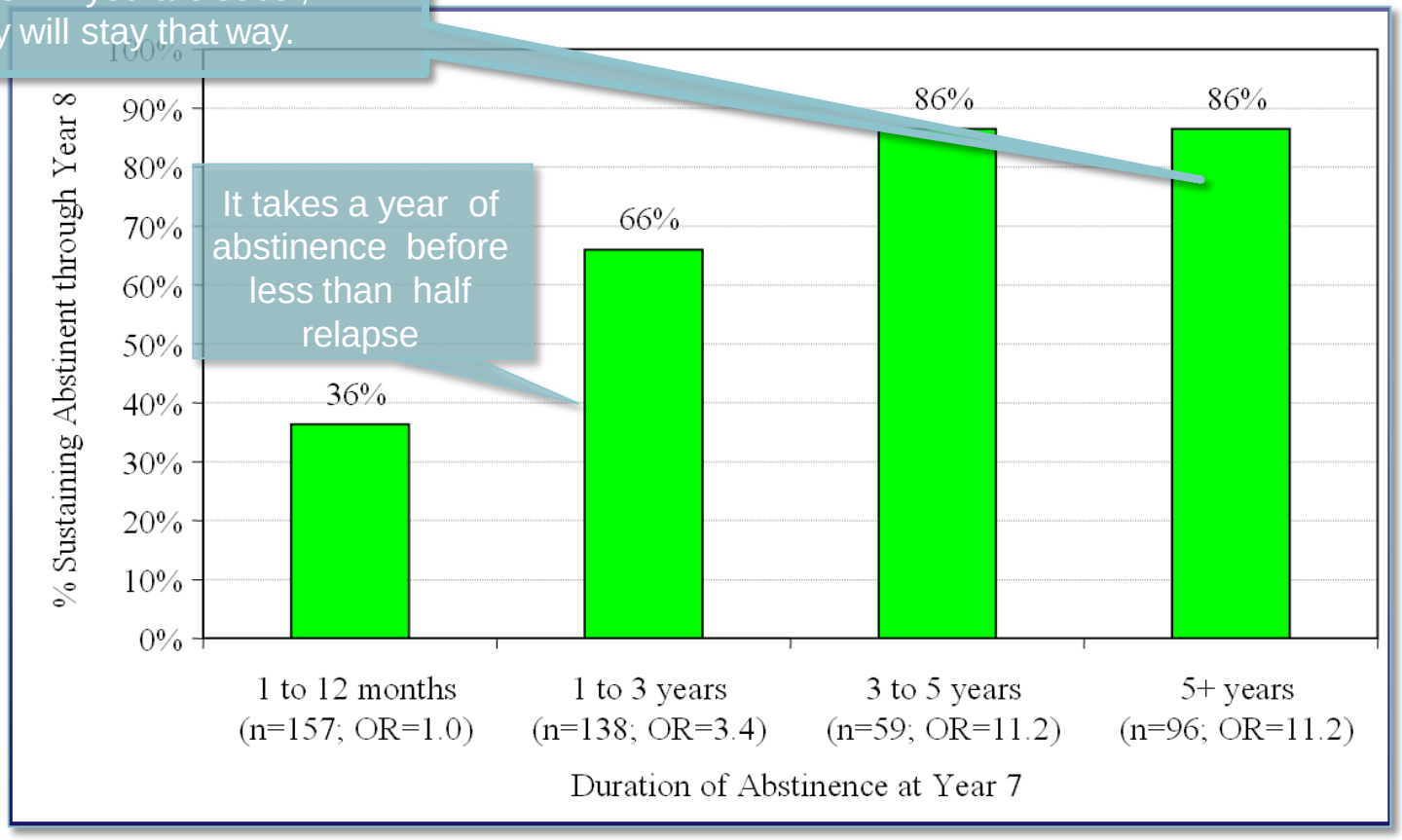


Slide courtesy of NIDA, Drugs, Brain Behavior: the Science of Addiction

Extended Abstinence is Predictive of Sustained Recovery

After 5 years – if you are sober, you probably will stay that way.

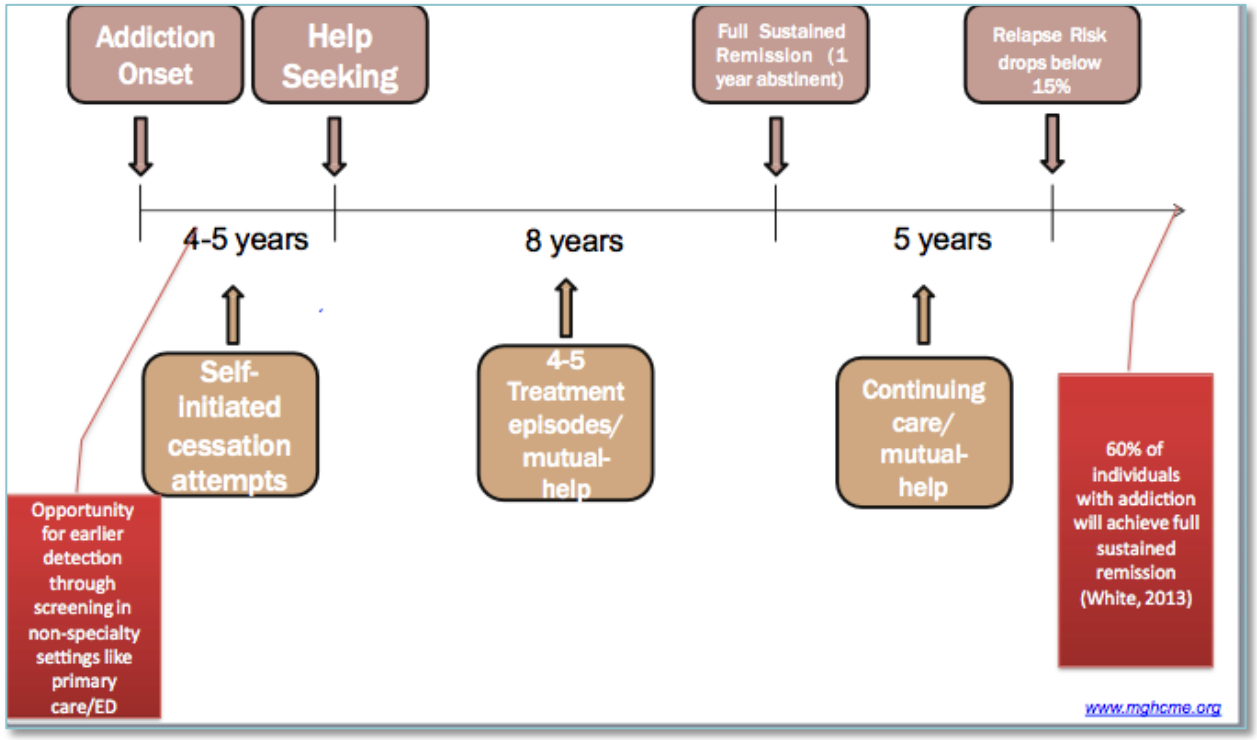
It takes a year of abstinence before less than half relapse



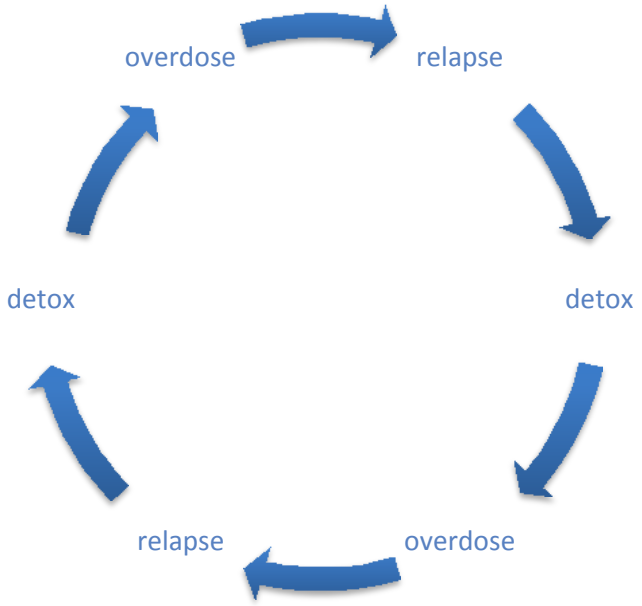
Slide courtesy of NIDA, Drugs, Brain Behavior: the Science of Addiction

For More Severely Addicted Individuals …

course of SUD and achievement of stable recovery can take a long time …



Acute Care Model as We Know It



"Treatment"

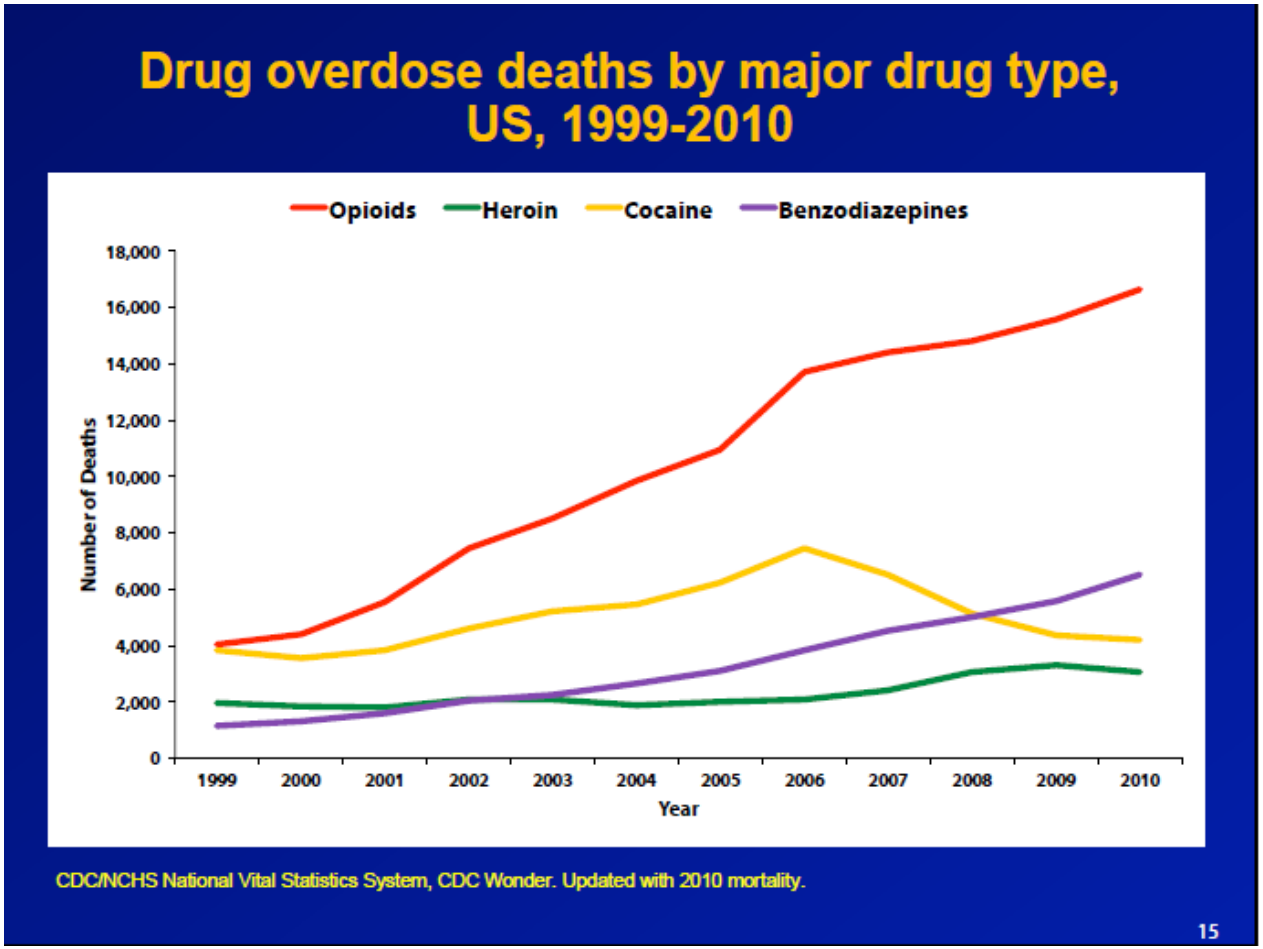
Relapse Requires Increased Support

- We label patients as “not ready” or “non compliant”
- We ask them to seek a higher level of care on their own, when most ill
- We refer them for “higher level of care” – yet many of those programs are not evidence based, and are essentially lower level of care
- What would we do if a cancer survivor had a lymphoma recurrence after years of remission?

Who is at Risk for an Overdose ?

- Patients receiving opioids from multiple prescribers / pharmacies
- Patients taking high daily doses of opioids
- Men ages 35-55 years old
- Whites/ American Indians
- Medicaid
- Rural
- Patients taking Opioids and Benzodiazepines

OD on Benzodiazepines is Increasing



Benzodiazepines 1996-2013

- Fatal overdoses have nearly quadrupled
- Combination of Alcohol and Benzodiazepines
- Combination of Opioids and Benzodiazepines
- The number of adults filling a RX increased 67% from 8.1 million to 13.5 million

Alcohol Withdrawal

- Begins 6- 8 hours after last drink
- Peaks 24 hours after last drink
- Typically resolves in 7 days

Alcohol Withdrawal

- 5 % of patients with AUD will develop more than mild to moderate symptoms
- Chronic medical conditions, nutritional deficiencies and electrolyte abnormalities can contribute and complicate course

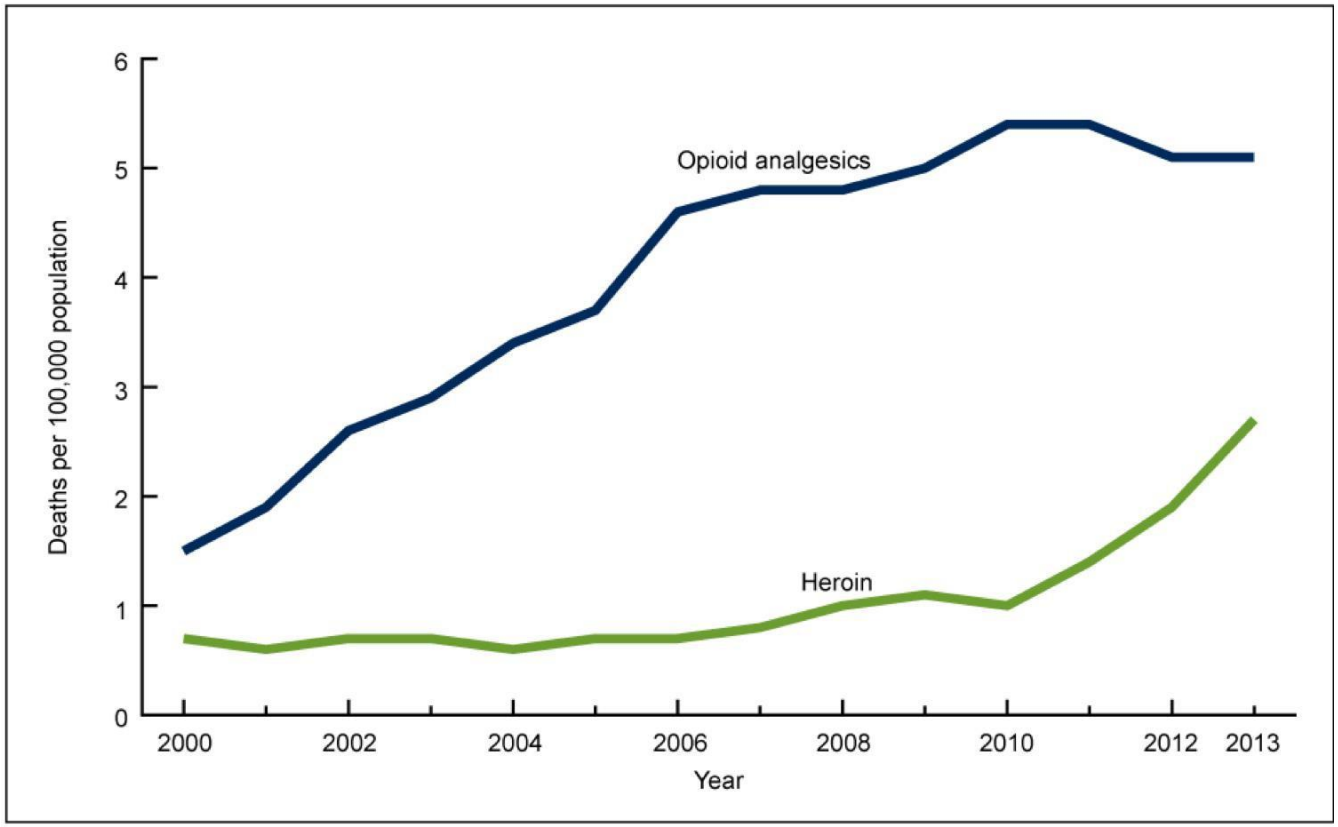
Alcohol Withdrawal Seizures

- Estimated to occur in 5-15 % of patients
- DT's estimated to occur in 5% of patients admitted for Alcohol Withdrawal
- Mortality rate is 20% for patients who have DT's

Source: APA Textbook of Substance Abuse Treatment, 4th edition

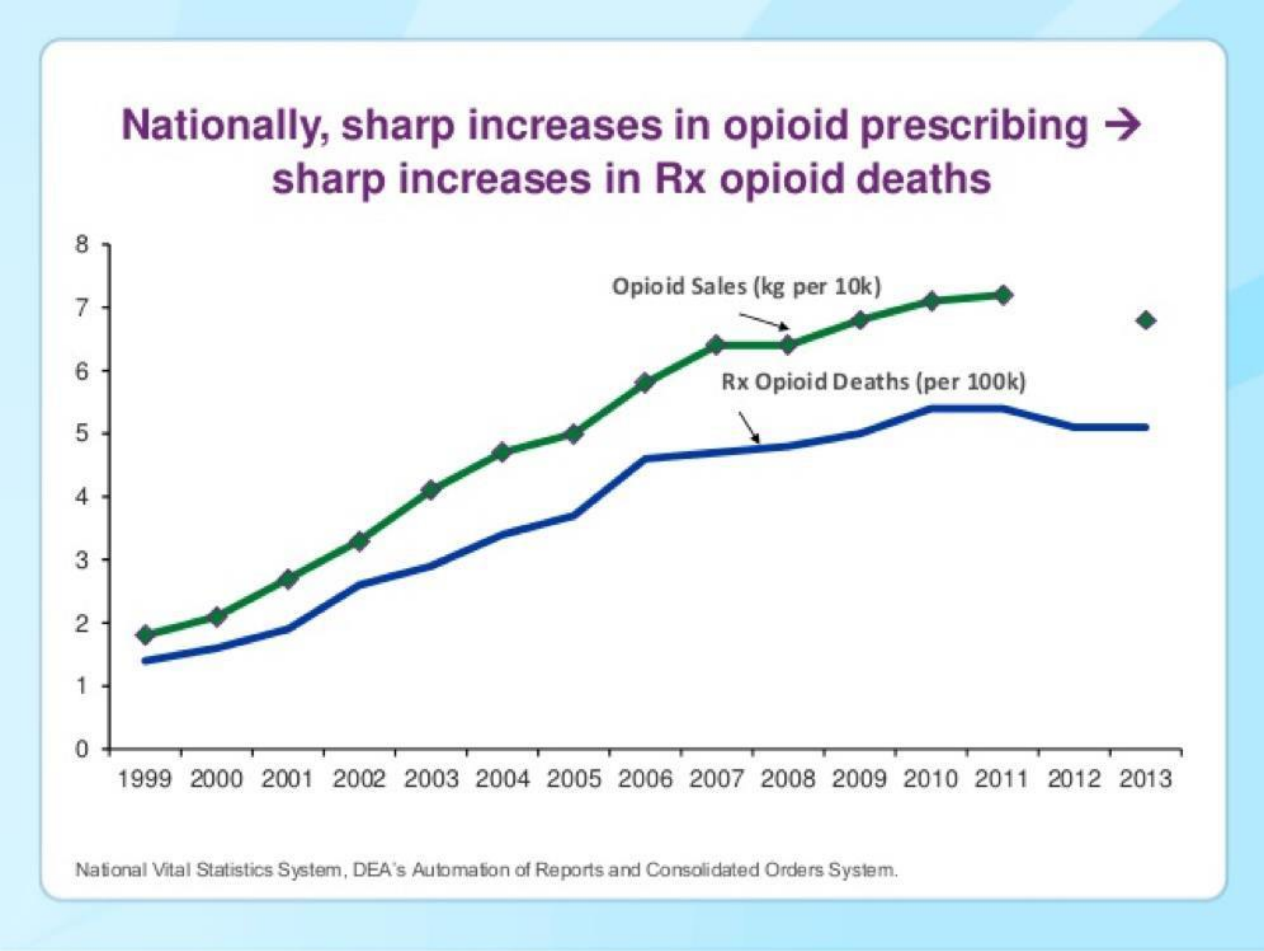
Us Opioid Related Deaths

Figure 1. Age-adjusted rates for drug-poisoning deaths, by type of drug: United States, 2000–2013

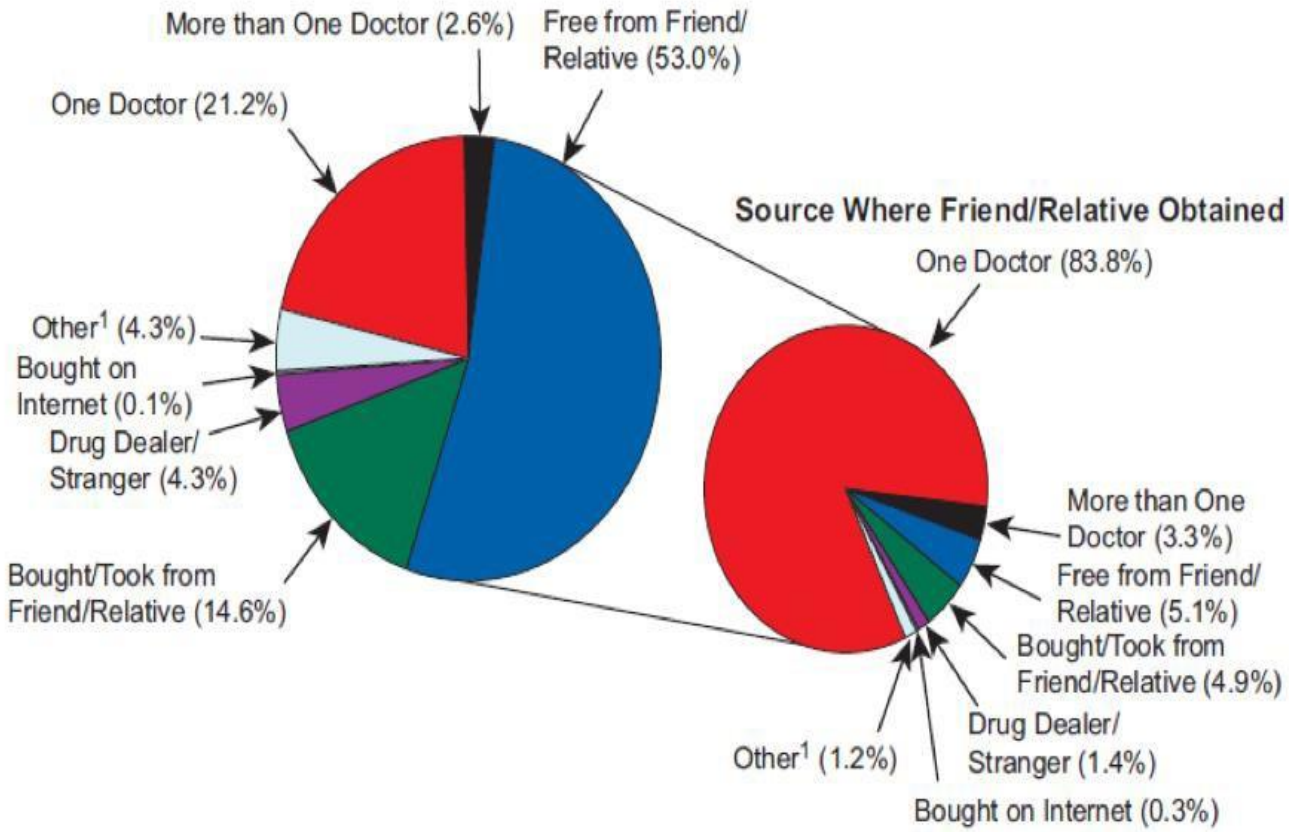


NOTES: The number of drug-poisoning deaths in 2013 was 43,982, the number of drug-poisoning deaths involving opioid analgesics was 16,235, and the number of drug-poisoning deaths involving heroin was 8,257. A small subset of 1,342 deaths involved both opioid analgesics and heroin. Deaths involving both opioid analgesics and heroin are included in both the rate of deaths involving opioid analgesics and the rate of deaths involving heroin. Access data table for Figure 1 at: http://www.cdc.gov/nchs/data/databriefs/db190_table.pdf#1.
SOURCE: CDC/NCHS, National Vital Statistics System, Mortality.

Prescribing Patterns and Deaths



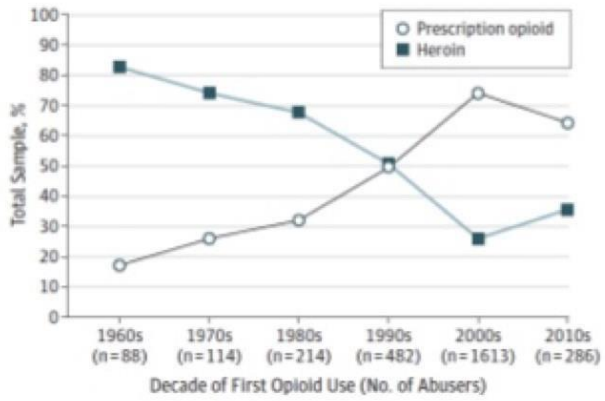
Sources of Pain Meds



Rx Opioids As Gateway To Heroin

A majority of people newly dependent on heroin report abusing prescription opioids first

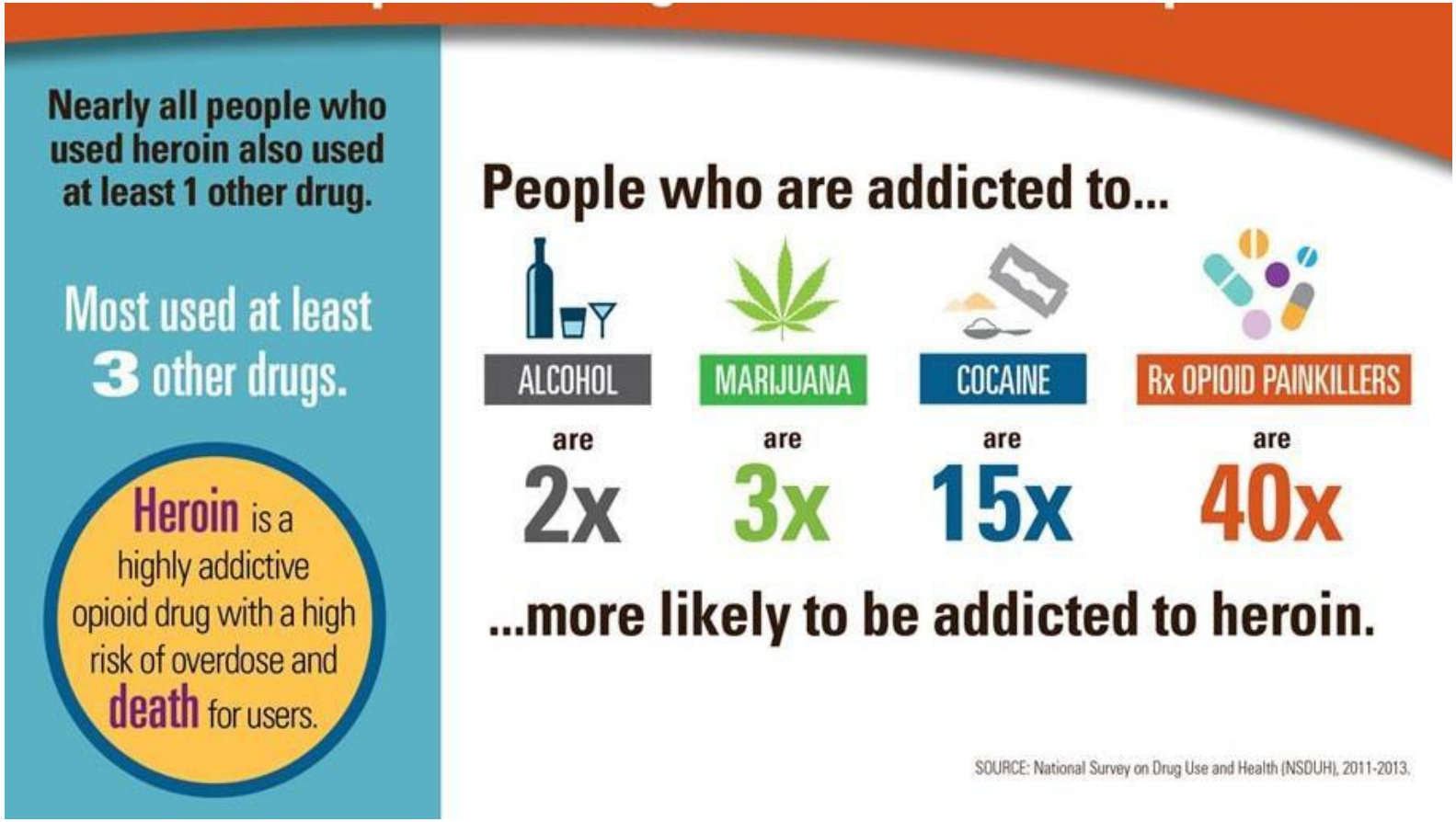
Figure 1. Percentage of the Total Heroin-Dependent Sample That Used Heroin or a Prescription Opioid as Their First Opioid of Abuse



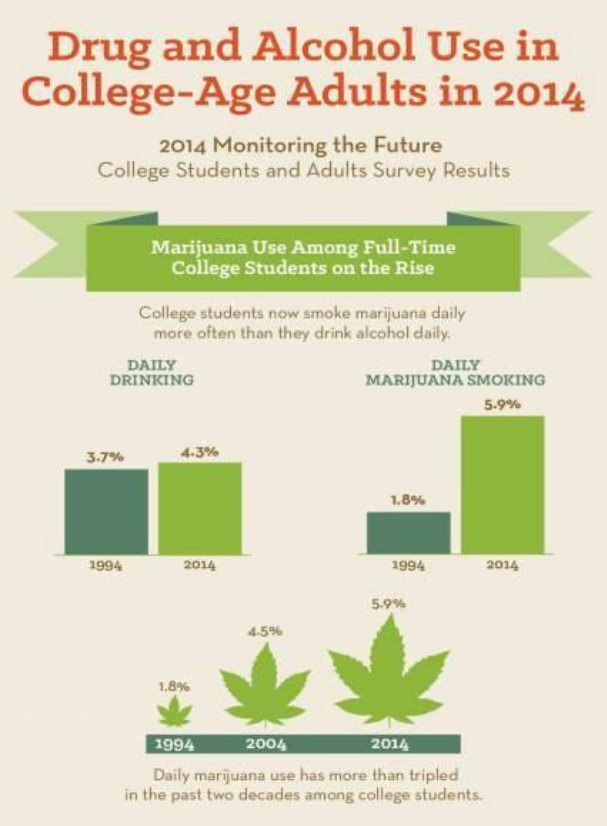
Data are plotted as a function of the decade in which respondents initiated their opioid abuse.

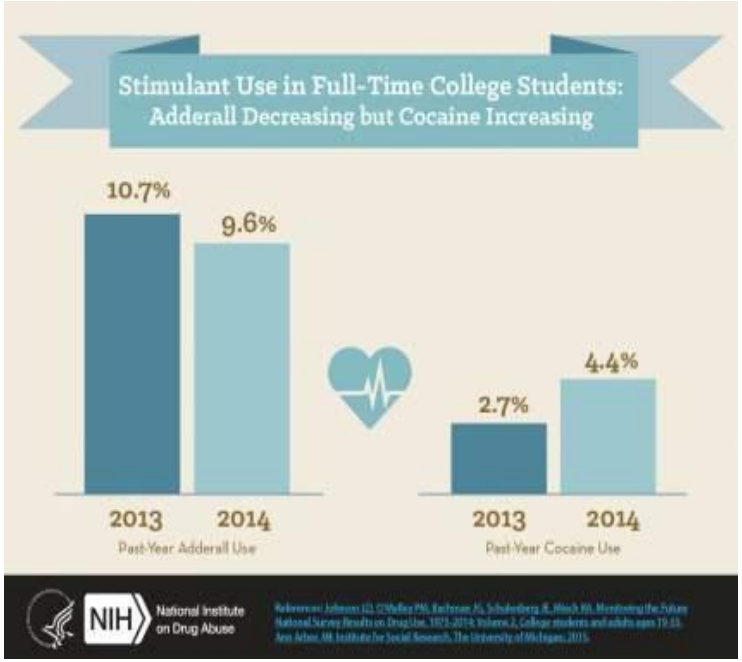
Cicero TJ, Ellis MS, Surratt HL, Kurtz SP. The Changing Face of Heroin Use in the United States: A Retrospective Analysis of the Past 50 Years. *JAMA Psychiatry*.2014;71(7):821-826.

Heroin Use is Part of a Larger Substance Use Problem



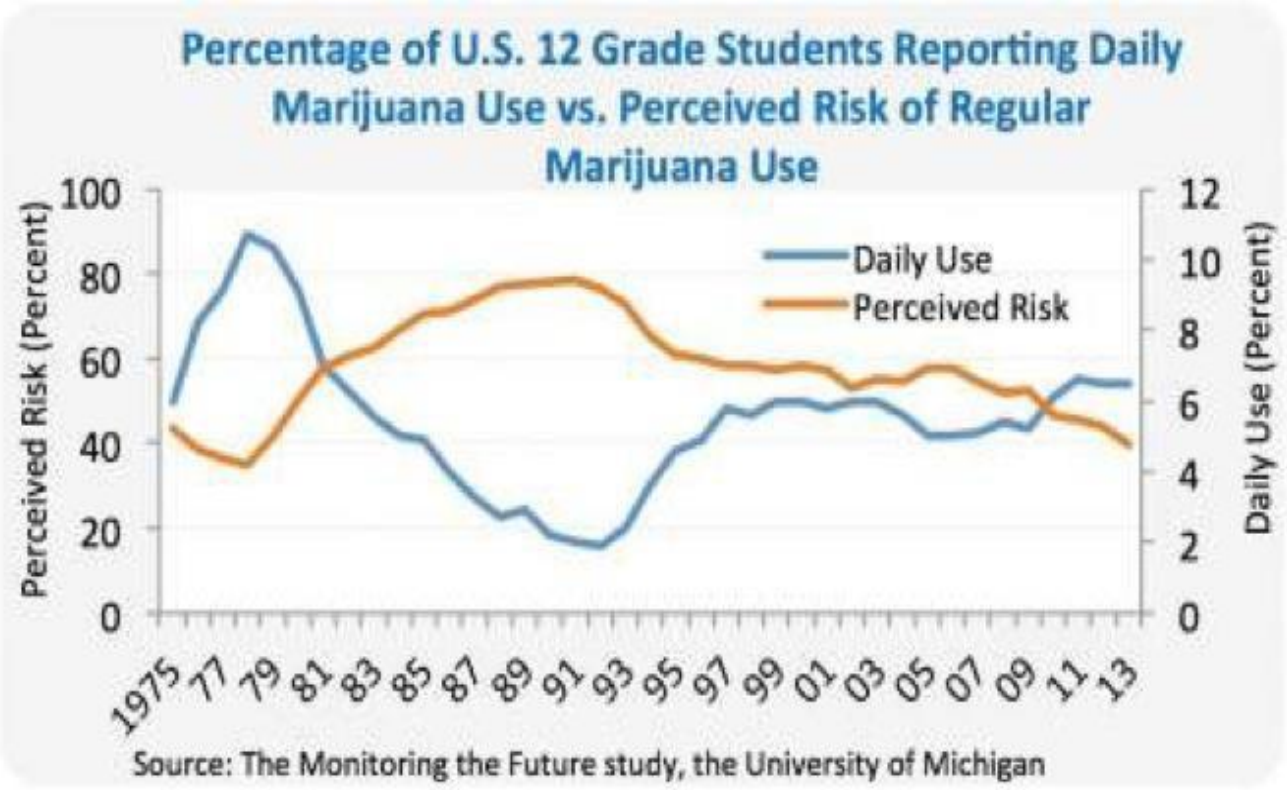
Monitoring the Future 2014 College and Adult





Source: National Institute on Drug Abuse; National Institutes of Health; U.S. Department of Health and Human Services

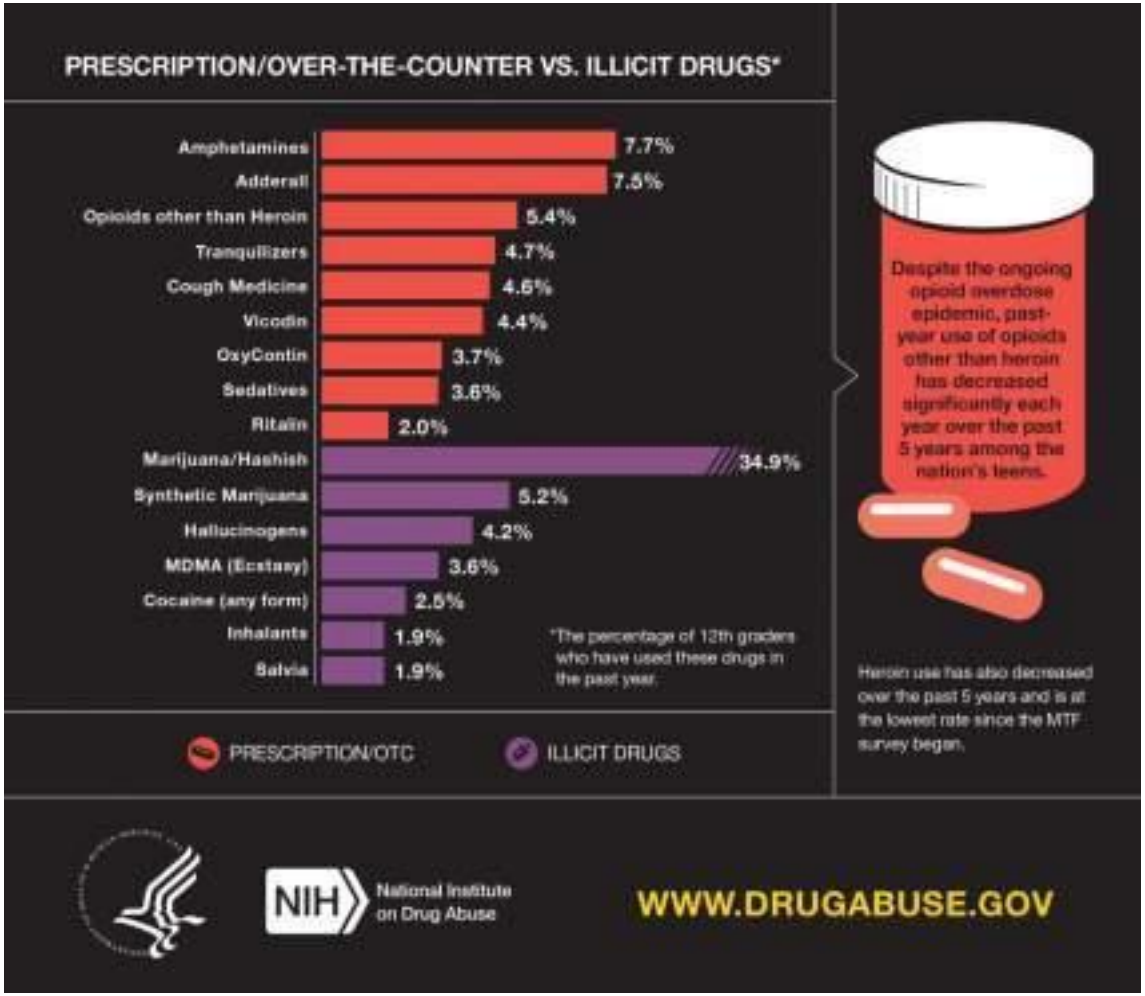
Perceived Harm and Drug Use



The Changing Face of Heroin Addiction

CDC Vital Signs: Demographic and Substance Use Trends Among Heroin Users — United States, 2002–2013

Prescription/OTC vs. Illicits



Medication RX Numbers -2013

- PERCOCET (Hydrocodone / Acetaminophen) is the #1 most prescribed medication in the USA
- XANAX is the #1 most prescribed Psychiatric medication in the USA

Source ; IMS Institute for healthcare informatics , 2013

Assessment of Need for Treatment

- ✓ Confirm OUD
- ✓ Establish current use, when, what, how much
- ✓ Assess social supports
- ✓ Evaluate degree of motivation
- ✓ Identify co-morbid medical and psych history
- ✓ PE: skin for inj sites, older tracking, body systems, cardiac murmurs, rhythm abnx
- ✓ Lab testing- blood and urine tox, liver enz, bili, Hep B, C, HIV
- ✓ Medications

Be sure to CHECK THE PMP!

Access to Treatment – Gap

- 2.5 million Americans 12 and over have opioid use disorders
- 120 people a day die of substance related overdoses
- Fewer than 1 million received treatment
- We let people "hit rock bottom"

WHY?

ASAM, Opioid Addiction Disease, 2015 Facts and Figures

Treating a Bio-behavioral Disorder Must Go Beyond Just Fixing the Chemistry

We need to treat the whole person

Pharmacological Treatments (Medications)

Behavioral Therapies

Medical Services

Social Services

In Social Context

Your Parents Were Right

At least about one thing…

Beliefs
Perception
Respect
Empathy
Stigma

Stigma

- Set of negative and often unfair beliefs that a society or group of people have about something
- A mark of disgrace or dishonor

October 2015: Charleston, West Virginia

"We can't fight this epidemic without removing stigma."

President Obama, 10/21/2015

Words to Avoid

- Addict, Abuser, Junkie
- Abuse
- Clean or dirty
- Habit
- Replacement or Substitution therapy
- (MAT)

Words to Use

Person first language focuses on the person, not the disorder

- Addiction
- Misuse
- Substance Use Disorder
- Medication Treatment (caution “MAT”)
- Person with Patient

Does AA "cause" better outcomes or is AA participation an outcome of better

The Bradford Hill Criteria

1: Strength of Association. The stronger the r
the dependent variable, the less likely it is that

2: Temporality. It is logically necessary for a

3: Consistency. Multiple observations, of an a
circumstances and with different measurement

4: Theoretical Plausibility. It is easier to acc
and theoretical basis for such a conclusion.

5: Coherence. A cause-and-effect interpretatic
conflict with what is known about the variable
competing theories or rival hypotheses. In othe
other knowledge.

6: Specificity in the causes. In the ideal situat
showing that an outcome is best predicted by o
claim.

7: Dose Response Relationship. There should
(i.e., the independent variable) and people's sta
variable).

8: Experimental Evidence. Any related resea
inference more plausible.

9: Analogy. Sometimes a commonly accepted
area.

- Using accepted scientific standards (Bradford Hill criteria) and the most rigorous scientific methods (i.e., RCTs, instrumental variables analysis, PS matching), evidence indicates causal therapeutic benefit of AA
- The one exception is "specificity" (e.g., other interventions could also cause these benefits)
- But given AA is available free of charge in practically every US community and that an intervention's "Impact" is a product of = reach x effectiveness (Glasgow et al, 2003), AA can be considered a clinical and public health ally in ameliorating the prodigious burden of disease attributable to alcohol addiction

Medication Treatment

- "MAT" = Medication PLUS counseling and behavioral therapies
- "Opioid Agonist Therapy," Medication, or Treatment preferred
  - Reduces drug use
  - Reduces the risk of infectious disease transmission
  - Reduces criminal activity
  - Reduces the risk of overdose
  - Reduces death
  - Increases treatment retention
  - Improves social functioning
  - Cost-effective
  - Safe

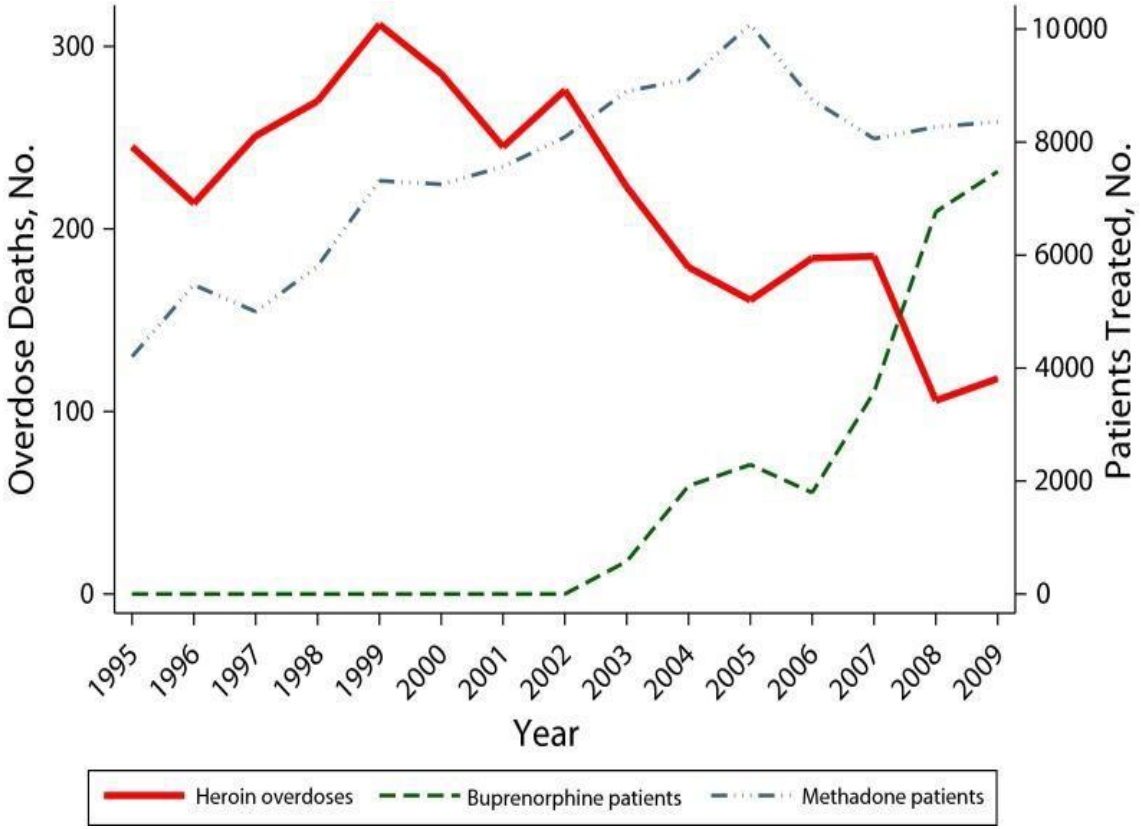
Overdoses Symptomatic of Untreated Disease

"A key driver of the overdose epidemic is underlying substance-use disorder. Consequently, expanding access to addiction-treatment services is an essential component of a comprehensive response. "

- 50% of Addiction treatment centers offer medication
- <38% of eligible patients are offered medications
- <5% of physicians are waivered to prescribe buprenorphine

Volkow ND, Frieden TR, et al N Engl J Med 370;22 May 29, 2014

Methadone and Suboxone save lives

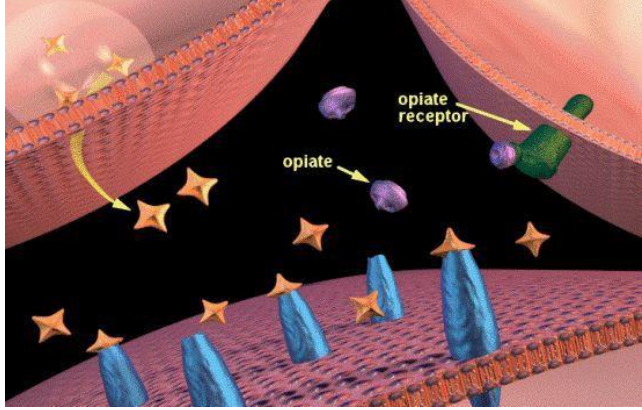


Schwartz, RP, Gryczynski J, O'Grady, Ke et al. Opioid agonist treatments and heroin overdose deaths in Baltimore, MD, 1995-2009. Am J Public Health 2013;103:917-22

Medication Therapy

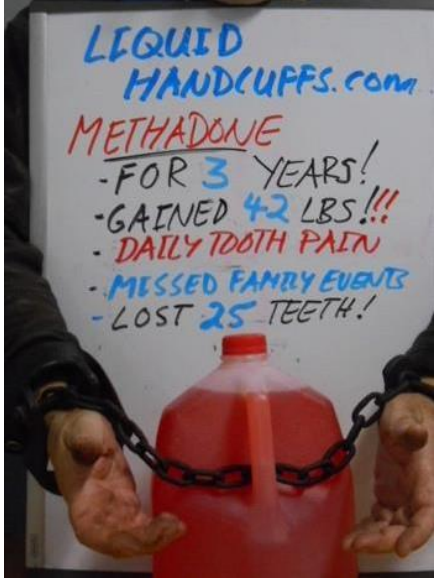
- Opioid Agonists
  - Full: Methadone (Methadose or Dolophine)
  - Partial: Buprenorphine/Naloxone, Buprenorphine (Suboxone or Subutex)
- Opioid antagonist
  - Naltrexone (Revia or Vivitrol)

Methadone



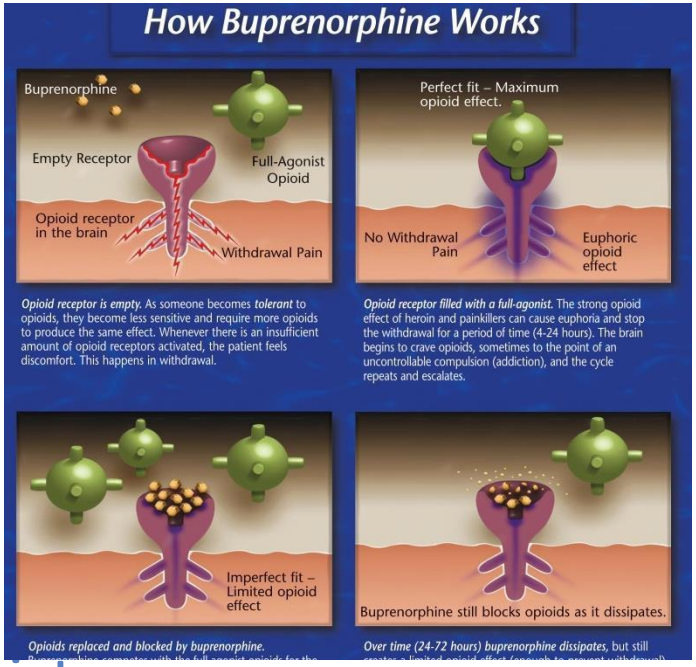
- Long acting, full opioid agonist
- Binds to and occupies mu–opioid receptors
- Prevents euphoria from other mu agonists
- Alleviates withdrawal symptoms
- Administered in licensed OTP
- Federal law: initial dose 10-30 mg, not to exceed 40 mg in day 1
- Suppresses cravings (60-120mg+)
- Can prolong QTc with risk of Torsades de Pointes
- Respiratory depression can be a side effect at any dose
- Increases overdose risk significantly if mixed with sedative hypnotics and ETOH

Methadone Myths



- "Liquid handcuffs"
- Substitutes one addiction for another
- Prevents true recovery
- Should not be used long term
- Rots teeth
- Damages bones
- Turns people into "zombies"
- Causes overdoses

Buprenorphine



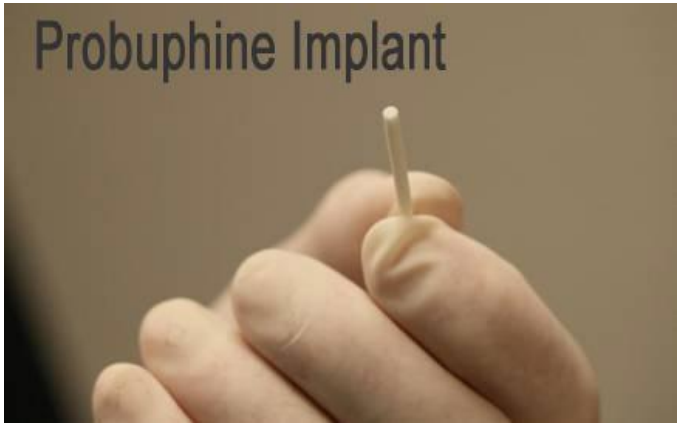
Major Paradigm Shift: DATA 2000

- Partial agonist – antagonist
- Sublingual
- Higher affinity for the mu opioid receptor compared to full agonists
- Slow to dissociate
- Will displace full agonists from the receptor with decreased opioid effect → precipitated withdrawal
- Relieves cravings without producing euphoria or dangerous side effects of other opioids
- Naloxone to deter IV use, not active sublingually

Naltrexone

- Full mu opioid antagonist
- Blocks the euphoric effect of mu opioid agonists
- No dependence, no need to wean
- Not scheduled – no special training or license needed
- Reduces relapse rates
- Will precipitate withdrawal if agonists (full or partial) are occupying mu receptors
- Must be 7-10 days opioid free
- Increased risk of overdose if try to overcome blockade
- Increased risk of overdose end of month or missed dose because of loss of tolerance
- Monthly IM dosing improves adherence, low adherence with oral dosing
- Substantially less stigma

On the Horizon… Probuphine



Investigational subdermal implant delivers buprenorphine continuously for six months following a single treatment.

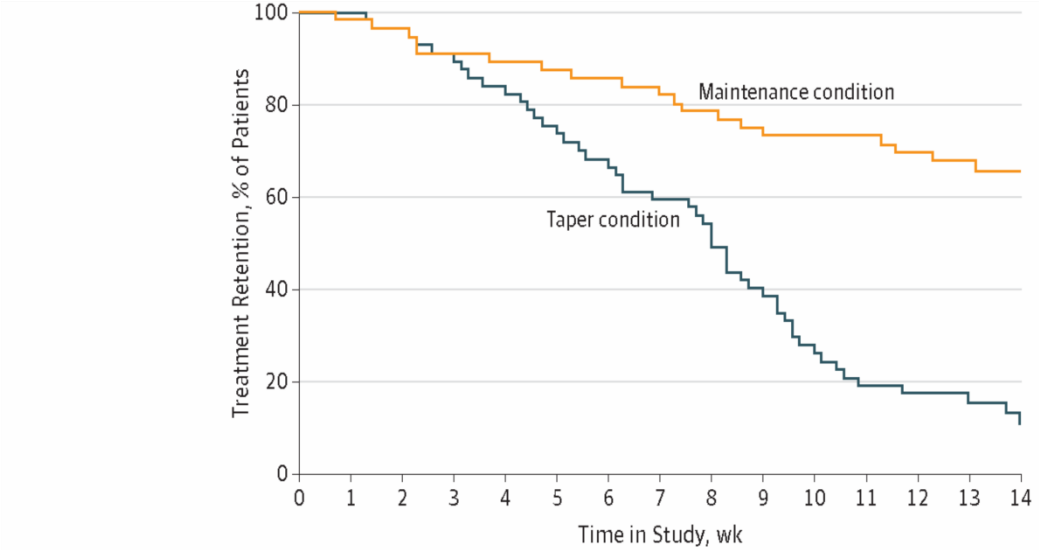
Currently under FDA review.

To taper or to maintain?

- No question, actually…..
- Longer treatment, better outcomes
- Consistent with chronic disease model
- Think DM, CAD, COPD
- As with any medication – no set limit
- Minimum of 12 months, but better outcomes with longer durations
- Continually reassessed and individualized

From: **Primary Care–Based Buprenorphine Taper vs Maintenance Therapy for Prescription Opioid Dependence: A Randomized Clinical Trial**

JAMA Intern Med. 2014;174(12):1947-1954. doi:10.1001/jamainternmed.2014.5302



Mean buprenorphine dosage, mg/d														
Maintenance condition	14.9	15.1	15.2	15.3	15.3	16.0	15.9	16.2	16.2	16.6	16.8	16.2	16.1	15.8	14.6
Taper condition	15.6	15.6	15.4	15.3	14.2	9.7	5.7	3.1	0.6	0.2	0	0	0	0	0

Results: Completion of 14 week trial: taper 11% vs maintenance 66%
Mean percentage of urine negative for opioids: taper 35% vs maintenance 53%

Figure Legend:
Treatment Retention and Mean Buprenorphine Dosage for Patients With Prescription Opioid Dependence. Patients were assigned to the taper or the maintenance condition. Buprenorphine treatment was administered as a tablet formulation of buprenorphine hydrochloride and naloxone hydrochloride in a 4:1 ratio.

Imagine Sobriety…

- After multiple detoxes, long term programs, losses, overdoses....
- You achieve sobriety
- You are engaged in counseling
- You are engaged in a treatment community
- You are exercising and eating healthfully
- You are in college or have a job
- You have your family back
- You feel “normal

BUT….

You are on agonist therapy/medication

- You are told by your support network that you are not sober
- You are “trading one addiction for another,” using a “crutch”
- You are told you cannot engage in peer support groups that bolster your sobriety
- You are badgered by your insurance company for repeated authorizations as to why you need it
- You are asked by your family and doctors when you are going to get off the of the medication

“People Don’t Fail Treatment Treatment Fails People”

- Deconstruct the relapse with your patient
- Good people make bad decisions when SUD active
- Change takes time, patience and trust
- When diseases flare, we increase care or enlist the care of other team members. This is no different
- Trust is an important tool
- Positive reinforcement (contingency management)
- Competing priorities
- Communicate with others
  - “No one size fits all” just like other diseases
  - Diet controlled pre-diabetes, oral agents, insulin for DM
  - Diet, exercise, statin, beta-blocker, ASA, ACE inhibitors for heart disease

Lessons Learned

- Listen to your patients
- It's hard to have an addiction
- Diversion happens
- Most have used Suboxone in the past and can do home inductions
- Don't get caught up in the dose-splitting hairs
- Don't forget about "pseudo-addiction"
- Take sleep disturbance seriously – advance Suboxone
- Take report of cravings extremely seriously – treat

Addiction Treatment

For each treatment plan, try to consider the level of care –

What does THE PATIENT want to craft as a realistic and concrete plan focused on engagement, patient preference and safety

Meeting patients where they are . . .but never leaving them where we found them.

What Next?


OPEN DOOR
FAMILY MEDICAL CENTERS