Opiate Use Disorder
Science and Treatment

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Disclosure

- I have no financial relationship or affiliation with any commercial interest
- I have no unapproved or investigational use of any product or device

Opiate Use Disorder-Science and Treatment

Learning Objectives

1. Neurobiology of Addiction
2. Addiction, a Choice or Genetics?
3. Medication Assisted Treatment- what types of treatments are available
4. What are some of the challenges to treatment
5. Goals of Therapy

Definitions

Addiction: A Chronic Relapsing Disorder

"Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry."

- ASAM

Definitions: Opiates

Nushtar or "nishtar" (from Persian, meaning a lancet)

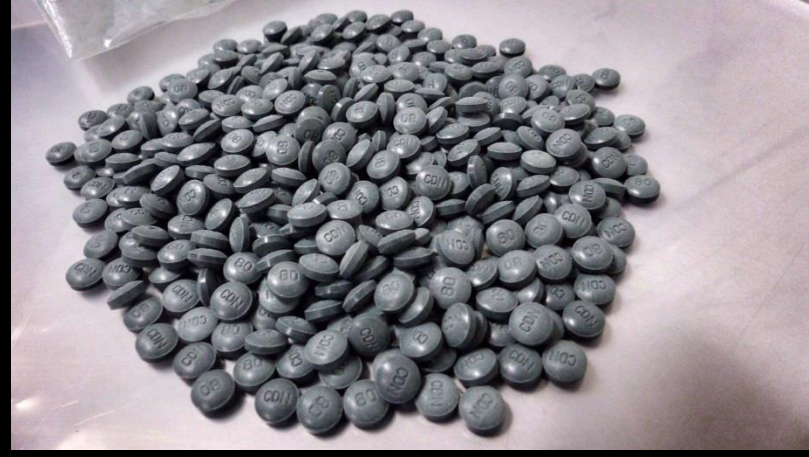
- **Morphine**
- **Codeine**
- **Opium**
- **Thebaine**

Opiates – substances naturally present in the opium poppy plant (Papaver Somniferum)

Definitions: Opioids

- Opioids are not found occurring in nature.
- Two “types” of opioids
  - Synthetic
  - Semisynthetic

Synthetic Opiates



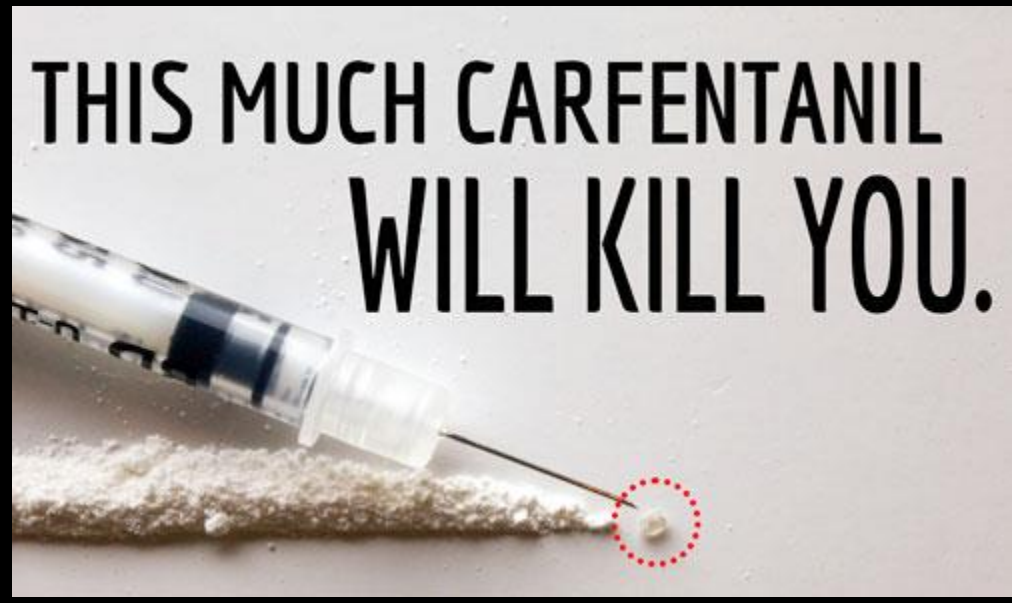
- Manufactured in chemical laboratories with a similar chemical structure to the milk of the poppy plant and are completely man-made to work like opiates
  - Fentanyl
  - Methadone
  - Dilaudid
  - Norco
  - Lortab
- “Game of Thrones”
  - Milk of the poppy plant is also commonly used throughout the Seven Kingdoms in the Game of Thrones for those who have suffered severe injuries.

Semi-synthetic opiates

- Combinations of natural opiates and synthetics
  - Heroin
    - Derived from: morphine (a naturally-occurring substance in the poppy plant)
  - Oxycodone (Oxycontin)
    - Derived from: thebaine (a naturally-occurring substance in the poppy plant)
  - Hydromorphone (Dilaudid)
    - Derived from morphine (a naturally-occurring substance in the poppy plant)
  - Oxymorphone (Opana)
    - Derived from: morphine (a naturally-occurring substance in the poppy plant)
  - Hydrocodone (Vicodin, Lorcet)
    - Derived from: codeine (a naturally-occurring substance in the poppy plant)
  - Buprenorphine (Subutex, Suboxone)
    - Derived from: thebaine (a naturally-occurring substance in the poppy plant)

Relative Potency

- 5 mg tablet of Vicodin or Hydrocodone = 5 mg MSO4
  - Heroin = 4-5 X 1 mg of MSO4
  - Fentanyl = 100 X 5 mg tablets
  - Sufentanyl = 1000 X 5 mg tablets
  - Carfentanyl = 100,000 X 5 mg tablets



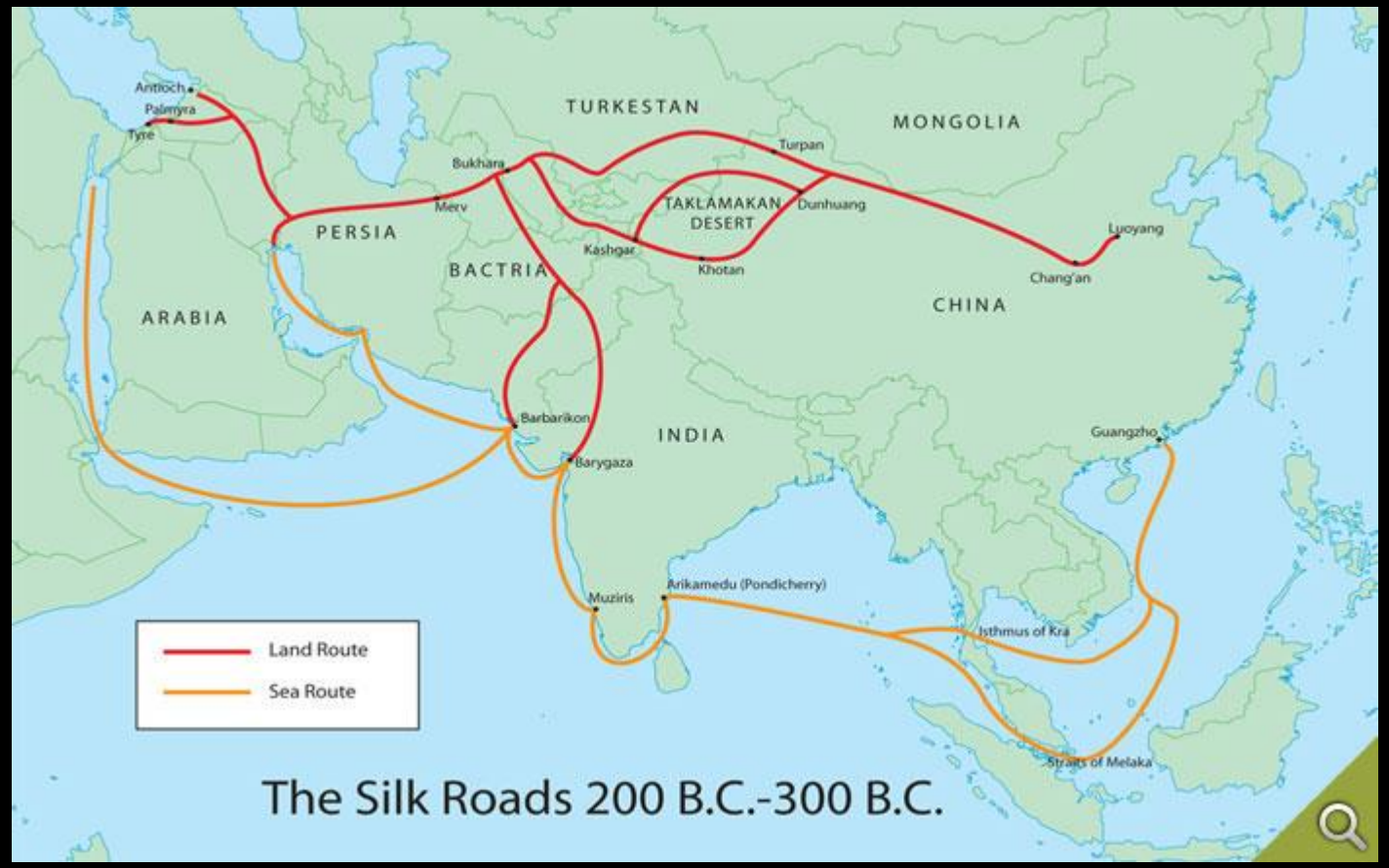
- The difference between getting "high" and dying from carfentanyl is 1 grain of sand and 3 grains of sand

Comparison of estimated lethal doses of heroin, fentanyl and carfentanil

History of Opiates

Opium-An Ancient Medicine

- Opium is mentioned in the most important medical texts of the ancient world
  - Ebers Papyrus
  - Galen
  - Avicenna
- Opium was known to ancient Greek and Roman physicians as a pain reliever, and used to induce sleep and to give relief for abdominal pain
- Opium was thought to protect the user from being poisoned.
- Opium's pleasurable effects were also described.



Opium's cultivation spread along the Silk Road, from the Mediterranean through Asia and finally to China

HISTORY HEROIN

Technical name

$C_{21}H_{23}NO_5$

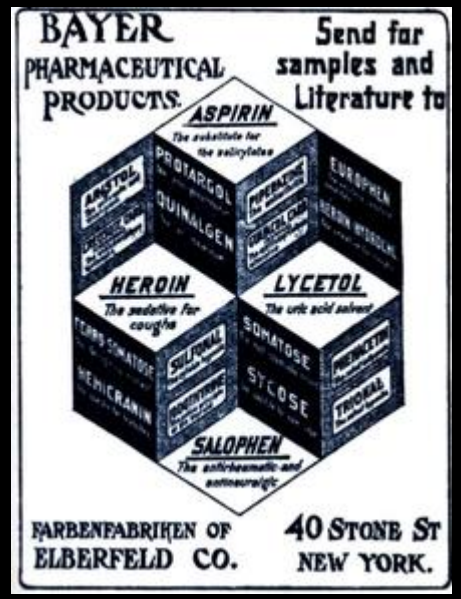
diamorphine

diacetylmorphine

HISTORY
HEROIN

1874- heroin developed from morphine

1898- heroin marketed by Bayer as a “safe” pediatric cough suppressant



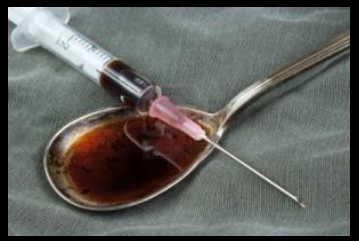
"In the cough of phthisis minute doses [of morphine] are of service, but in this particular disease morphine is frequently better replaced by codeine or by heroin, which checks irritable coughs without the narcotism following upon the administration of morphine."

This is not the first Opiate Epidemic!

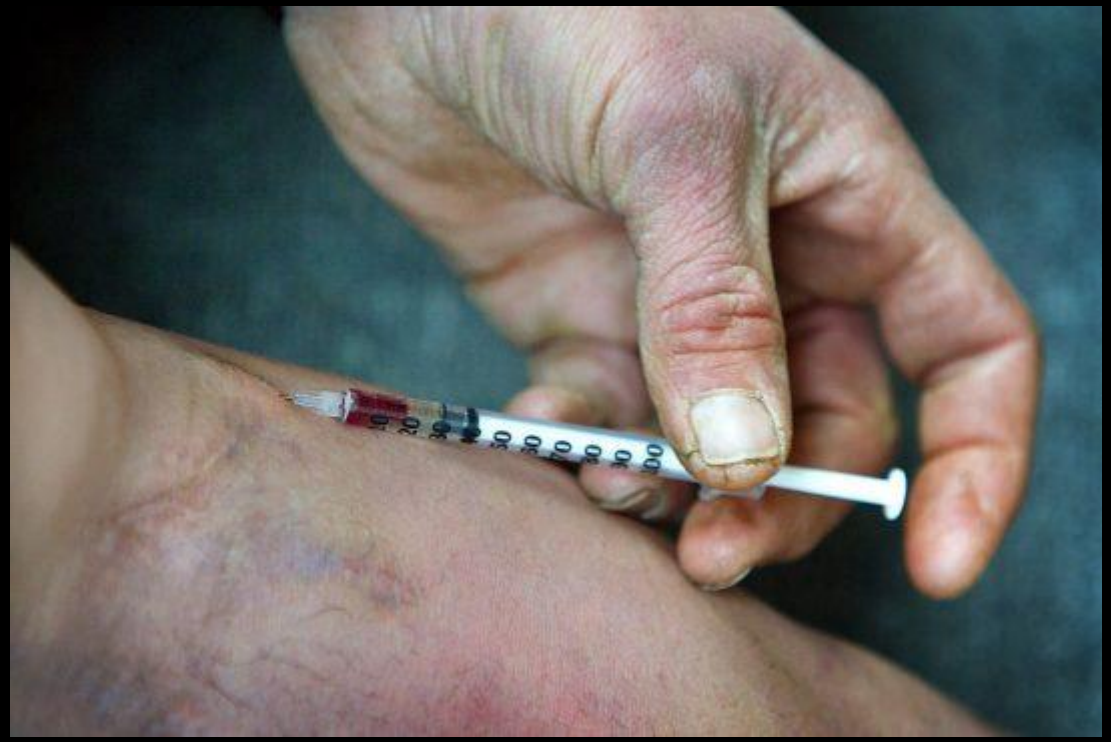
1. Late 1800s: Morphine
   - Mainly middle class
   - Female > Male

2. Early 1900s: Heroin (pharmaceutical grade)
   - First generation Italians, Jews, Irish
   - Male > Female

3. 1950s-1970s- Heroin (illicit)
   - African American/Latinos
   - Male > Female



The Current Opioid Crisis

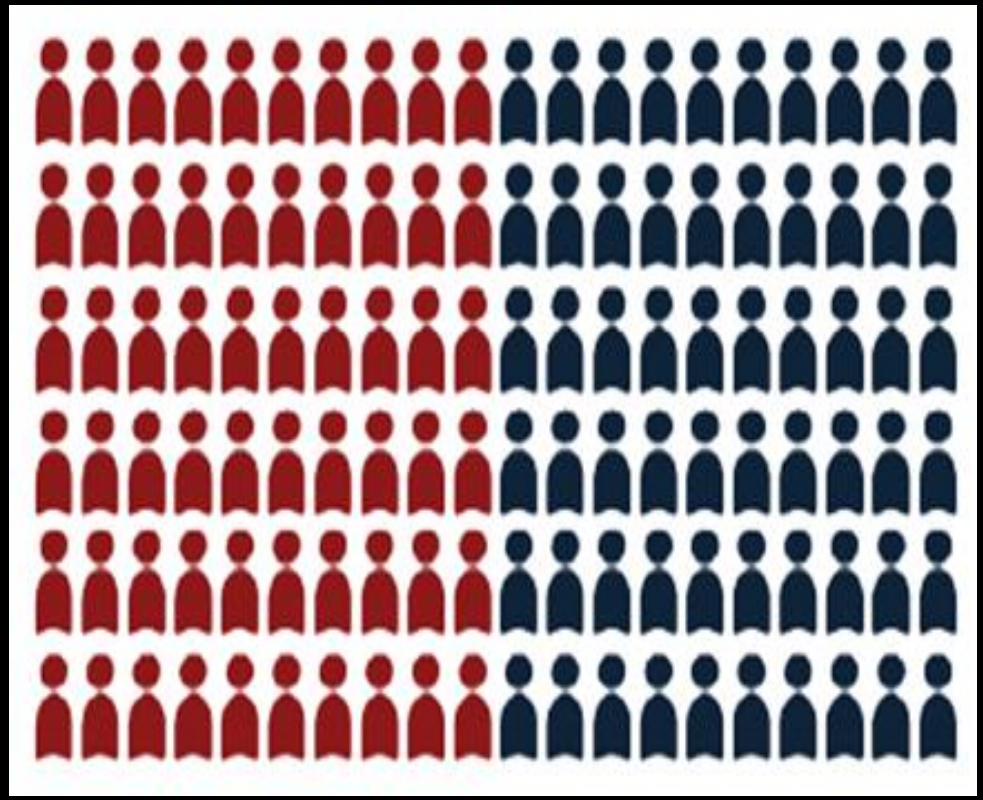


Scope of the Problem

Every **16 minutes**, a person in the United States **dies** from an opioid overdose.

900

OD's Per Day
From Heroin, Fentanyl, and Prescription Opioids



Anne Case & Angus Deaton, Princeton University

Scope of the Problem

- PRESCRIPTION OPIOID OVERDOSE, MISUSE, AND DEPENDENCE COST THE U.S.

  >$78 BILLION / YEAR IN HEALTH CARE, CRIMINAL JUSTICE, AND LOST PRODUCTIVITY COSTS.

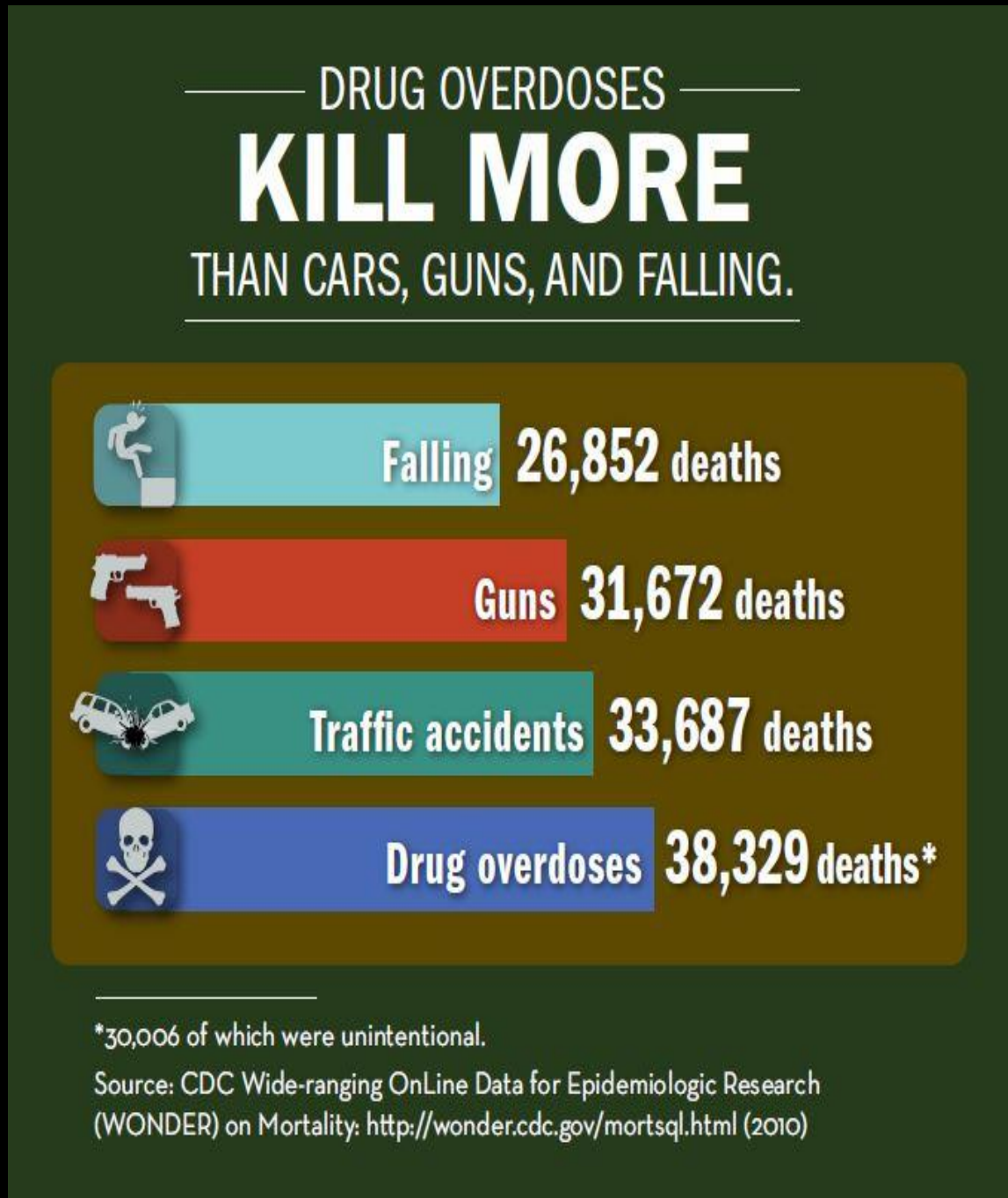
Source: Curtis S. Florence et al., “The Economic Burden of Prescription Opioid Overdose, Abuse, and Dependence in the United States, 2013 Medical Care 54, no. 10 (2016): 901-6, http://journals.lww.com/lww-medicalcare/Abstract/2016/10000/The _Economic _Burden_of_Prescription_Opioid.2.aspx.

The White House

September 16, 2016

"Each year, more Americans die from drug overdoses than in traffic accidents

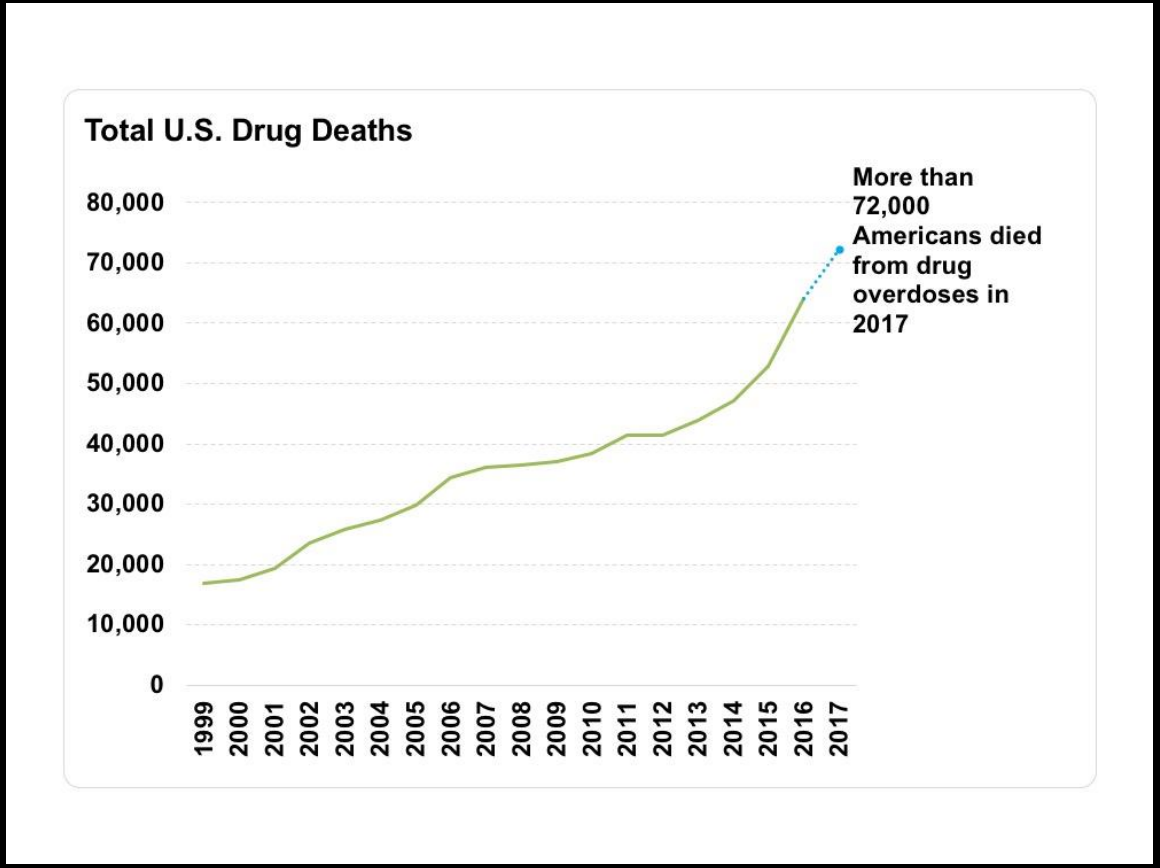
>3/5 of traffic fatalities involve an opioid.



In one year, drug overdoses killed more Americans than the entire Vietnam War

Staggering Statistics!!

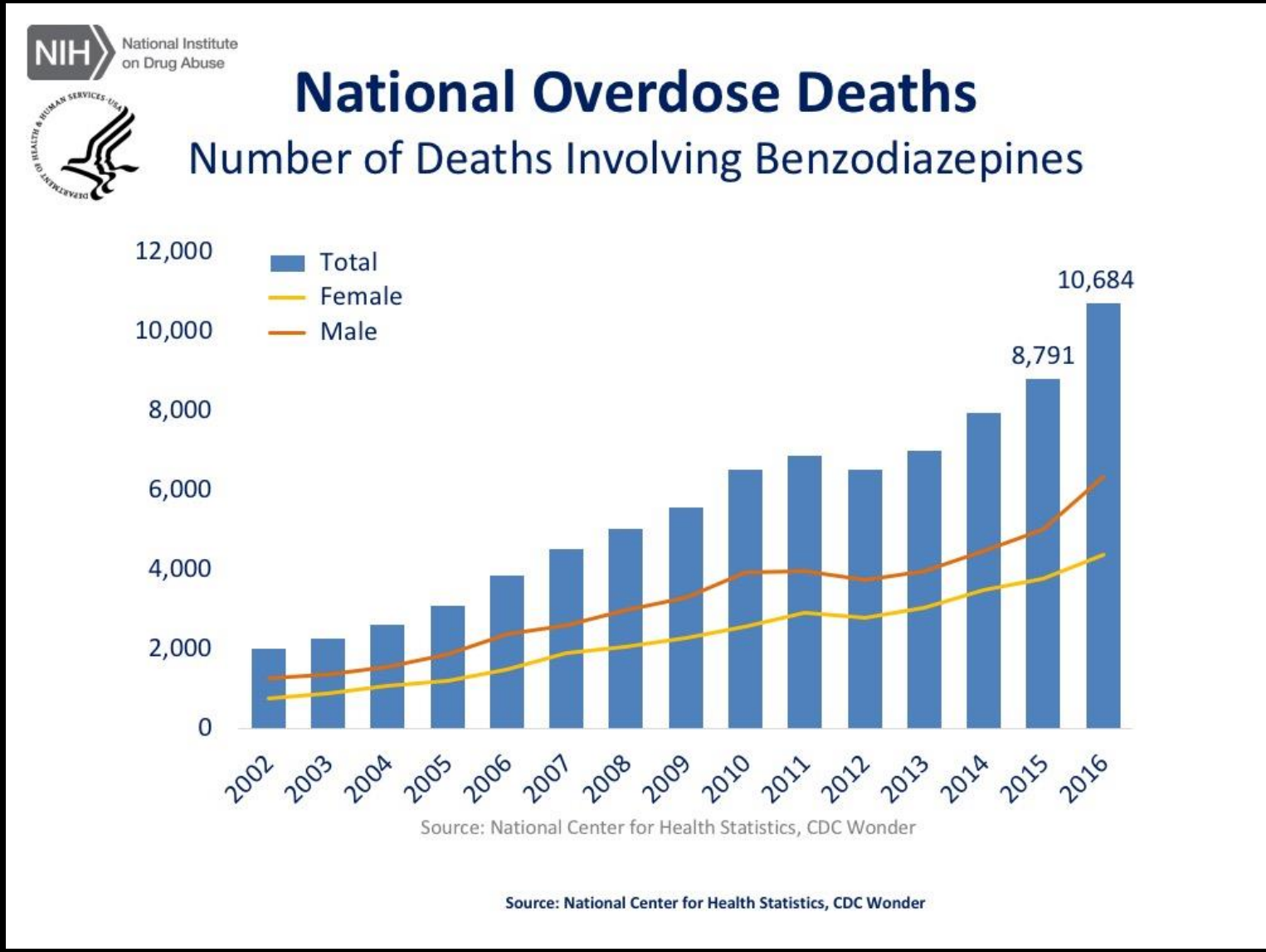
- From 2000 - 2017
  - >600,000 people died from drug overdoses.
- 2017
  - >72,000 persons died from drug overdoses – more than in any year on record before.
- The majority of drug overdose deaths (more than 6 out of 10) involve an opioid.



National Center for Health Statistics at the Centers for Disease Control and Prevention

NCHS Data Brief No. 294, December 2017
National Center for Health Statistics

Benzodiazepines are gaining ground!



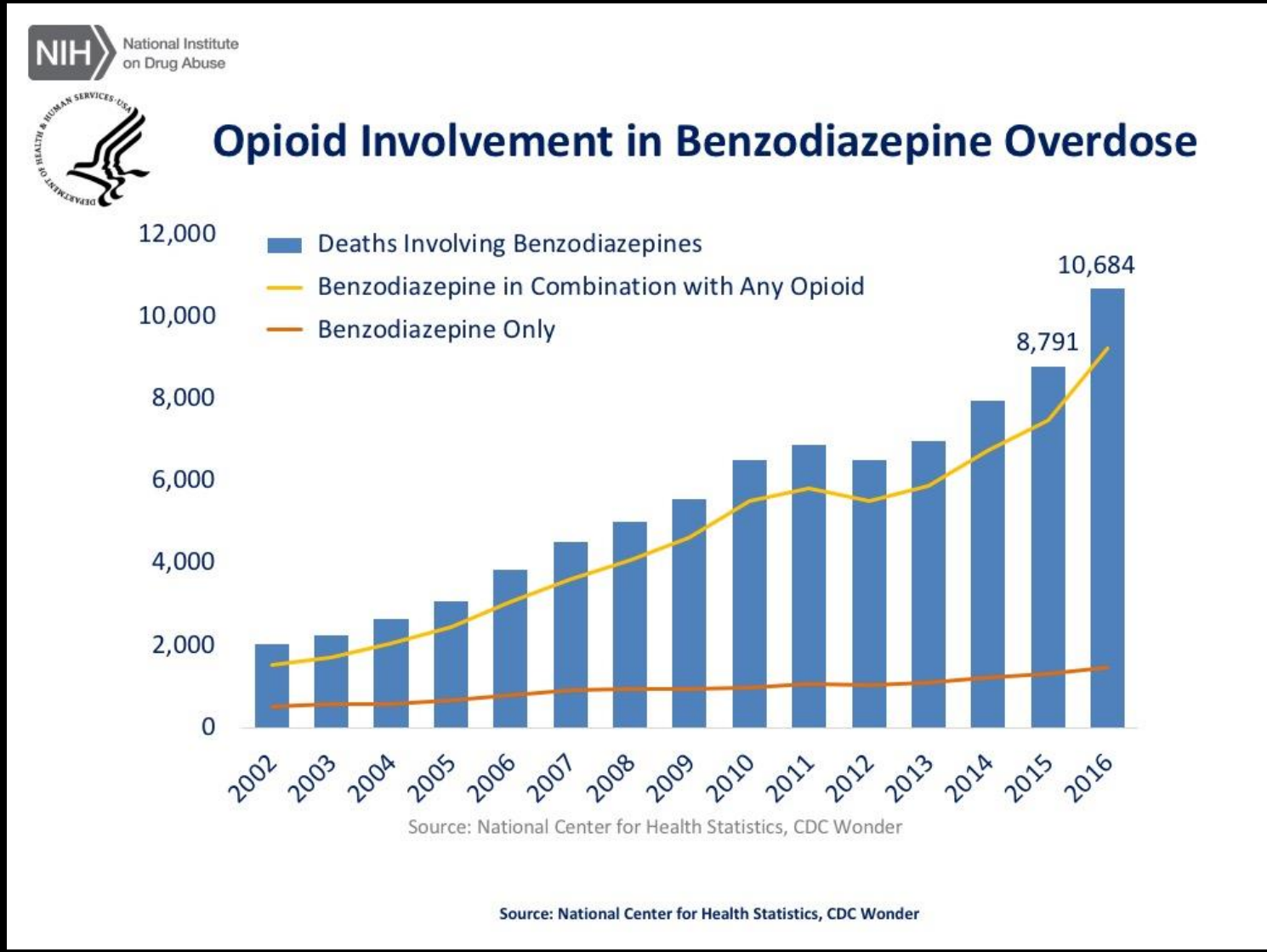
Source: National Center for Health Statistics, CDC Wonder

The yellow line represents the number of benzodiazepine deaths that also involved opioids

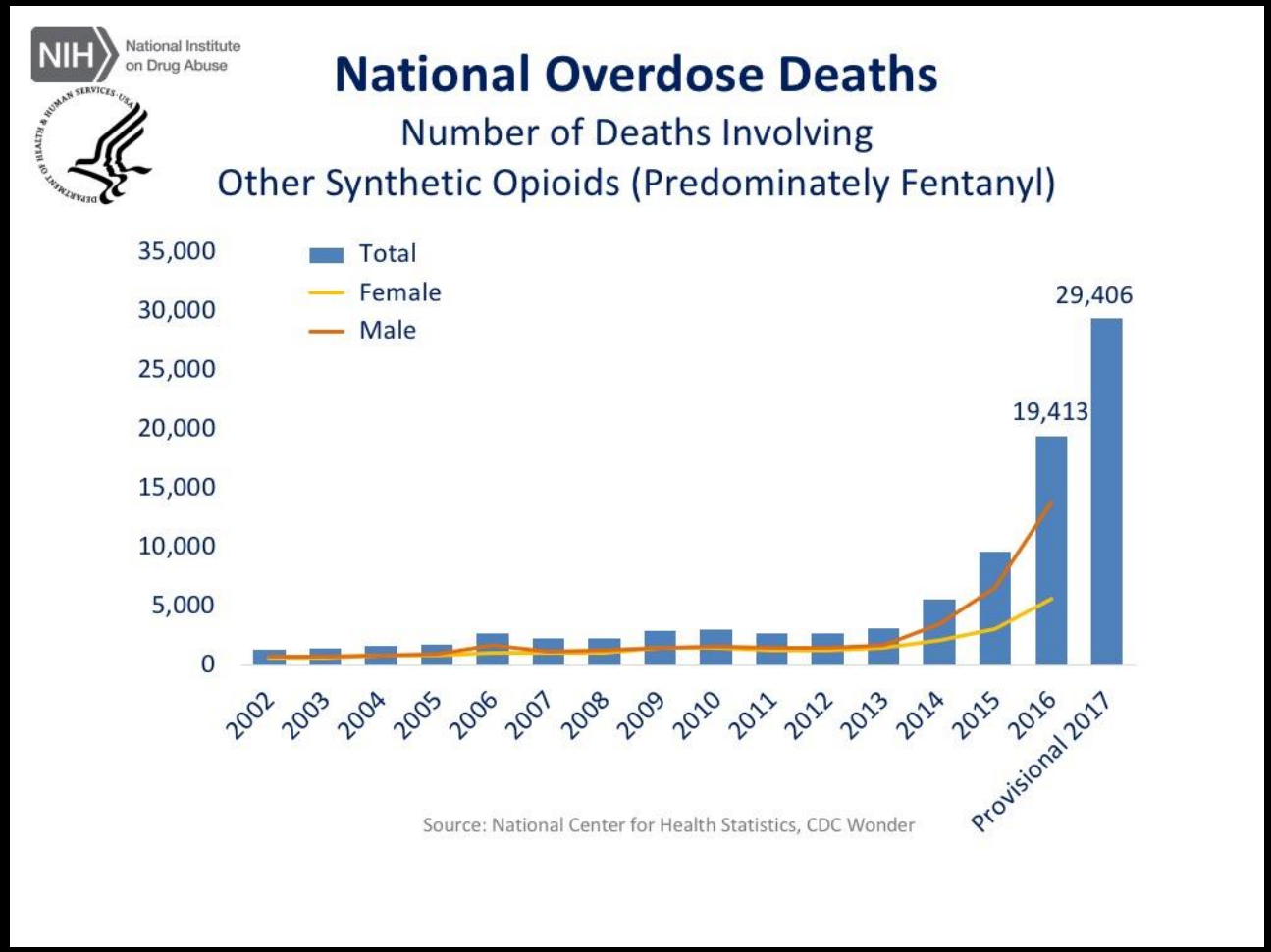
The orange line representing benzodiazepine deaths that did not involve opioids.

2002-2016

Benzodiazepine deaths involving opioids increased 6X more than those not involving opioids.



Fentanyl Death Rates



Staggering Statistics!!

- West Virginia (52.0 per 100,000)
- Ohio (39.1)
- New Hampshire (39.0)
- District of Columbia (38.8)
- Pennsylvania (37.9)

Highest observed age-adjusted drug overdose death rates in 2016

US rate is 19.8/100,000

Maryland's drug overdose death rate:

33.2/100,000

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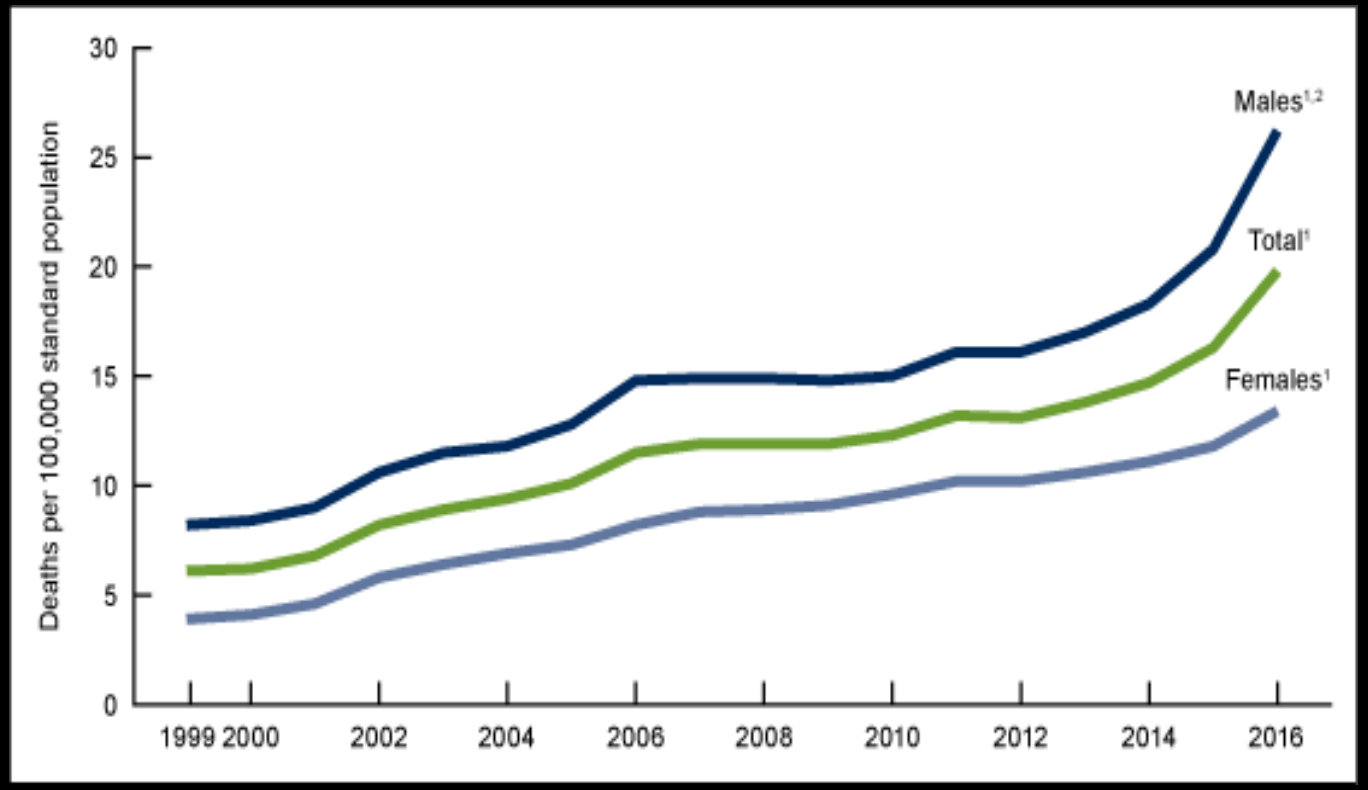
National Center for Health Statistics

- Drug overdose death rates- males > females.
  - Males- the rate increased (4X) 1999 - 2016.
  - Females-the rate increased (3X) 1999 -2016.



SOURCE: NCHS (National Center for Health Statistics), National Vital Statistics System, Mortality

At least 50% of all opioid overdose deaths involve a prescription opioid!

- 24.6 million adults age 12+ live with a SUD (Substance Use Disorder)

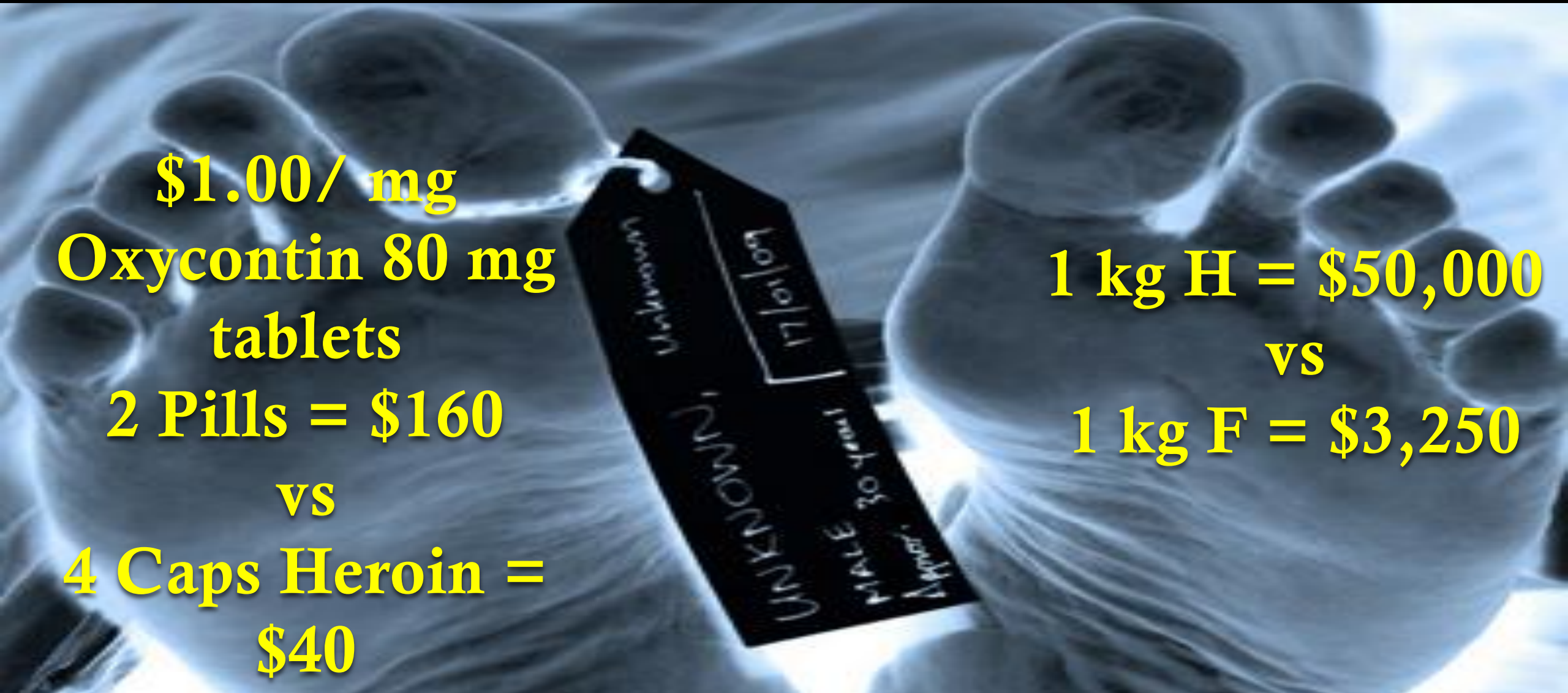
- Only 10% or 1 out of 10 individuals sought or received treatment for their addiction

ASAM, Opioid Addiction Disease, 2015 Facts and Figures

Street Economics

Pills to Fentanyl - 2 Easy Lessons

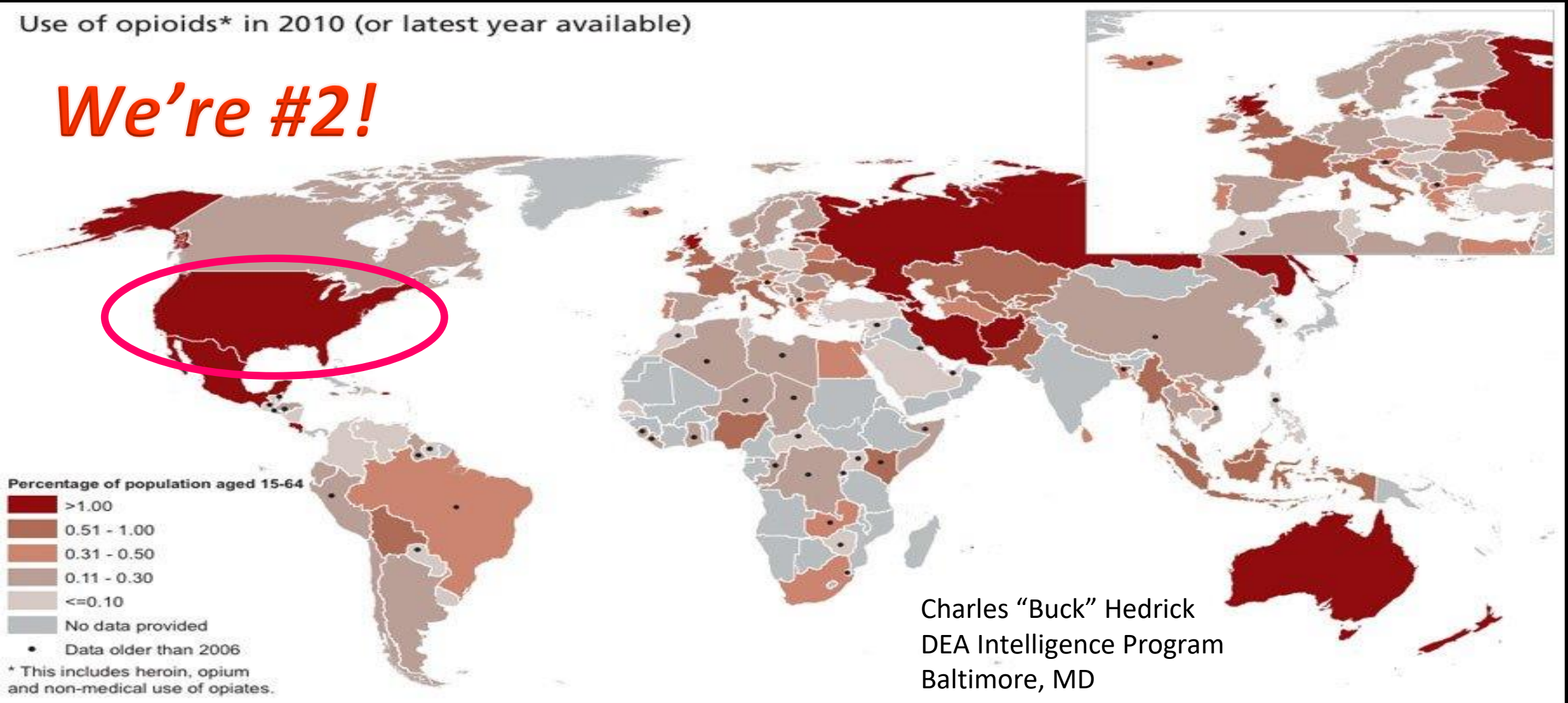
Charles "Buck" Hedrick
DEA Intelligence Program
Baltimore, MD



$1.00/ mg
Oxycontin 80 mg tablets
2 Pills = $160
vs
4 Caps Heroin = $40

1 kg H = $50,000
vs
1 kg F = $3,250

Heroin Markets



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DEA Intelligence Program
Baltimore, MD

Heroin Source Regions

Charles “Buck” Hedrick
DEA Intelligence Program
Baltimore, MD

Mexico/South America/Middle East/Southeast Asia

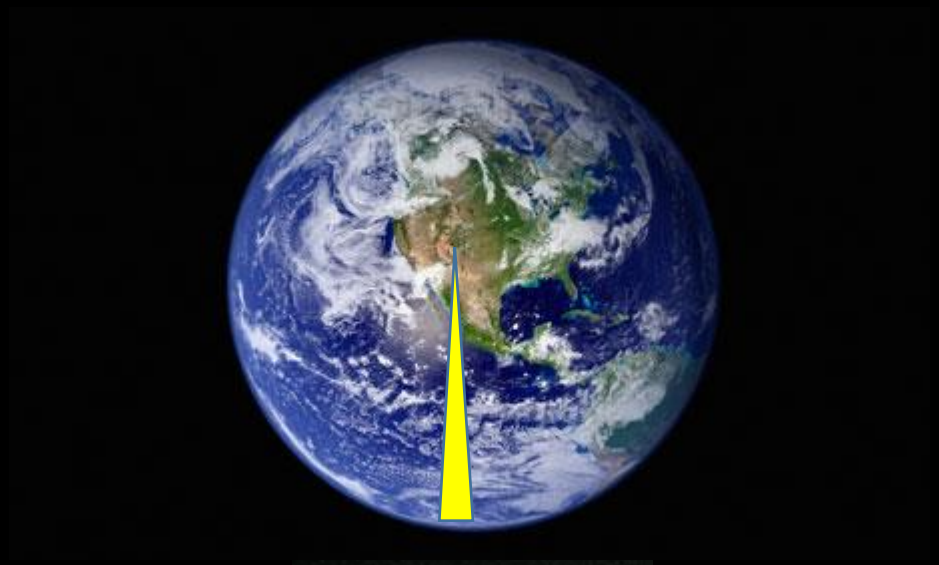
THE US IS NUMBER 1
!!!!!!!

Consumption

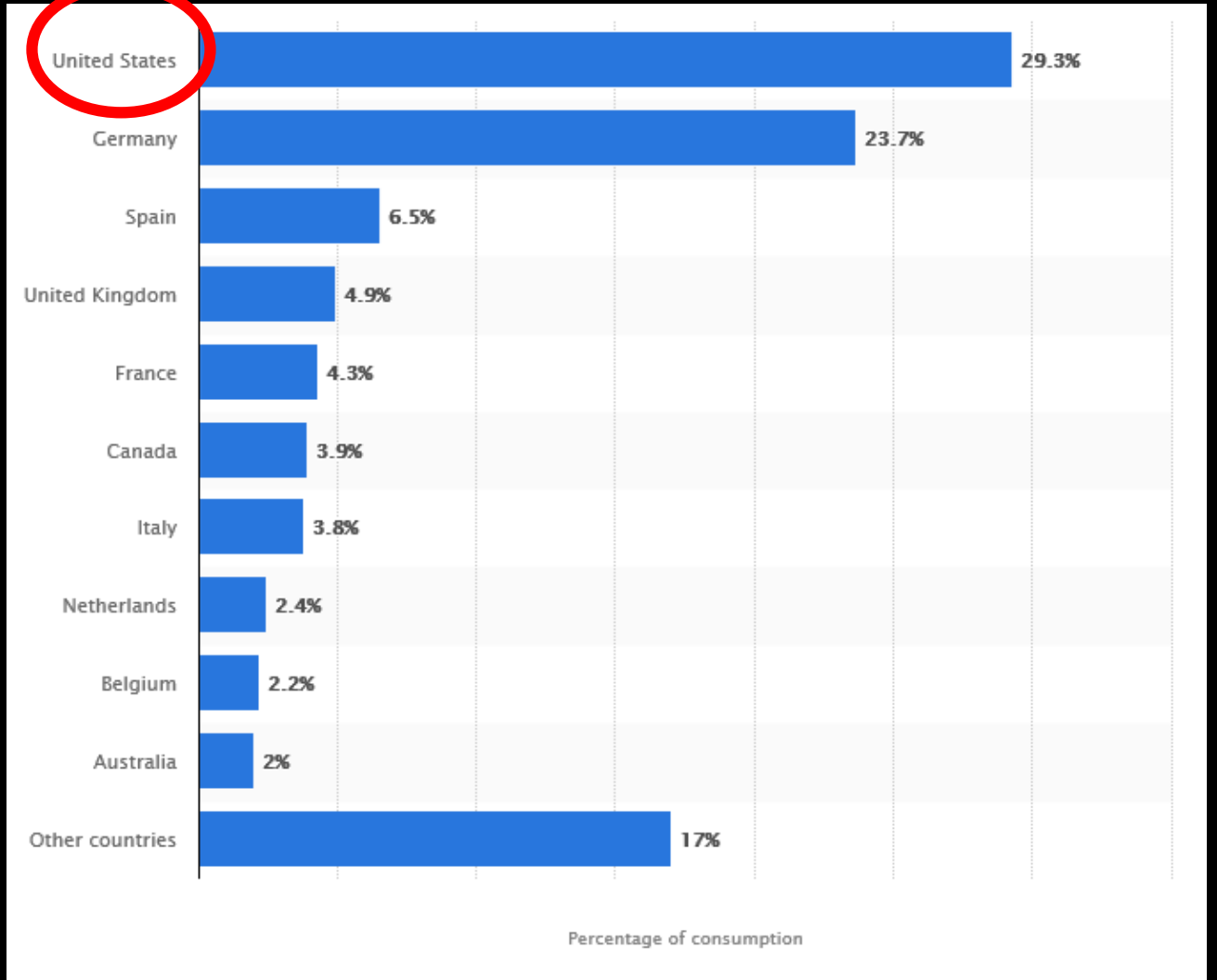
U.S. has 4.6 % of the world’s population

but, U.S. residents consume 80% of world's oxycodone

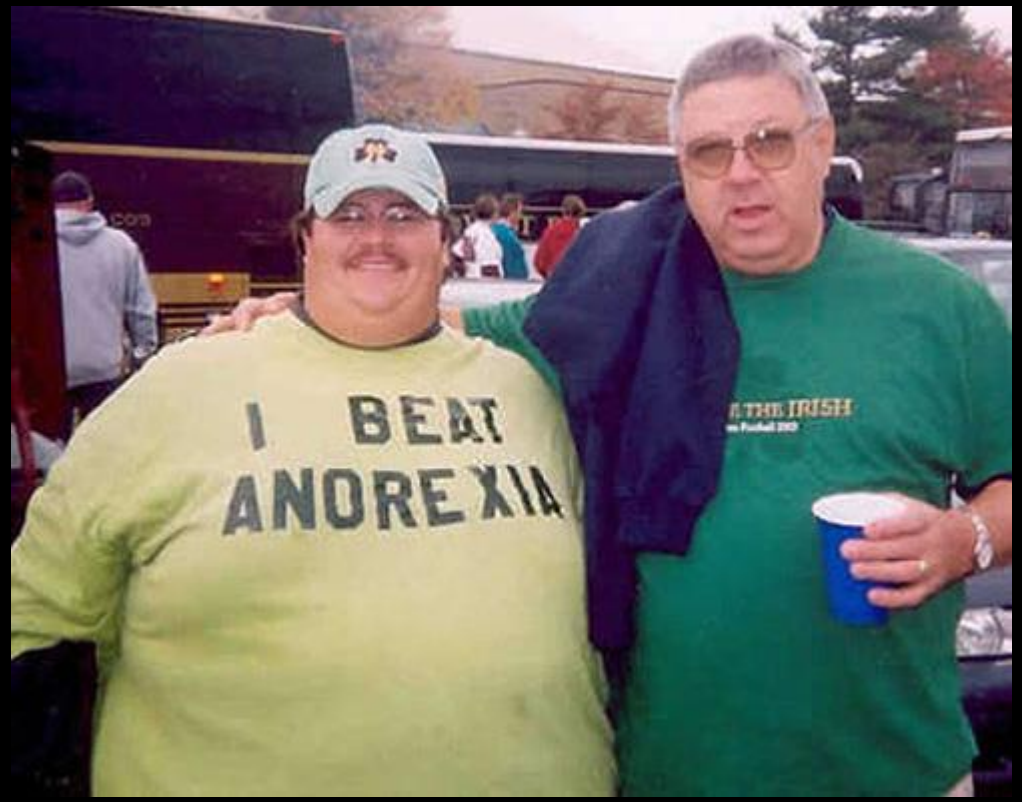
Consumption
And 99% of the world's hydrocodone (vicodin)!!



Consumption
Fentanyl by country
2016



Speaking of “Consumption”
The Other National Epidemic
Obesity



Pain

- *“If you are distressed by anything external, the pain is not due to the thing itself, but to your estimate of it; and this you have the power to revoke at any moment.”*

Marcus Aurelius, *Meditations*

150 AD

Beginnings

1990s

Opioid crisis begins due to regulations, policies, and practices which focused on opioid medications as the primary treatment for many types of pain

- Rosenblum A, Marsch LA, JosephH, et al. Opioids and the treatment of chronic pain: Controversies, current status, and future directions. Exp Clin Psychopharm. 2008;16:405-416

Pain, the 5th Vital Sign

- American Pain Society 1996 Guidelines
- Morone NE, Weiner DK. Pain as the fifth vital sign: Exposing the vital need for pain education. Clin Ther. 2013;35:1728-1732

Prevalence of Opioid Use Disorder in Patients with Chronic Pain

- Originally thought to be rare (<1%)
  - Compton WH. Research on the Use and Misuse of Fentanyl and Other Synthetic opioids: Testimony Before the House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations. Washington D.C.: U.S. House of Representatives; March 14. 2017

The real prevalence of OUD is thought to be in the range of 20-25%

NIDA August 2016- https://www.drugabuse.gov/publications/research-reports/misuse-prescription-drugs/

SAMHSA- National Survey on Drug Use and Health: Misuse of Prescription Pain Relievers 2015

Sources of Prescription Drugs

53% - Free from a friend or relative

21.2% - one doctor

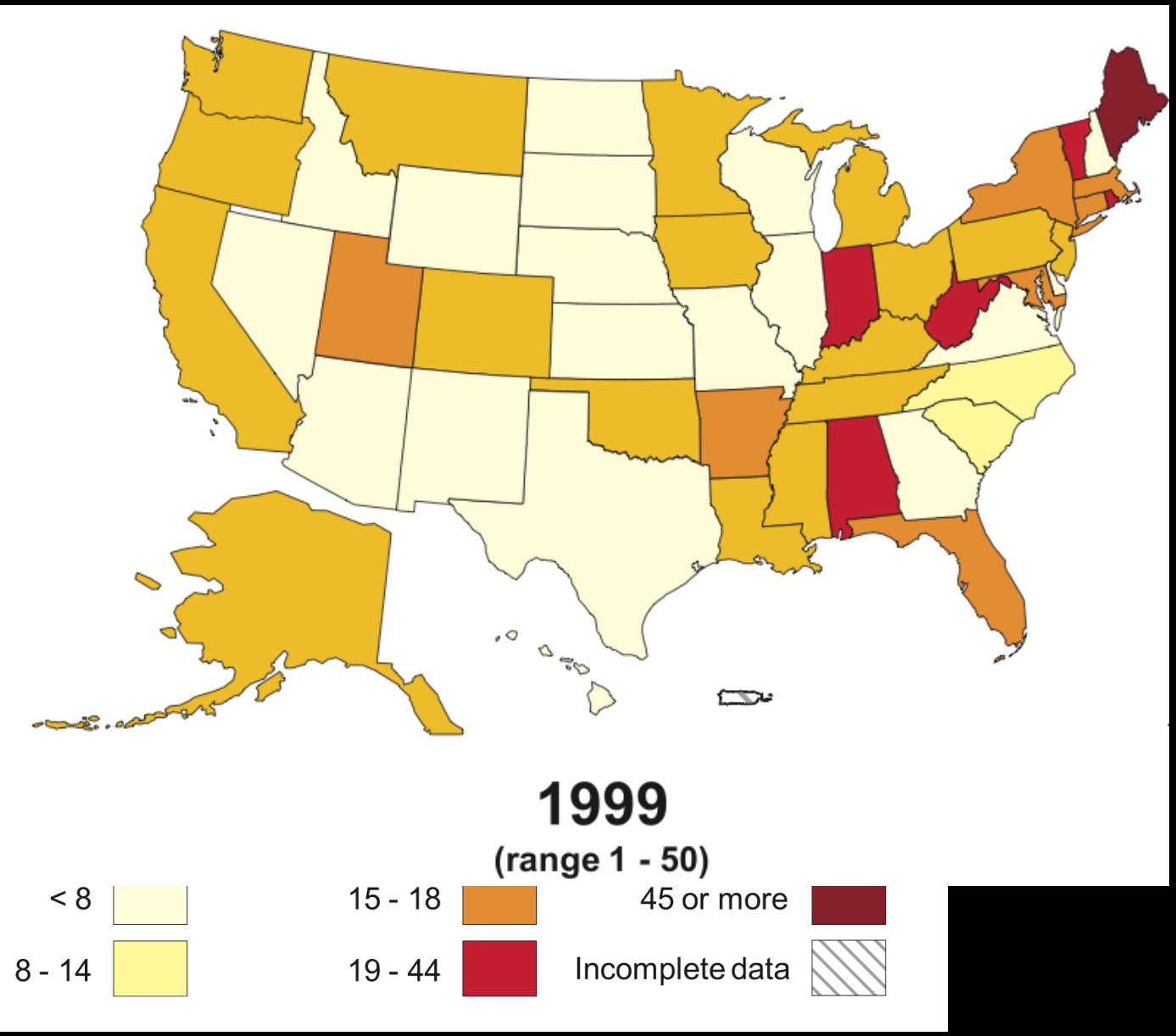
14.6% - purchasing from friend

4.3% - fake prescription/theft

4.3% - drug dealer

2.6% - multiple doctors

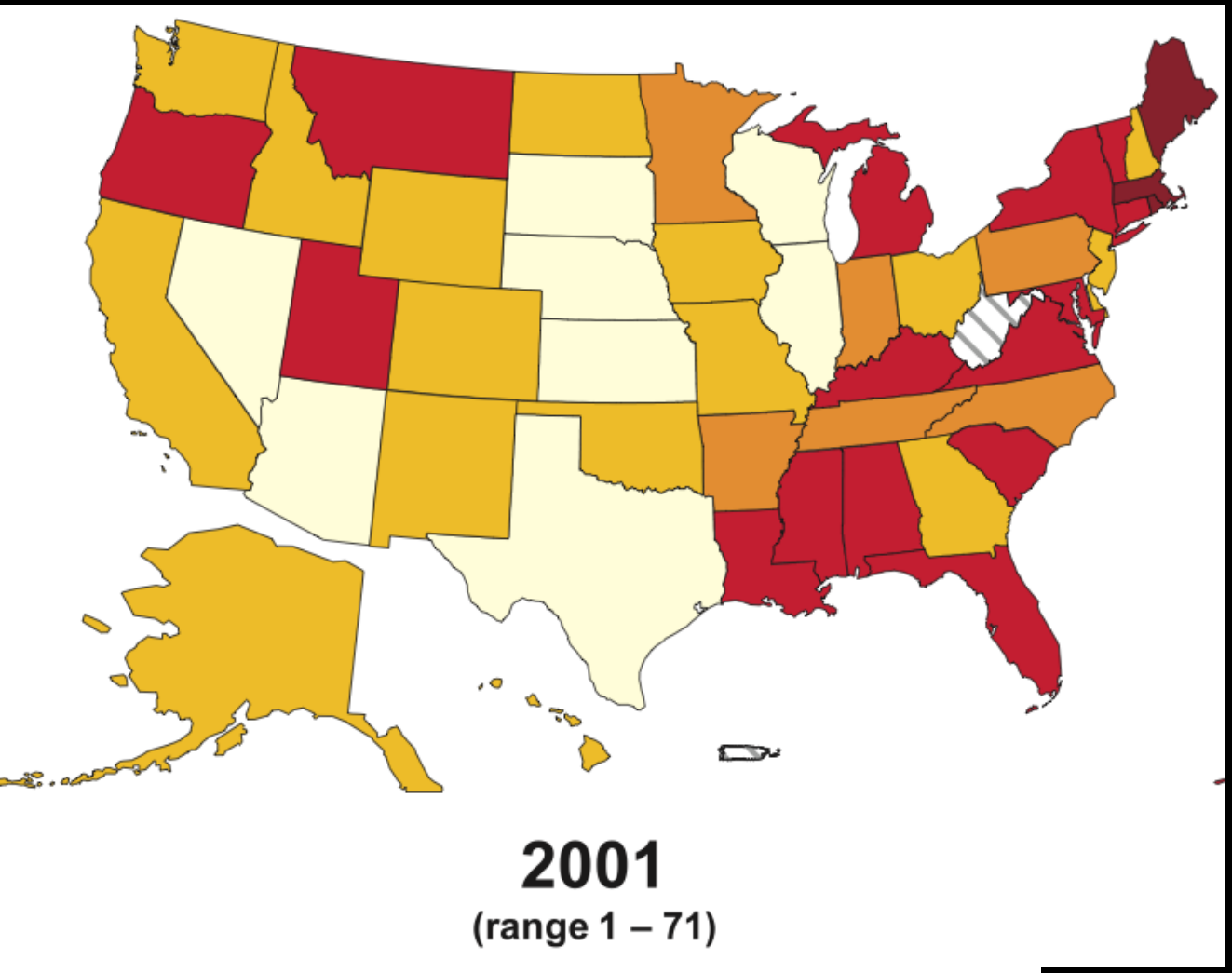
0.1% - online



Primary Non-Heroin Opiates/Synthetics Admission Rates by State per 100,000 Population Aged 12 and Over 1999-2009

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.

Primary Non-Heroin Opiates/Synthetics Admission Rates by State per 100,000 Population Aged 12 and Over 1999-2009



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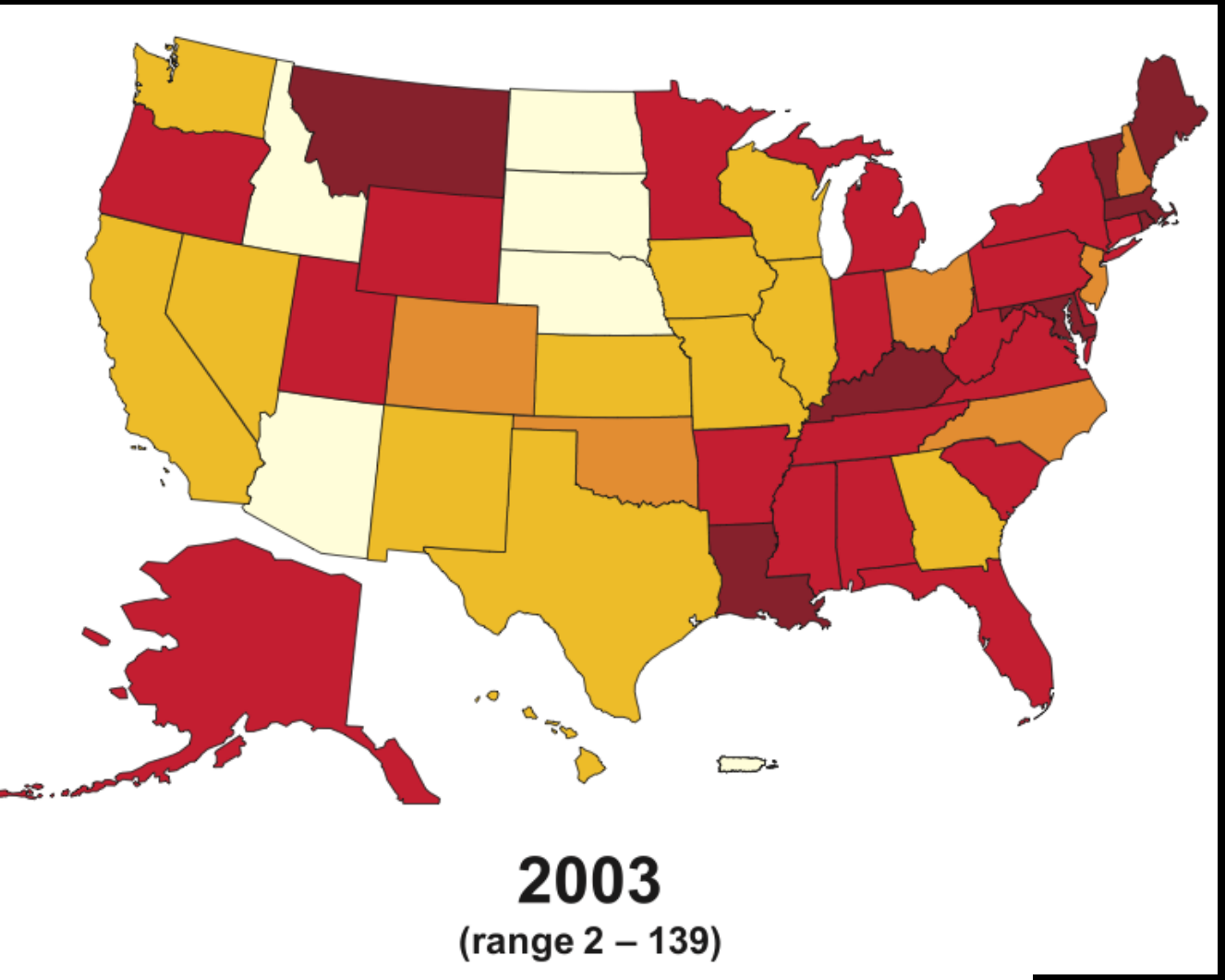

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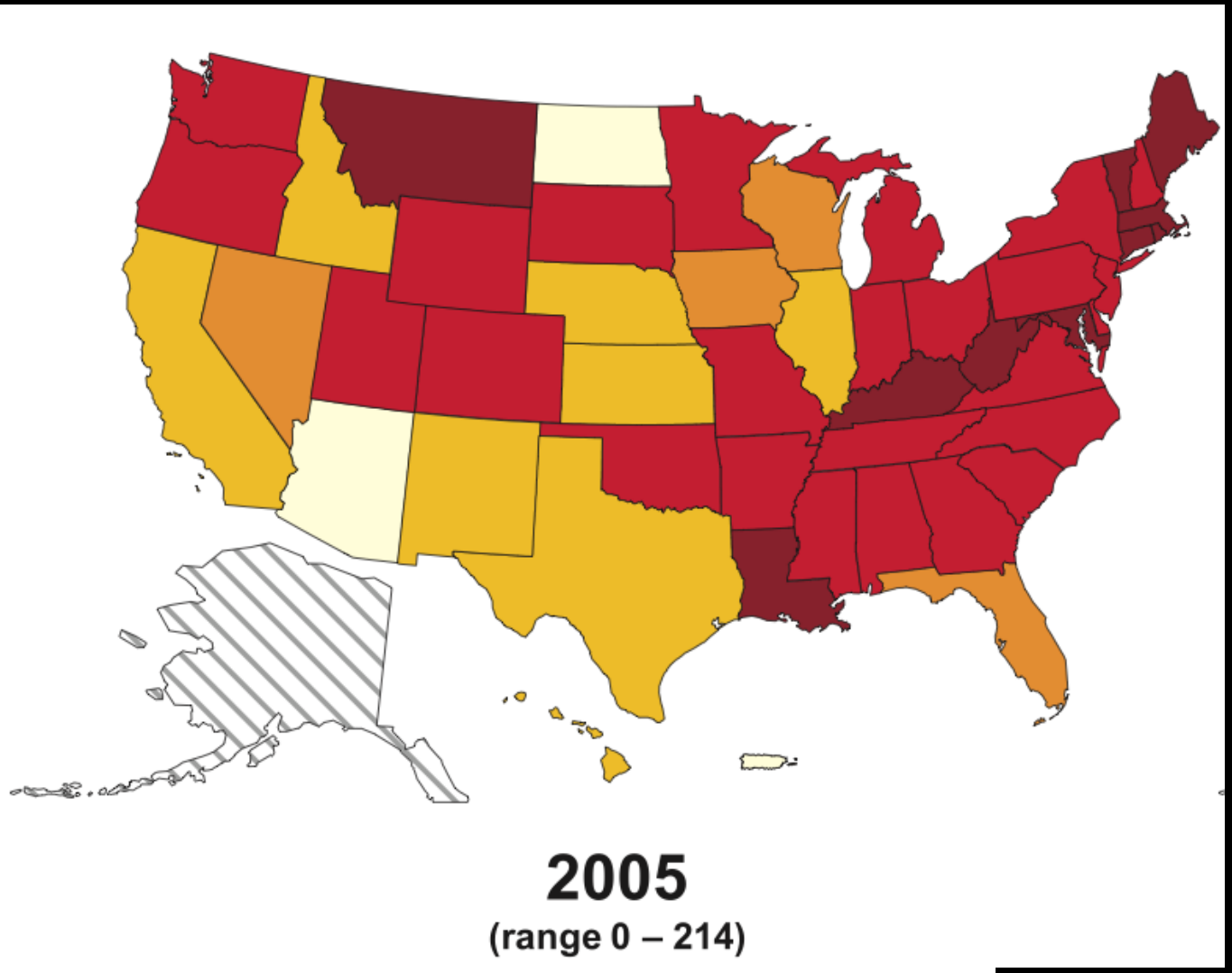

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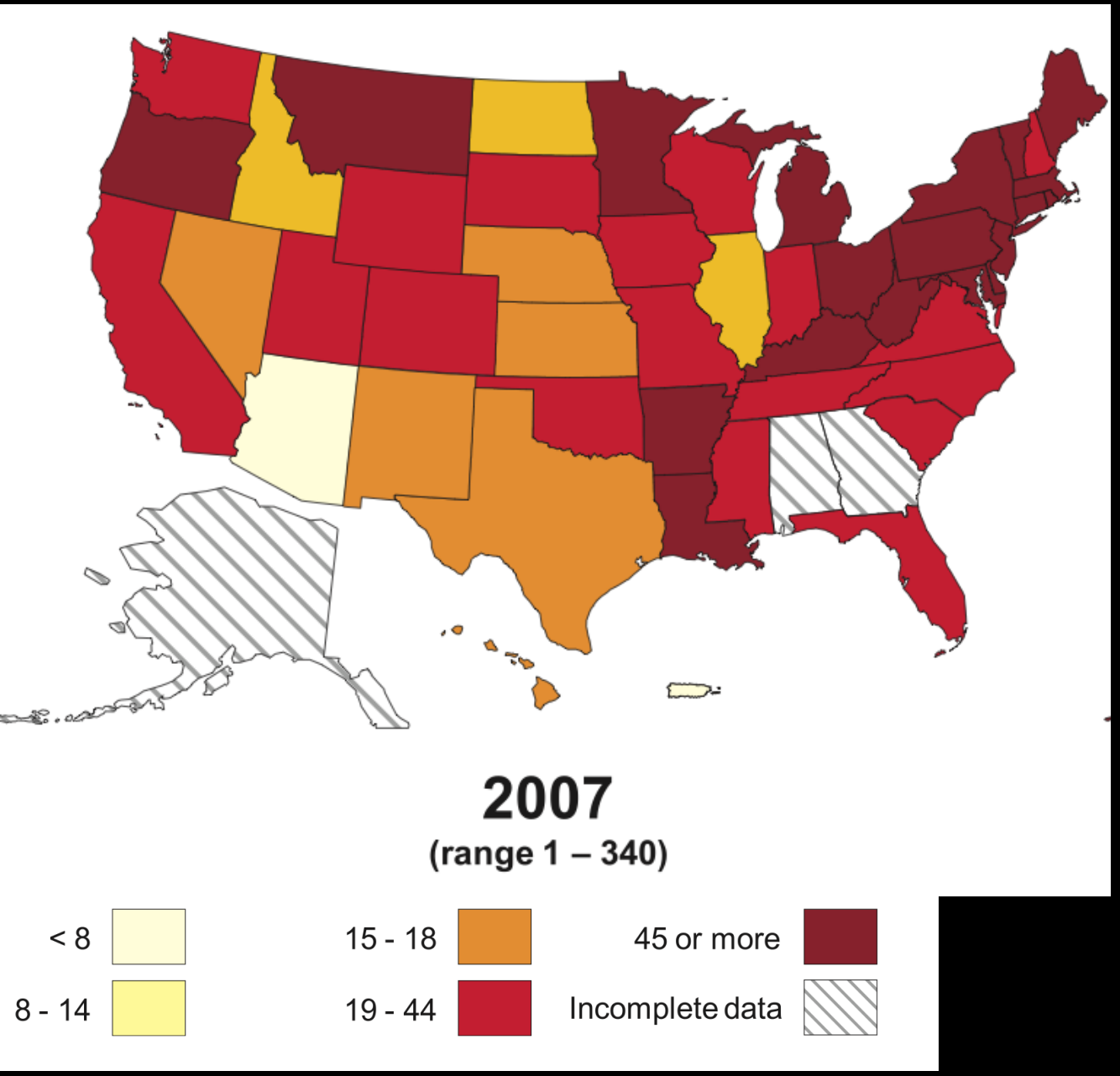

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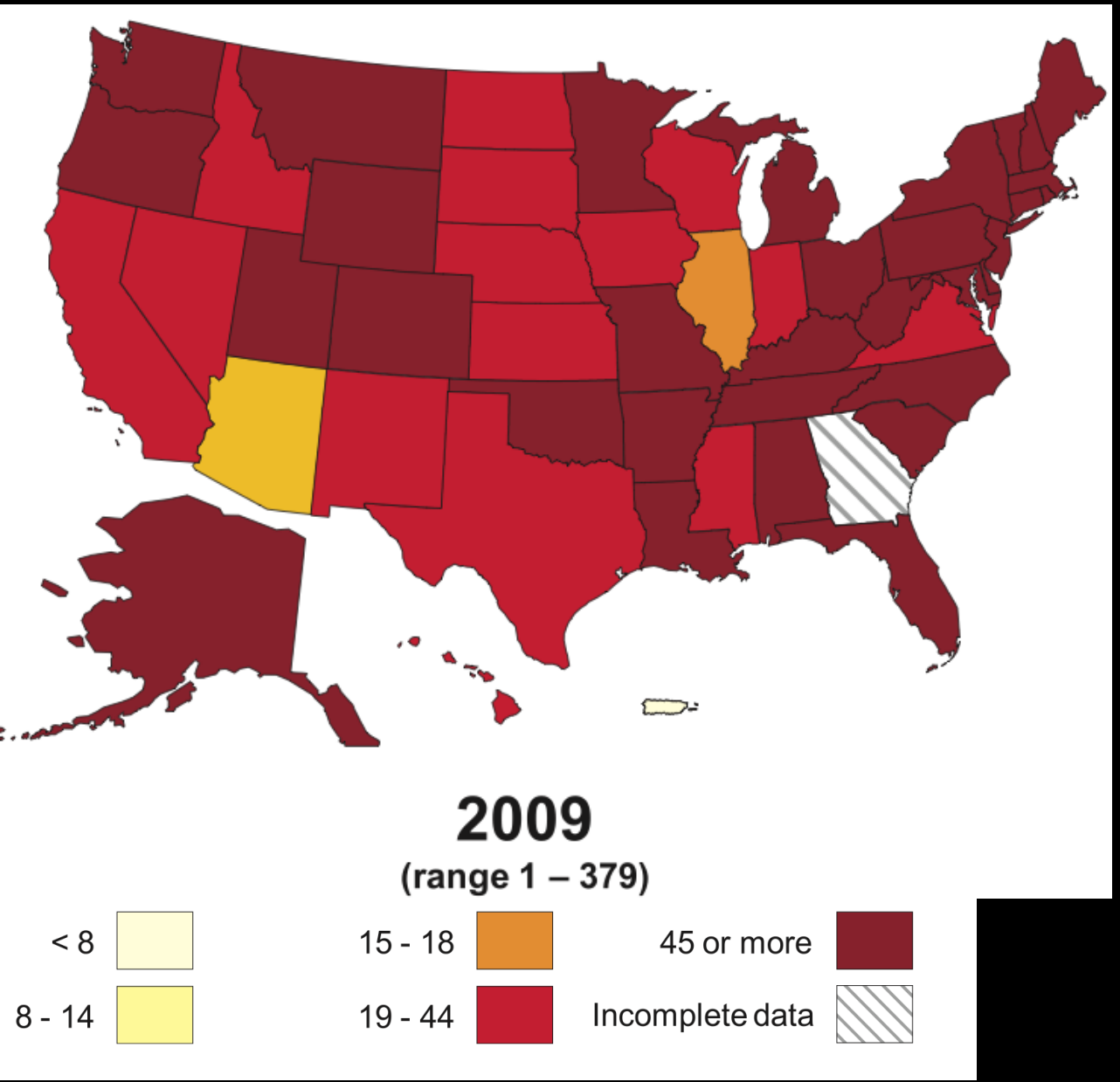


SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.

July 2016 - September 2017

- Emergency department visits for opioid overdoses increased 30% in 45 states

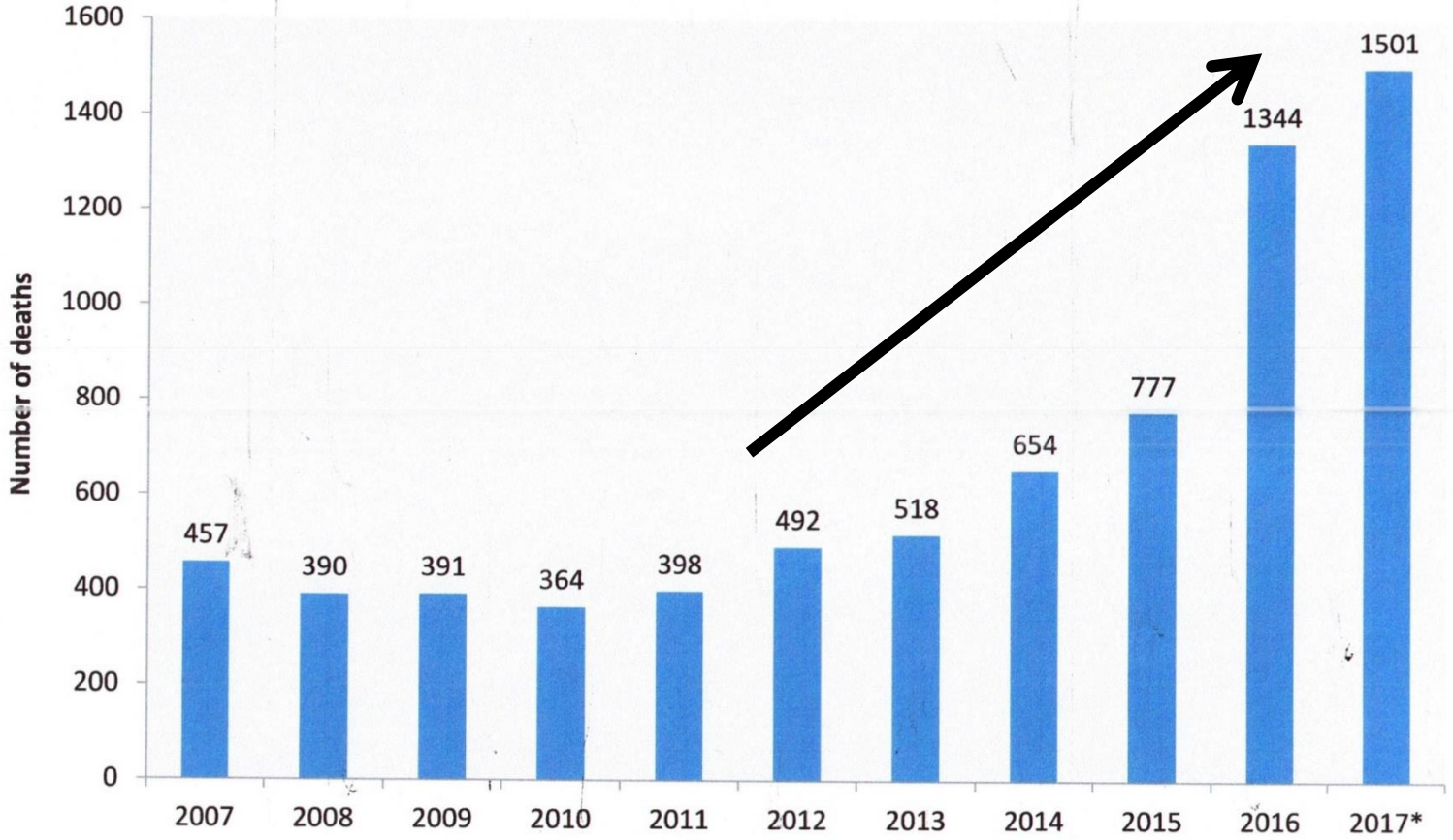
The Washington Post

Study: Despite decline in prescriptions, opioid deaths skyrocketing due to heroin and synthetic drugs

By Katie Zezima

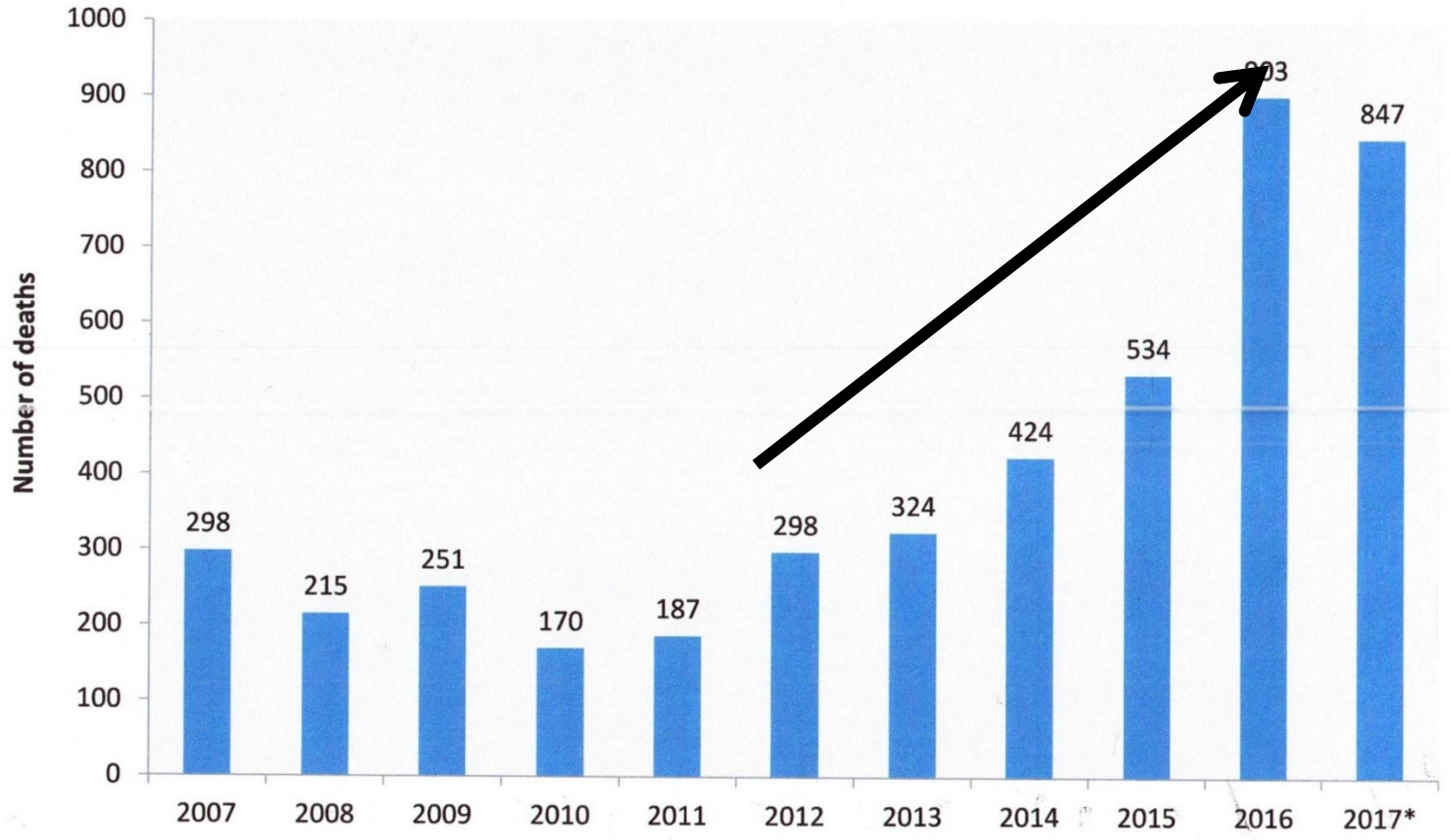
April 10, 2018

Figure 2. Number of Opioid-Related Deaths Occurring in Maryland from January through September of Each Year.*



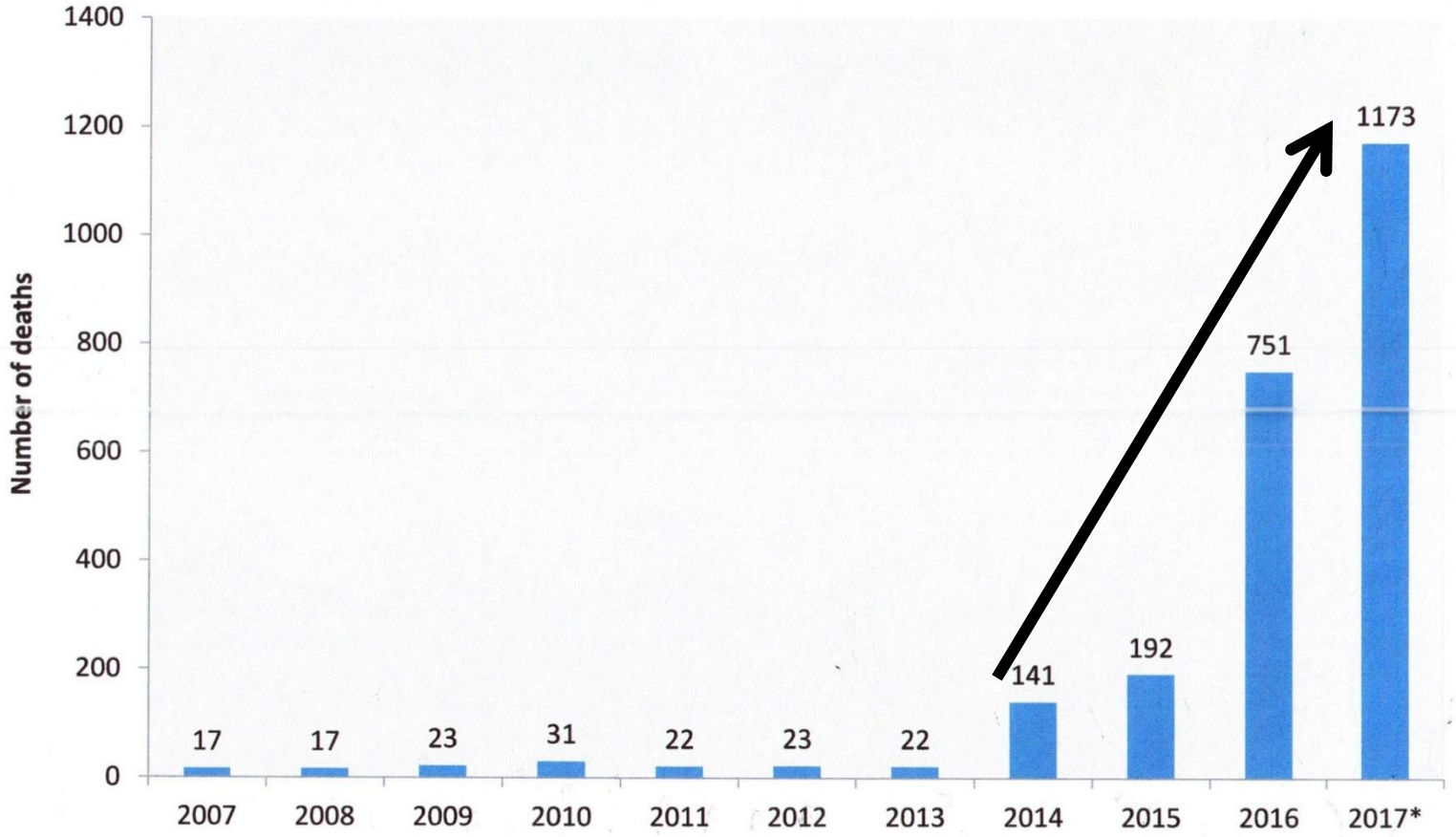
*2017 counts are preliminary.

Figure 3. Number of Heroin-Related Deaths Occurring in Maryland from January through September of Each Year.*



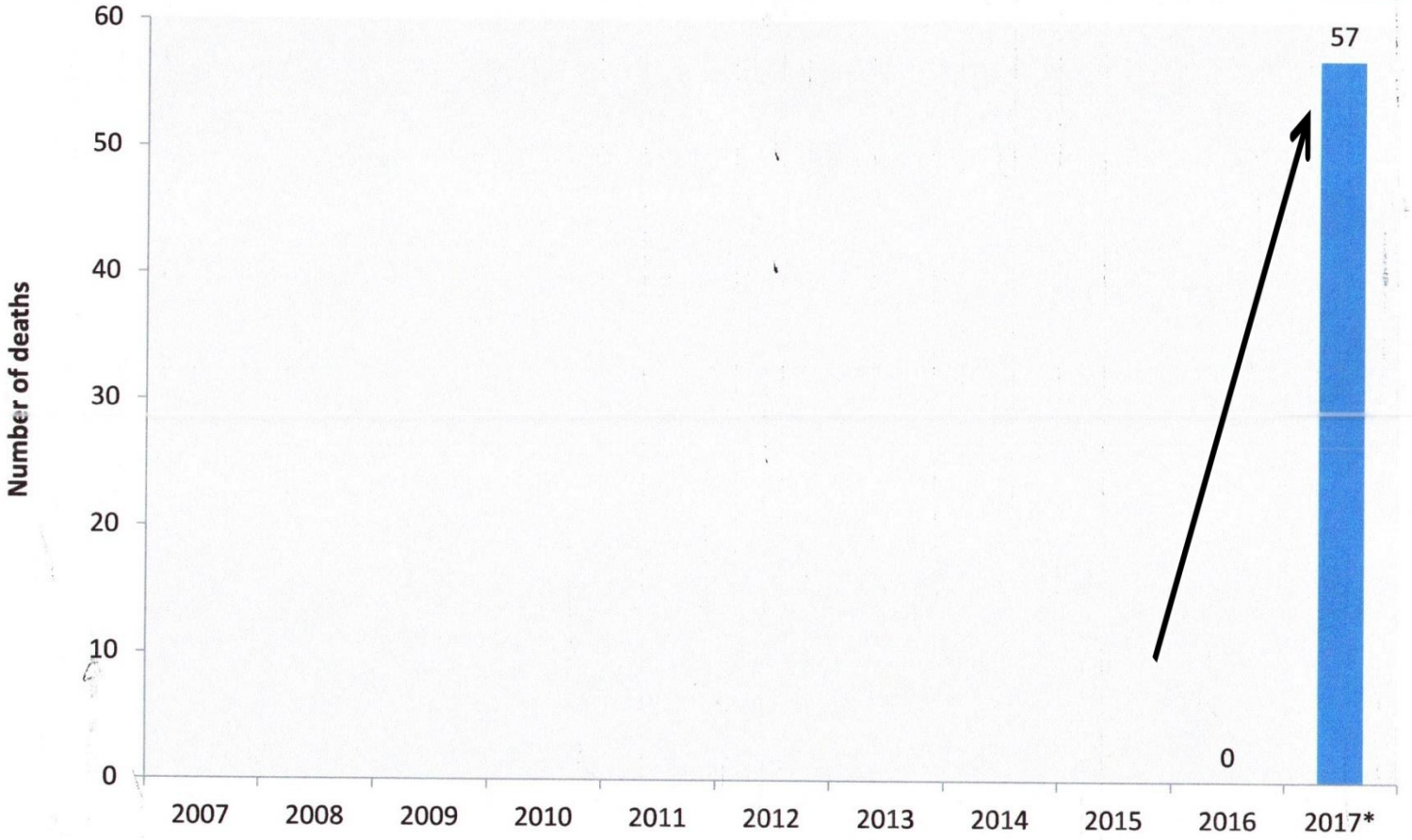
*2017 counts are preliminary.

Figure 4. Number of Fentanyl-Related Deaths Occurring in Maryland from January through September of Each Year.*



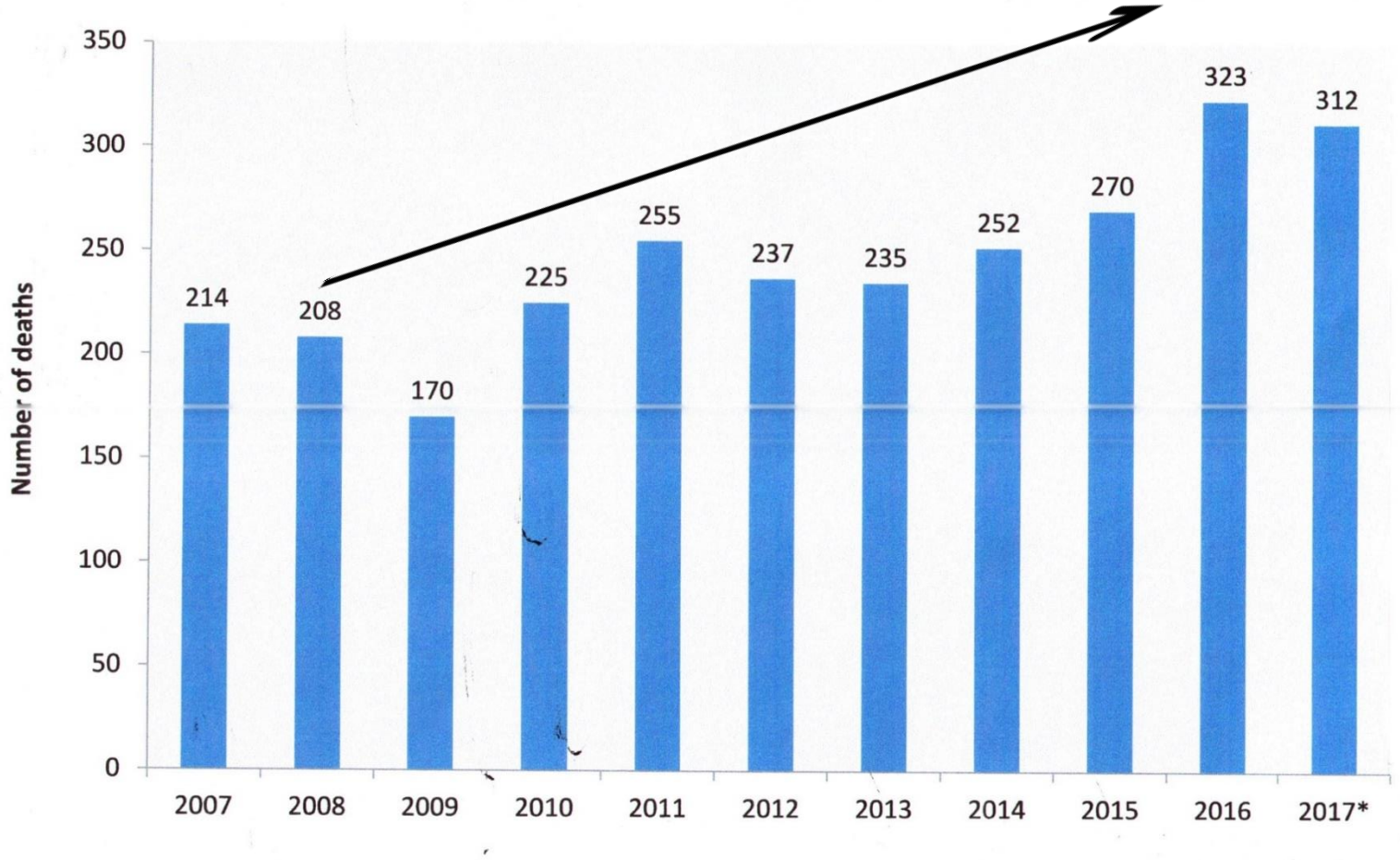
*2017 counts are preliminary.

Figure 5. Number of Carfentanil-Related Deaths Occurring in Maryland from January through September of Each Year.*



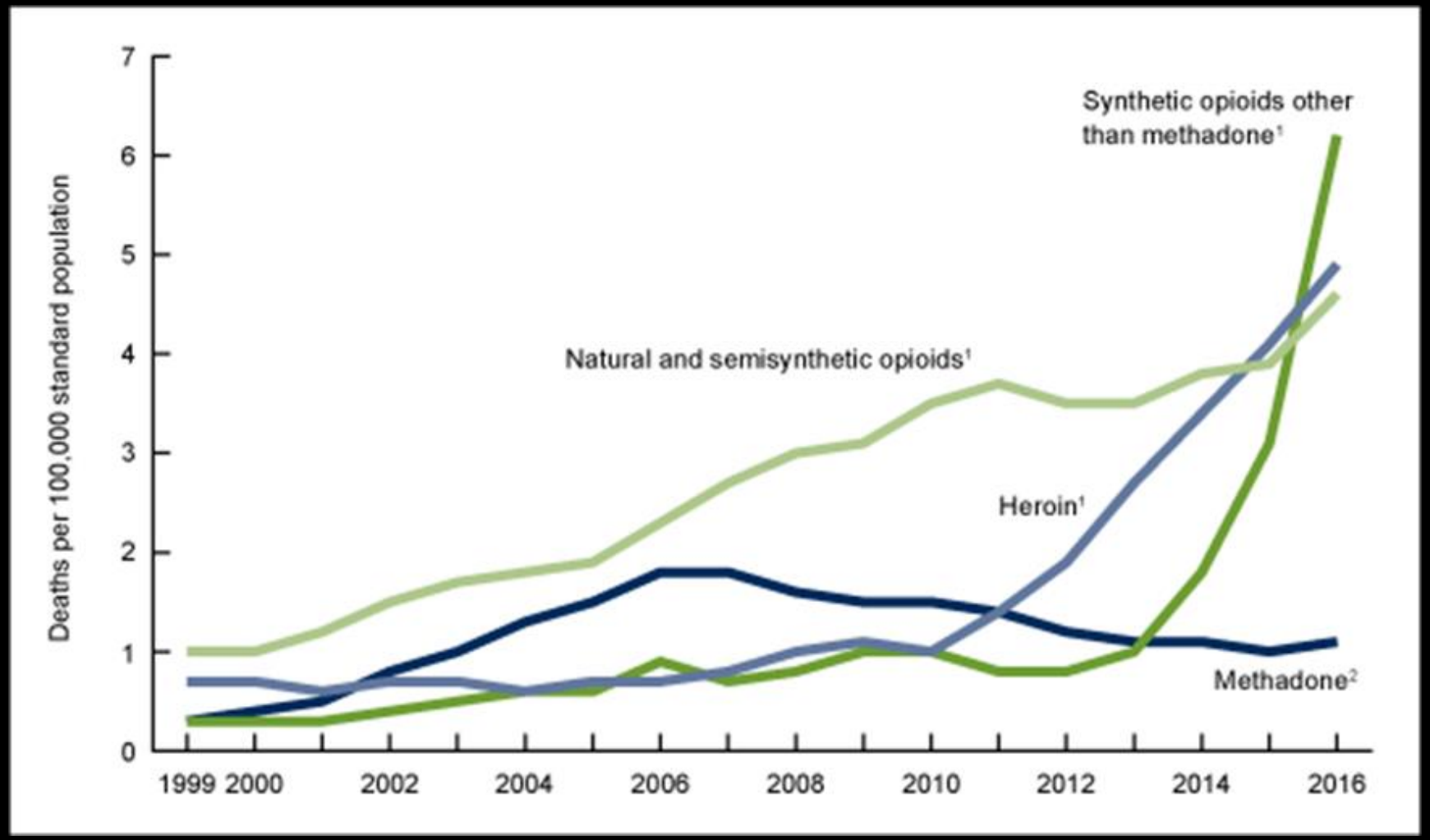
*2017 counts are preliminary.
** Screening for Carfentanil began in 2016, first detected in 2017

Figure 6. Number of Prescription Opioid-Related Deaths Occurring in Maryland from January through September of Each Year.*



*2017 counts are preliminary.

Age-adjusted drug overdose death rates, by opioid category: United States, 1999–2016



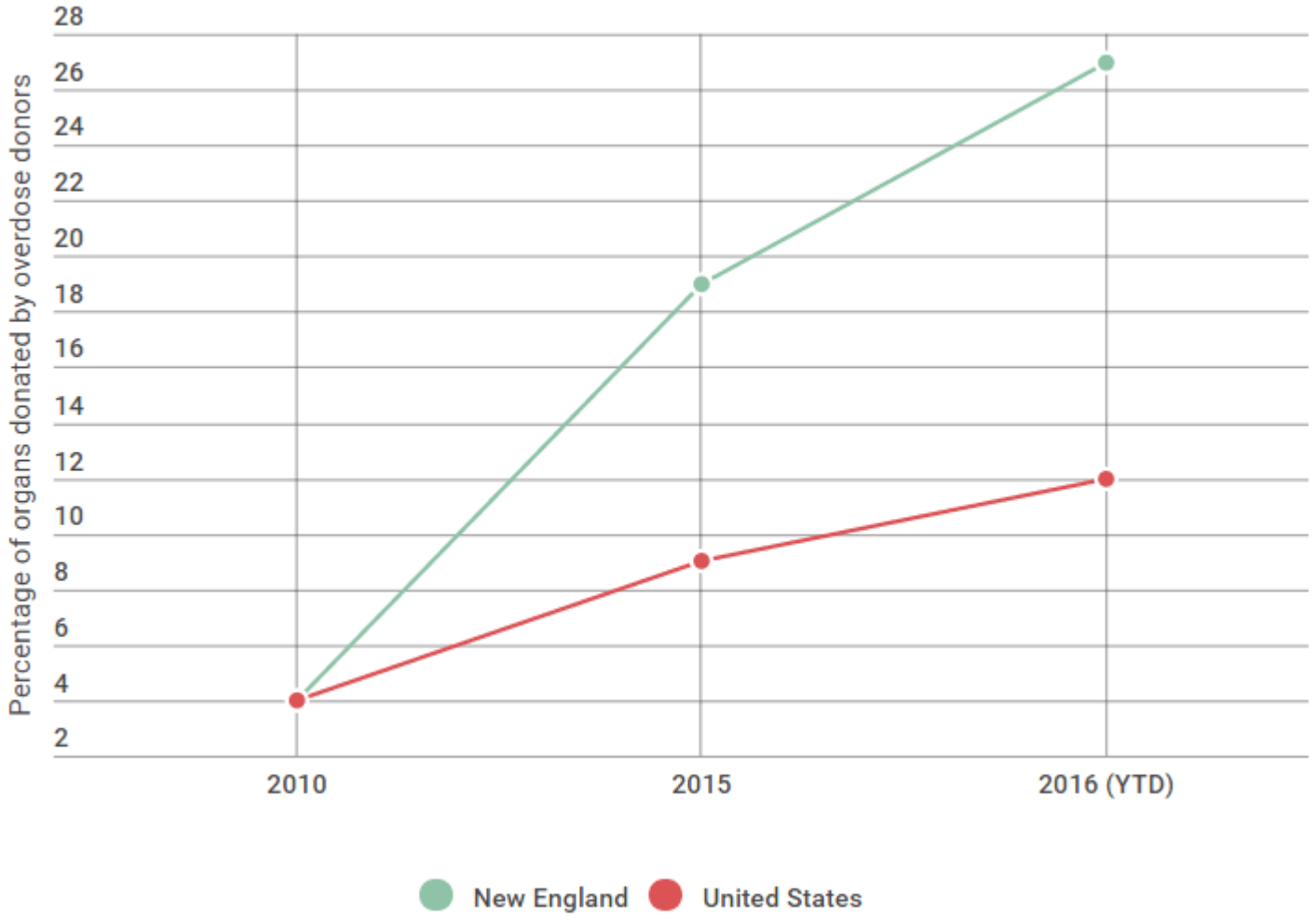
NCHS Data Brief No. 294, December 2017
National Center for Health Statistics

Opioid Epidemic Fallout

- Increases in Acute Hepatitis C Virus Infection Related to a Growing Opioid Epidemic and Associated Injection Drug Use, United States, 2004 to 2014
- Jon E. Zibbell PhD, Alice K. Asher PhD, Rajiv C. Patel MPH, Ben Kupronis MPH, Kashif Iqbal MPH, John W. Ward MD, and Deborah Holtzman PhD Author affiliations, information, and correspondence details

American Journal of Public Health (AJPH)
February 2018

Unintended “fallout” from Overdose Deaths

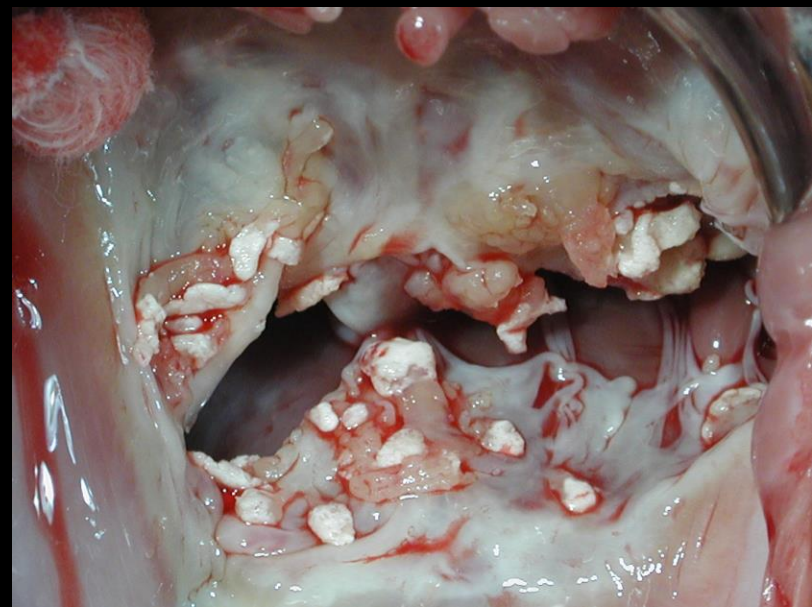


Organ Donation From Overdose Patients

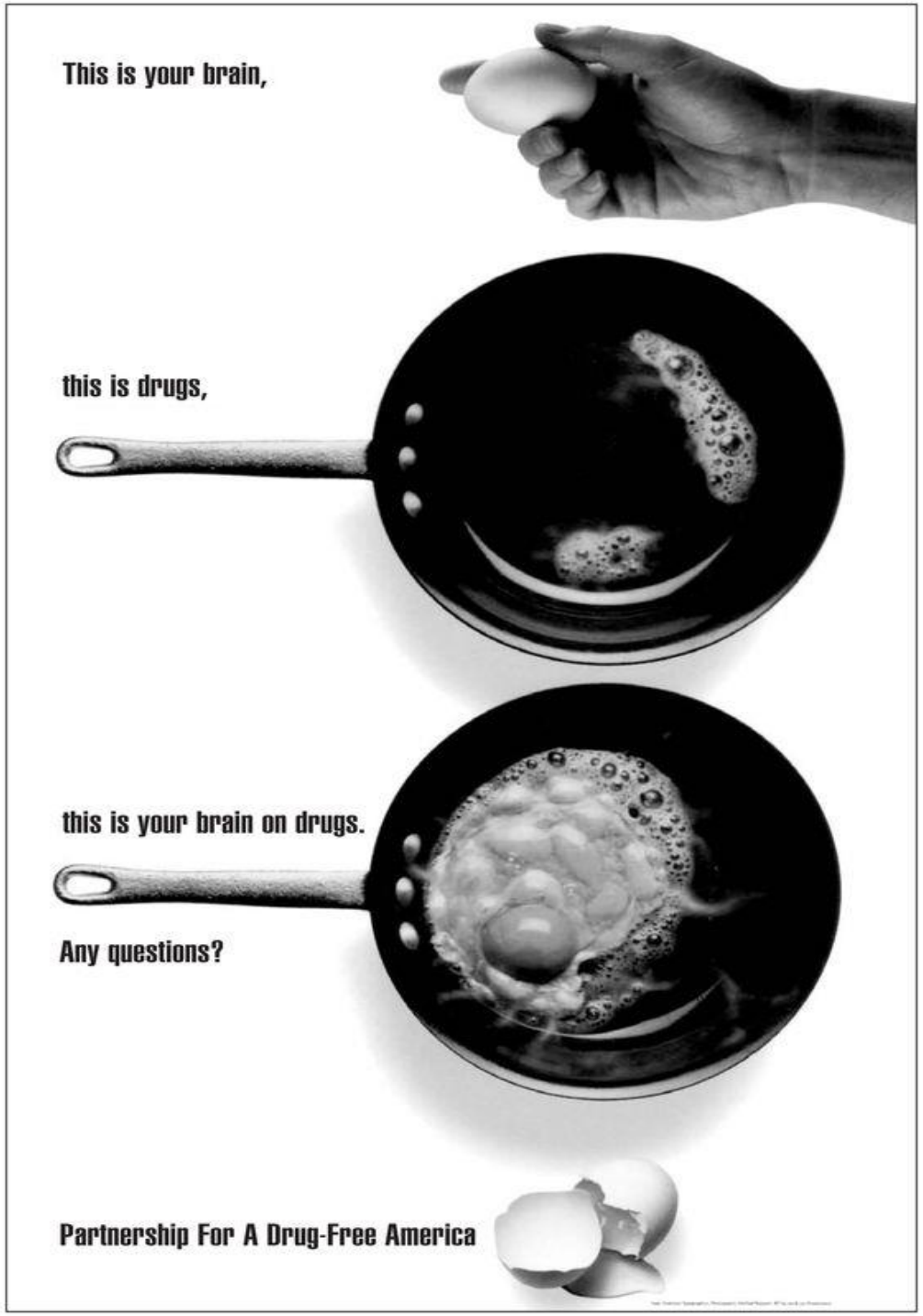
Unintended “fallout”- Endocarditis

2016 -Tufts University study found hospitalizations due to injectable drug-related endocarditis more than doubled between 2000 and 2013 to more than 8500 cases.

The study also found a rising proportion of those cases were found in young adults ages 15 to 34.



1980’s Drug Advertisement



Addiction

A Disease,
A Choice, or
Genetics?

So, What is Addiction??

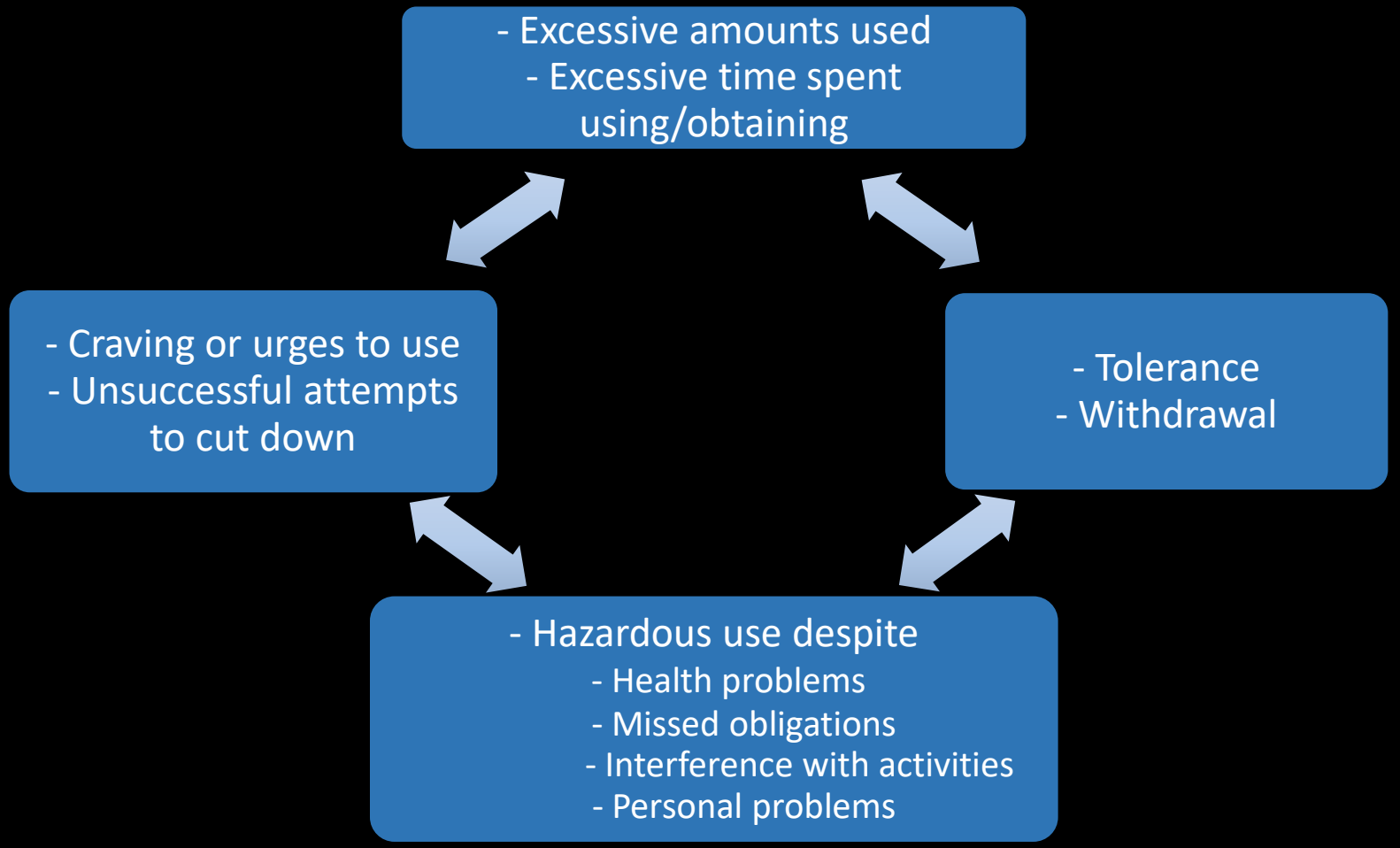
Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuits.

Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations.

i.e. pts pathologically pursue reward and/or relief by substance use and other behaviors.

ASAM

Symptoms of SUDs (Substance Use Disorders)



Like other chronic diseases, addiction often involves cycles of relapse and remission.

Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death

Compliance & Chronicity

Chronic Illness	Medication Compliance	Relapse within 1 year
Diabetes	<60%	30 – 50%
Hypertension	<40%	50 – 70%
Asthma	<40%	50 – 70%
Diet or Behavioral Changes	<30%	
Addiction	<70%	40 – 60%

McLellan AT, Lewis DC, O'Brien CP, Kleber HD;
Drug Dependence, A Chronic Medical Illness, JAMA, Oct 4, 2000

Predictive Factors of RELAPSE For Diabetes, HTN, Asthma, OUD

Low socioeconomic status

Low family support

Psychiatric co-morbidity

Lack of adherence to diet, medications, or behavioral change

McLellan AT, Lewis DC, O'Brien CP, Kleber HD;
Drug Dependence, A Chronic Medical Illness, JAMA, Oct 4, 2000

FACT

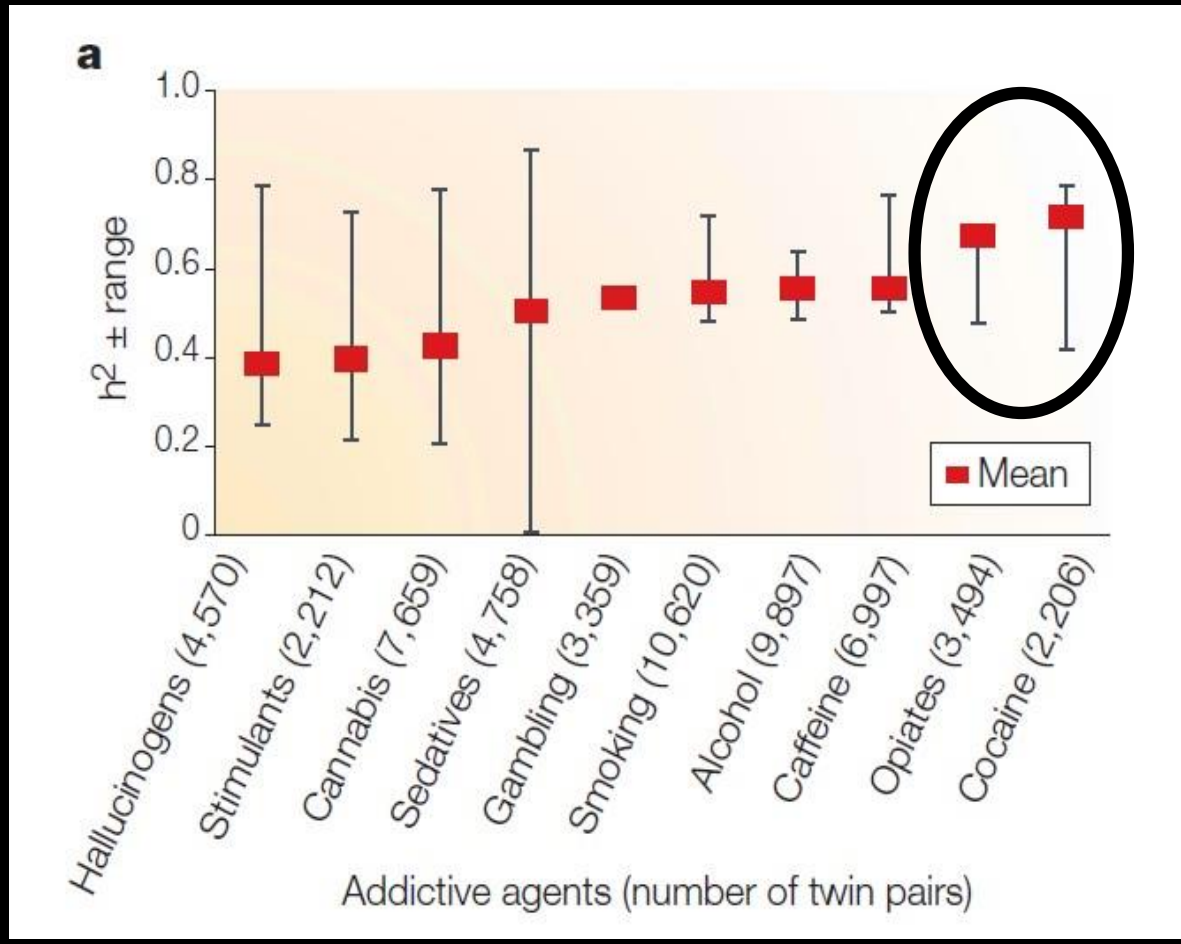
ADDICTION IS NOT A WEAKNESS. IT IS A DISEASE

Genetic and Environmental Contributions to Substance Use Disorder

Inheritance of Addictive Disorders

Heritabilities range from 40-70% for all substances

The highest numbers are for heroin & cocaine abuse



From Goldman, Oroszi & Ducci (2005)

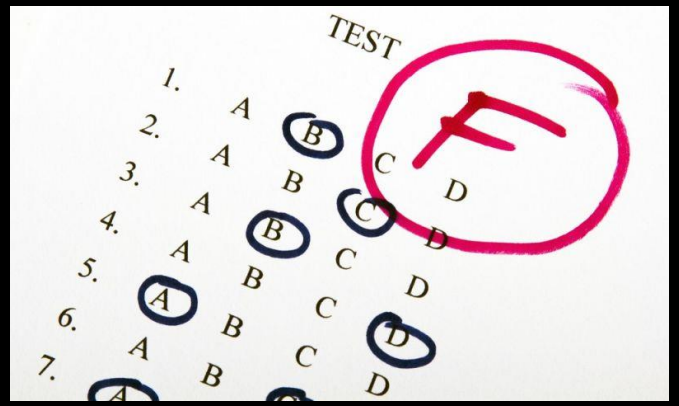
The Environment

"What is inherited is
the manner of reaction to a given environment"

- Dr. Elmer G. Heyne (1912 – 1997), Wheat Geneticist

Environmental Influences

- Chaotic home /abuse
- Parental use and attitudes
- Peer influences
- Community/ social attitudes
- Poor school achievement



Risk Factors

Biology/Genes
- Genetics
- Gender
- Mental Disorders

Environment
- Chaotic home /abuse
- Parental use and attitudes
- Peer influences
- Community attitudes
- Poor school achievement

DRUG
- Route of Administration
- Effect of drug
- Early use
- Cost

Addiction

"THE PERFECT STORM"

Gene–Environment Interaction

Factors that reduce the genetic risk of SUD

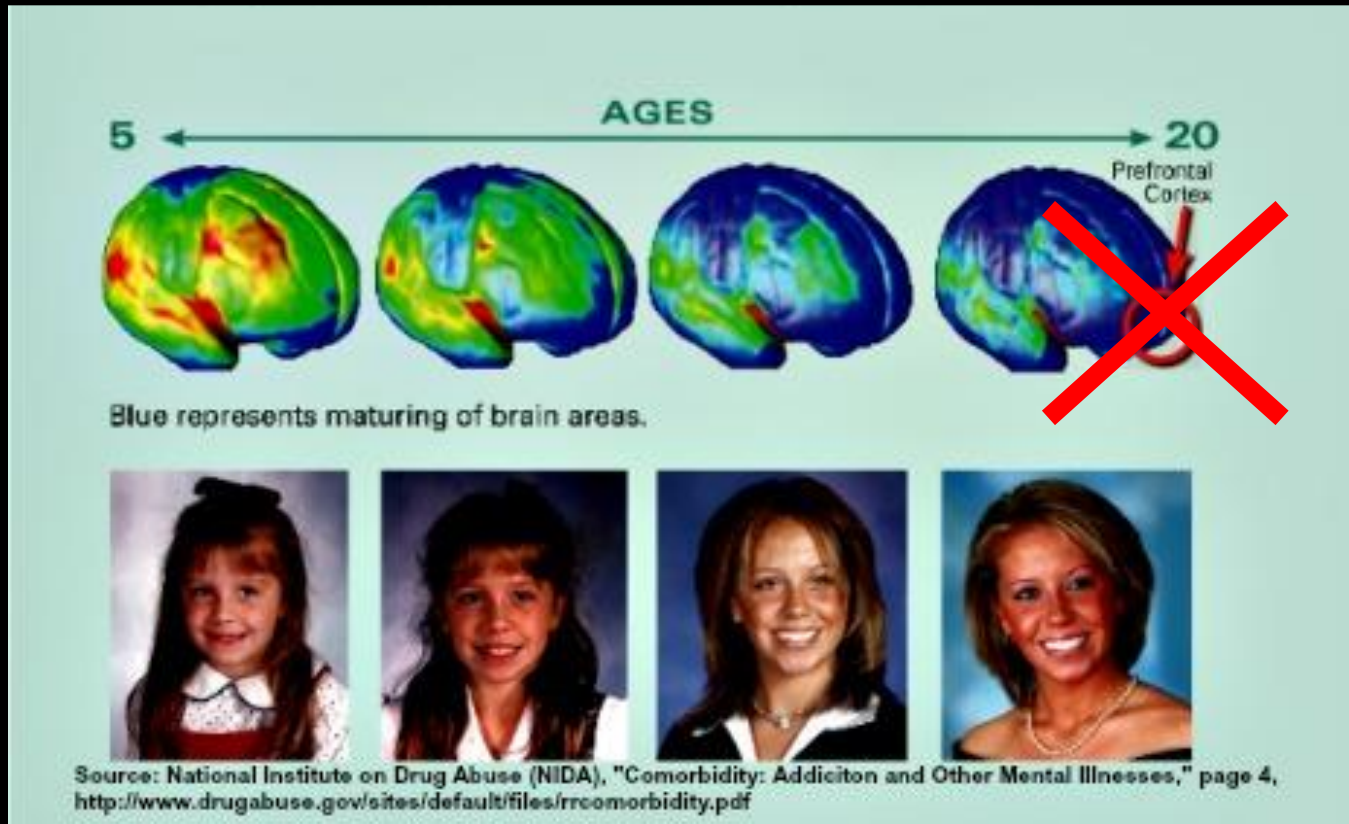
- Religiosity
- Rural settings, neighborhoods with less migration
- High parental monitoring
- Legislative restrictions
- Social restrictions

Addiction is a Developmental Disease

As we mature the pre-frontal cortex is the last area for the synaptic connections to coalesce.

This is the area most highly associated with the ability to format/understand consequences of our actions

Opiate Addiction interrupts these final synaptic connections



Neurobiology of Addiction

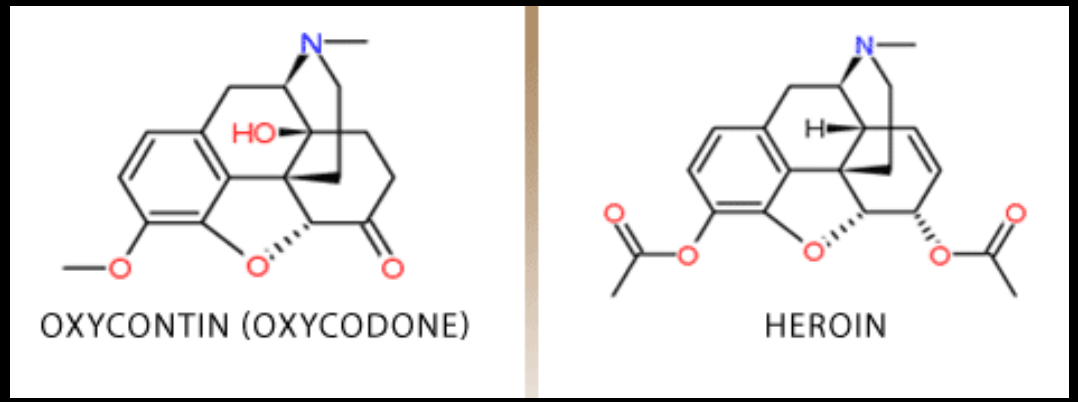
Pre-frontal Cortex

Thalamus

Ventral Tegmental Area (VTA)

Nucleus Accumbens

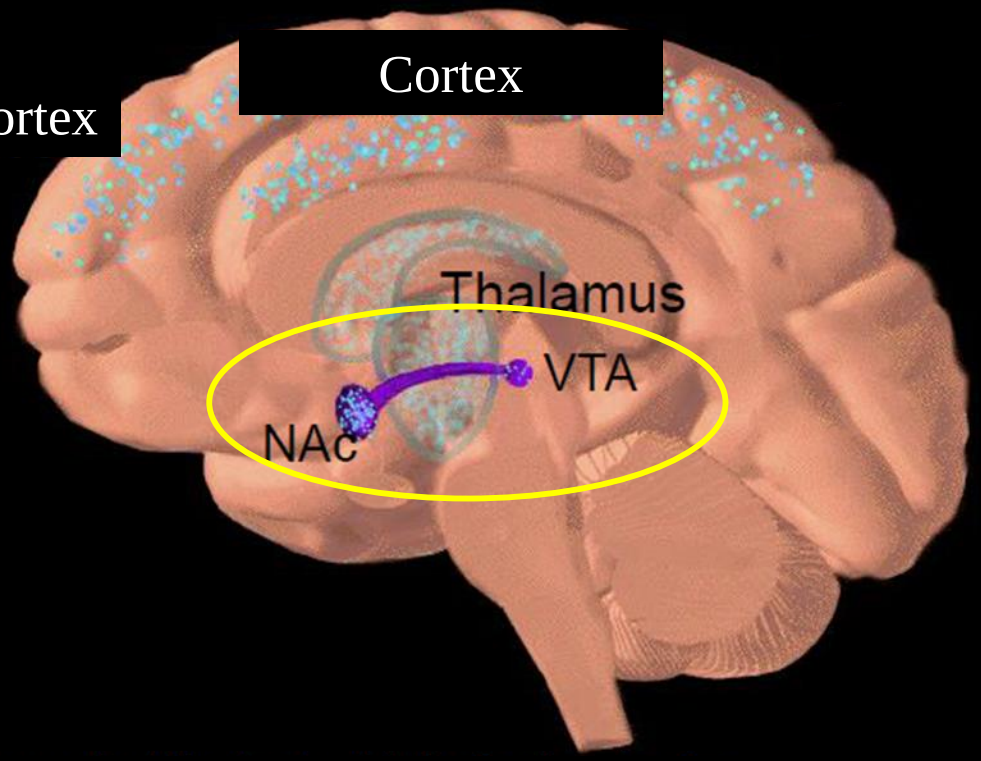
Neurobiology of Addiction
Prescription Opioids and Heroin



- Prescription opioids and heroin are chemically similar and work through the same mechanism of action.
  - Both Heroin and prescriptions work at the Mu (μ) opioid receptors
  - **Prescription opioids are similar to and act on the same brain systems affected by heroin**

www.drugabuse.gov accessed 10/17/16

Etiology of Opioid Abuse: Neurobiology of Addiction



Binding to the μ receptors in the thalamus produces - analgesia
Binding to the μ receptors in the cortex produces - impaired thinking
Binding to the μ receptors in the Ventral tegmental area (VTA)/ nucleus accumbens (Nac) produces- euphoria or “high”

The VTA-Nac is the major reward pathway that is responsible for the reinforcing effect leading to addiction

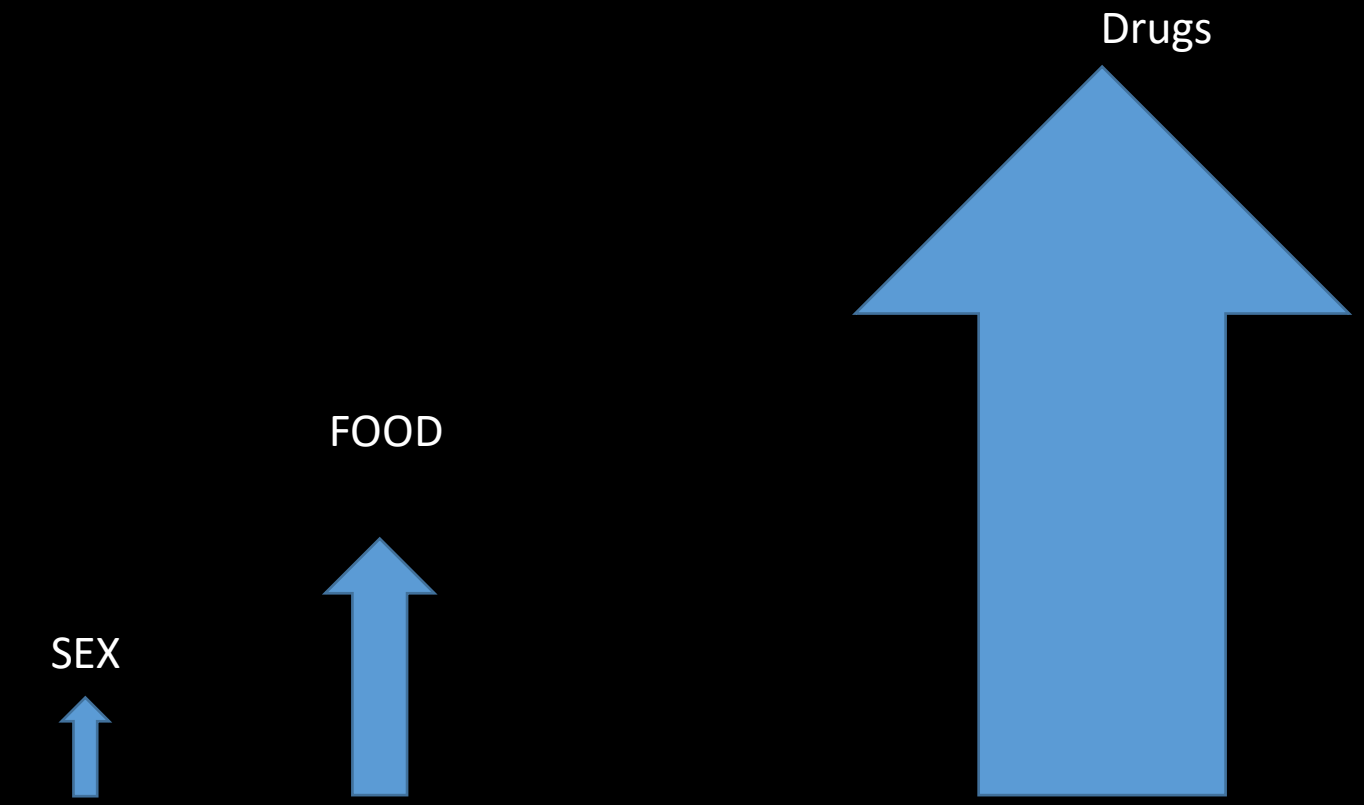
Neurobiology of Addiction

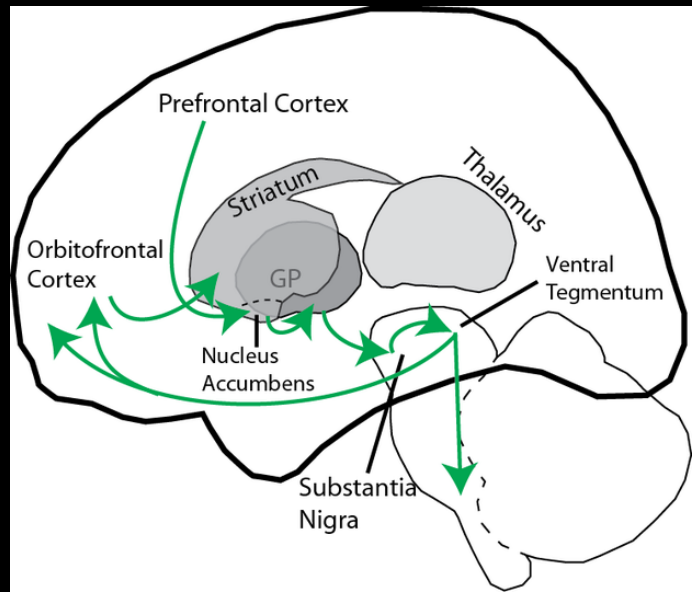
- The neurocircuitry disrupted in addiction, includes circuits that:
  - mediate reward and motivation
  - executive control
  - emotional processing

- This has allowed an understanding of the aberrant behaviors displayed by addicted individuals and has provided new targets for treatment.

Reward Pathways

- Reward pathways are very old from an evolutionary point of view.
  - They evolved to mediate an individual's response to natural rewards, such as food, sex, and social interaction.
- Drugs of abuse activate these reward pathways with a force and persistence that is not seen under ordinary conditions





Reward Pathways

- Repeated drug exposure causes adaptations in the brain's reward pathways.
  - During active drug use or shortly after stopping drug intake
    - The ability of natural rewards to activate the reward pathways is diminished
    - The individual experiences depressed motivation and mood.
    - Taking more drugs is the quickest, easiest way for an individual to feel "normal" again.

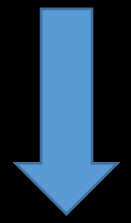
Reward Pathways

- Drug use causes long-lasting memories related to the drug experience.

  Even after prolonged periods of abstinence (months/years), stressful events or exposure to drug-associated cues can trigger intense cravings and relapse, in part by activating the brain's reward pathways.

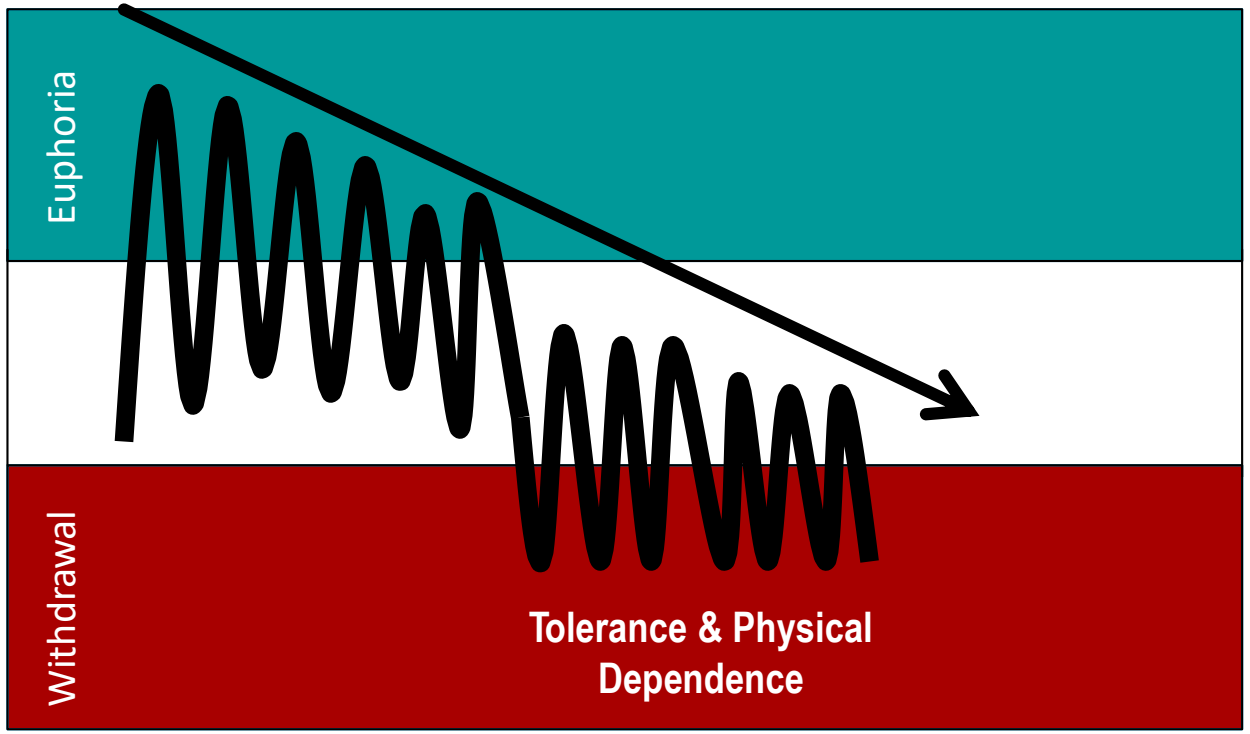
Disruption of Executive Control and Emotional Processing

- Where do we see this most commonly?
  - Disruptions of an individual's ability to prioritize behaviors that result in long-term benefit over those that provide short-term rewards.
    - Increased difficulty exerting control over these behaviors even when associated with catastrophic consequences

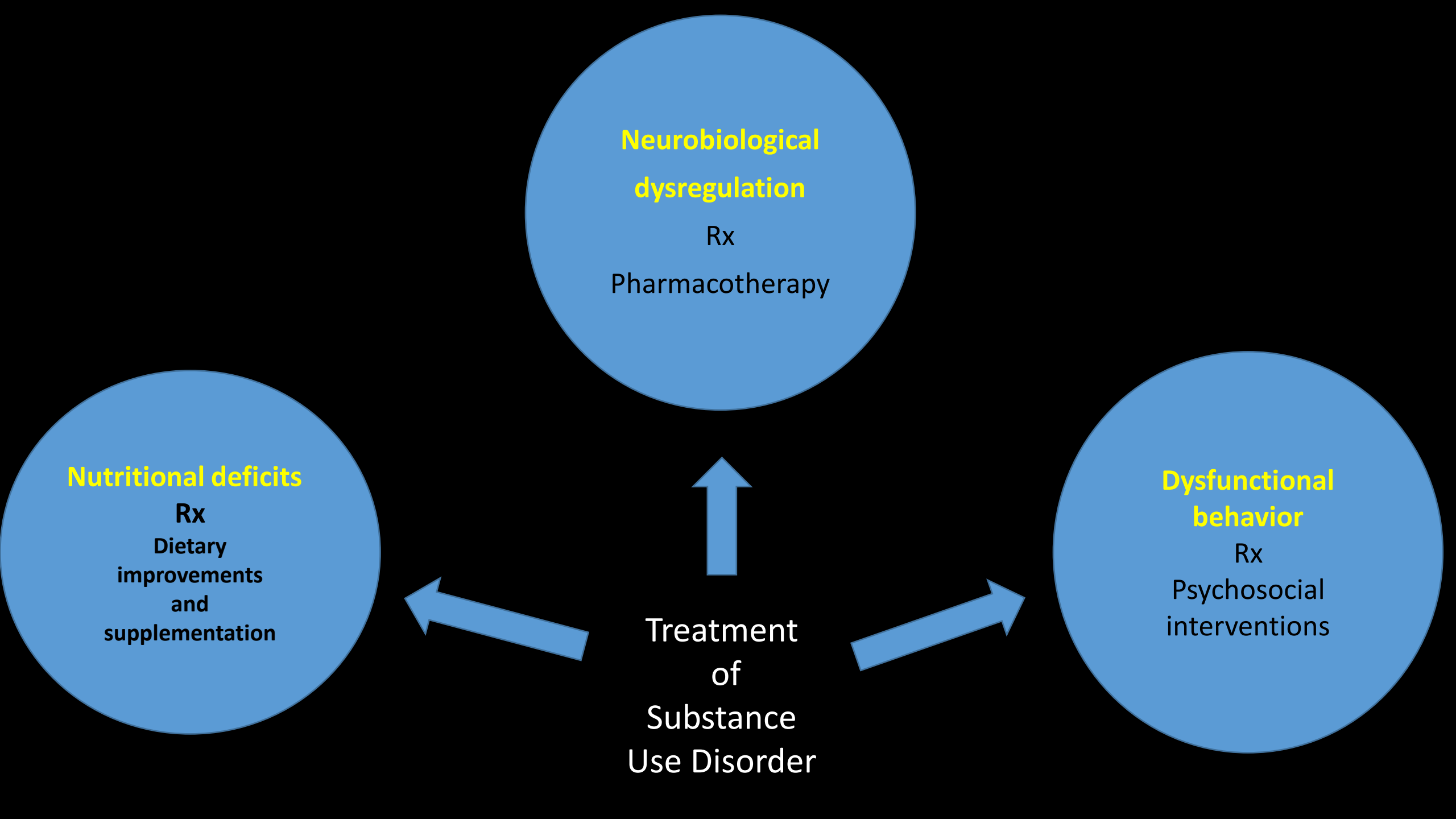


- The individual pathologically pursues reward and/or relief by substance use and other behaviors.

Natural History of Opioid Use Disorder



Treatment of OUD


Neurobiological dysregulation
Rx
Pharmacotherapy
Nutritional deficits
Rx
Dietary improvements and supplementation
Dysfunctional behavior
Rx
Psychosocial interventions
Treatment of Substance Use Disorder

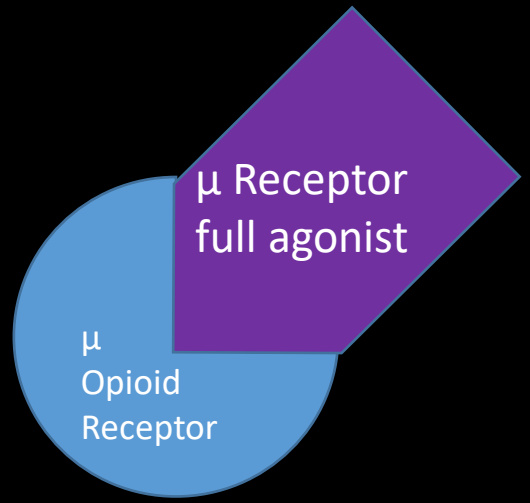
Substances for which Pharmacotherapy is Available

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

Substances for which Pharmacotherapy is **not** available

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

Brief Pharmacology Overview:
full opioid agonists

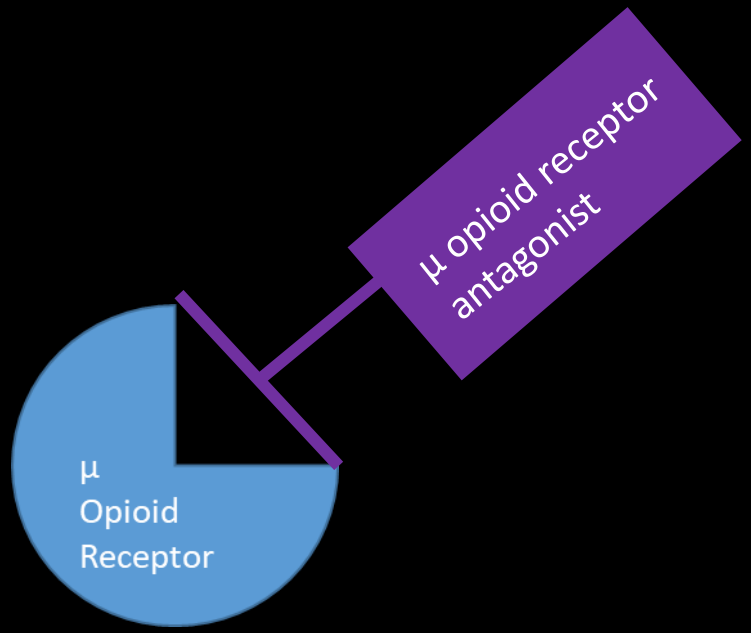


Full agonist (ex: heroin, oxycodone) binding activates the μ opioid receptor

Highly reinforcing

Most abused opioid type

Brief Pharmacology Overview:
μ opiate receptor antagonist



Antagonist (ex: naloxone, naltrexone) binds to μ opioid receptor without activating

- Is not reinforcing
- Blocks access by opioids

Treatment Options for Opioid Use Disorder

- Self-help groups
- Detoxification +/- Medication Assisted Treatment (MAT)
- Outpatient treatment +/- MAT
- Residential treatment +/- MAT

Traditional 12 Step Drug Treatment

Accepting powerlessness
Disease identification
Surrender to a Higher Power
Commitment to AA/NA
Commitment to abstinence
Sober social support
Intention to avoid high-risk situations

What is MAT?

- MAT (Medicated Assisted Treatment)
  - FDA-APPROVED MEDICATION + BEHAVIORAL THERAPY

    - FDA-approved medications include:
      - buprenorphine, methadone, naltrexone

    - Behavioral therapies include:
      - counseling
      - family therapy
      - peer support programs

Rationale for MAT (Medication Assisted Treatment)

- Reduce/Eliminate opioid use
- Stabilize neuronal circuitry with μ occupation/blockade
- Protect against opioid-related overdoses
- Prevent withdrawal and craving
- Reduce criminal behavior
- Extinguish compulsive behavior
- Prevent spread of HIV and Hepatitis C

MAT Regulation

OTP (Opioid Treatment Program)

- Any treatment program for opioid addiction certified by SAMHSA (Substance Abuse and Mental Health Services Administration)
- OTP's provide counseling and MAT for individuals who are opioid-dependent

OTPs are regulated by SAMHSA and FDA, DEA, State Methadone Authority

MAT for OUD

- Each MAT includes medication and recovery work with intensive psychosocial and behavioral therapy

- Patients benefit from MAT with a minimum >1-2 years of sobriety before attempting to taper, with frequent dosing reassessments

Medication Assisted Treatment

There is no evidence for a pre-determined length of treatment!!!

Longer Retention = Better Outcomes!!

To Taper or to Maintain, That is the Question…

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 12-24 months, but longer durations = better outcomes
- Continually reassess and individualize

Tapering

- **Typically patients with continuous sobriety for 1-2+ years have the best outcomes**
  - Treatment <6 months = worse outcomes

- **There is no evidence to support stopping MAT**
  - 95% of methadone patients do not achieve abstinence when attempting to taper off (Nosyk, et al. 2013)
  - Over 90% of buprenorphine patients relapse within 8 weeks of taper completion
    - (Weiss, et al. 2011)

- **Successful patients are commonly maintained on**
  - Methadone or Buprenorphine for > 2 years
  - Vivitrol (? time)

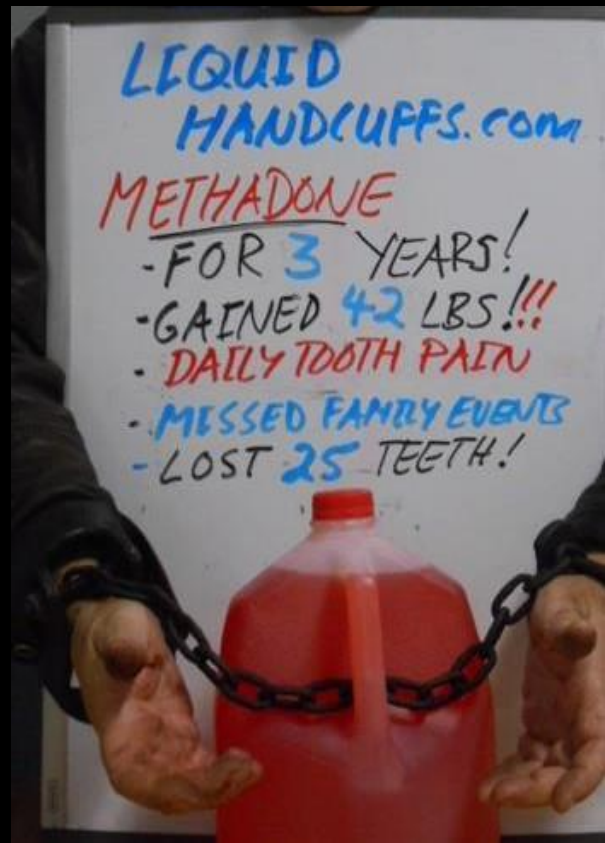
MAT: Medication Assisted Treatment for Opioid Use Disorder (OUD)

Medications used in MAT

- Methadone (schedule II)
- Buprenorphine (schedule III)
- Naltrexone (not controlled)

Methadone Myths-”Urban Legends”

- “Liquid handcuffs”
- “All you’re do’in is substituting one drug for another”
- Prevents true recovery
- Should not be used long term
- Rots your teeth
- Damages bones-”Gets into your bone marrow!”
- Turns people into “zombies”



Methadone Maintenance Therapy

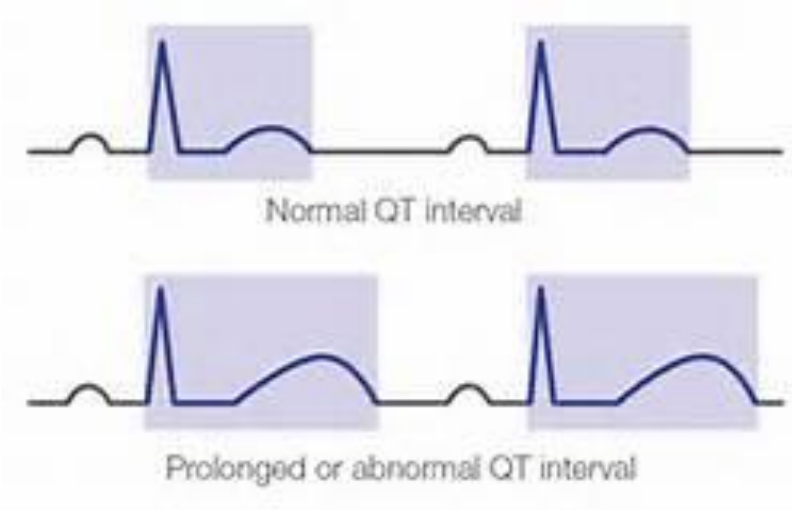
- Full agonist with long elimination half-life
- Once daily dispensing in a federally-qualified methadone clinic
- Reduces euphoria of subsequent opioid use
- Specific Eligibility Criteria (> 1 year of documented OUD)
- Typical effective dose range - 60-120mg/day*
  - *HIGHER FOR PREGNANT PATIENTS
- Integrated with individual and group counseling

Methadone Pros

- Increased retention time in treatment
- Decreased opioid use
- Highly structured treatment
- Gold standard for OUD in Pregnancy
- Some analgesic benefit
- Cheap
- Reduced criminality
- Improved health (reduced utilization of health care)
- Improved functioning
- Public health gains (HIV, Hepatitis,etc.)
- Overall health care cost savings

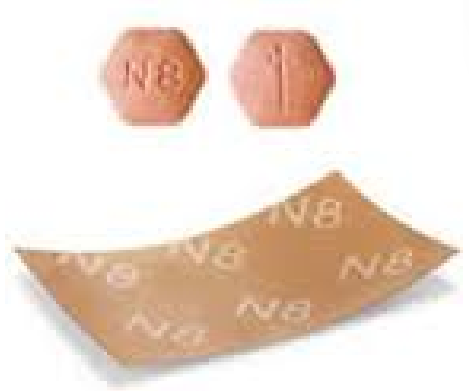
Methadone Cons

- Daily dosing
- QTc prolongation
- High overdose risk
- Many drug-drug interactions
  - BZD
  - HIV meds
  - Seizure meds



Buprenorphine

(subutex™) /naloxone (Suboxone™) (4:1 combination)



- Partial opioid agonist
- Long half-life
- Typically once daily, but BID or TID is safe
- 16mg usually the highest effective dose
- Paired with antagonist (naloxone) to prevent (????) abuse through injection
- Office based prescribing with DEA waiver or “X license”
  - Treat up to 30 patients first year, then up to 100 patients then a 250 patient waiver

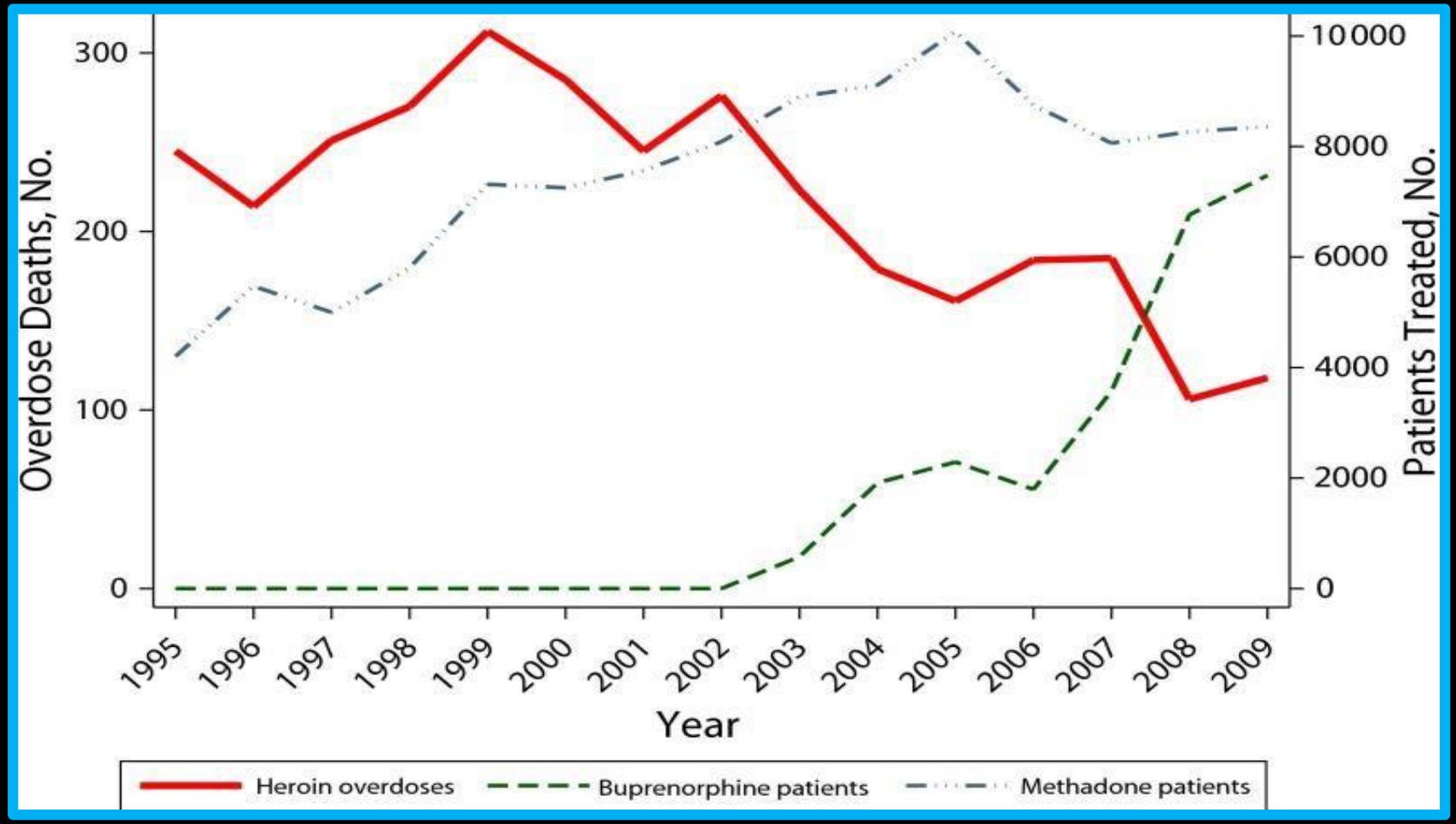
Buprenorphine -Pros

- Increased retention in treatment
- Low overdose risk
- Office Based Opiate Agonist Treatment (OBOT)
- Minimal drug interactions
  - Except Benzos, ETOH
- No cardiac toxicity
- Less neonatal abstinence syndrome compared to methadone
- Less euphoric effect
- Less respiratory depression

Buprenorphine- Cons

- Training required to prescribe
- Expensive!!- $150.00/week
- Can complicate pain treatment
- Potential for precipitated withdrawal
- Can be diverted

Methadone and Buprenorphine Save Lives

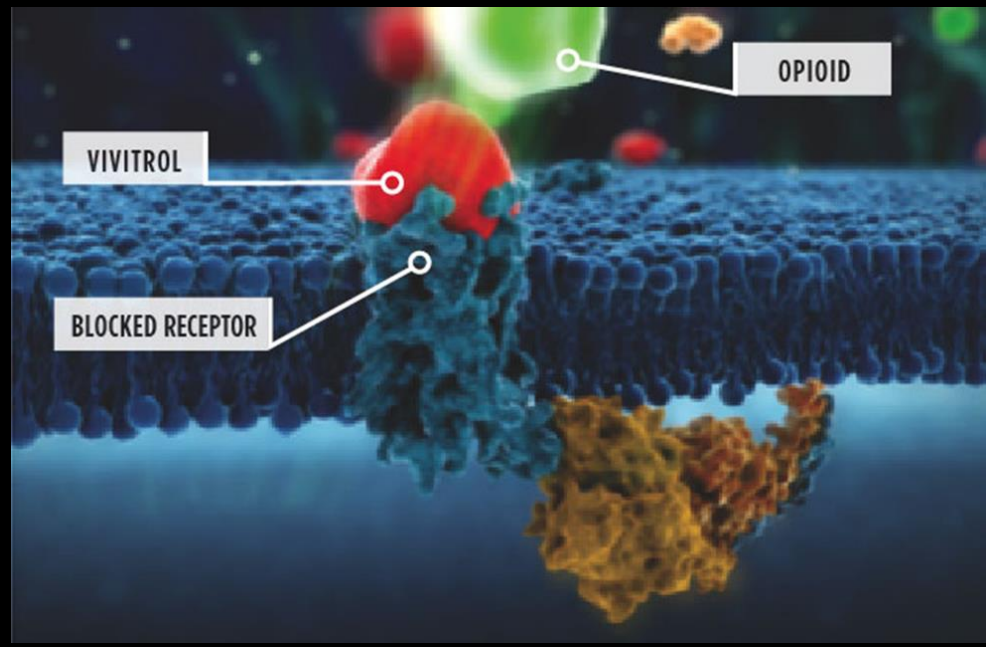


Schwartz, RP, Gryczynski J, O'Grady, Ke et al. Opioid agonist treatments and heroin overdose deaths in Baltimore, MD, 1995-2009. Am J Public Health 2013;103:917-22

Naltrexone: opioid antagonist

- Two formulations approved in US:
  - Oral Naltrexone (Revia) (1984), 50mg once daily
  - Vivitrol -Extended Release Naltrexone, (2010) Q 28 days

- Blocks all opioid receptors
- Not a controlled medication
- Blocks euphoric effects of opioids
- Also treats alcohol dependence
- ER Naltrexone used in criminal justice

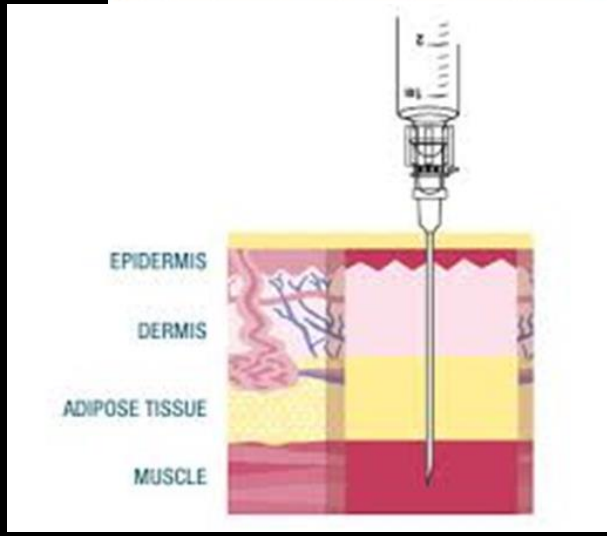


Naltrexone pros

- Not a controlled medication
- MD’s, PA’s and NP’s can prescribe
- Lasts 28 days
- Treats ETOH and opioid use disorders
- No euphoria with opioids
- Few drug interactions

Naltrexone cons

- Must be opioid free for 5-7 days
  - Methadone free for 14 days
- Can complicate pain treatment
- Pain at injection site
- Very expensive!!! - $1,500.00/injection
- Overdose risk when dose wears off



Treatment Barriers

"Tell me another area of medicine where willingness to use an FDA-approved medication is a bad idea."

Dr. Thomas McLellan

Former: **Deputy Director of the Office of National Drug Control Policy**

Founder, Treatment Research Institute, Chairman of the Board of Directors

Access to Treatment – Gap

- 2.5 million Americans 12 and over have opioid use disorders
- 90-120 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

Imagine Sobriety…

- After multiple detoxes, long term programs, losses, overdoses….
  - You achieve sobriety
  - You are engaged in counselling
  - 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……..

- Because 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 of the medication

Medication is an Effective Tool

"Access to medication – assisted treatment can mean the difference between life or death."

Michael Botticelli, October 23, 2014

Director, White House Office of National Drug Control Policy

Overdoses Are 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. "

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

Overdoses Are Symptomatic of Untreated Disease

However!

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

Treatment Barriers
STIGMA

- Often associated with substance use disorders—driven by perceptions that they are moral failings rather than chronic diseases—can exacerbate treatment barriers.

- “Stigma has created an added burden of shame that has made people with substance use disorders less likely to come forward and seek help.”

Facing Addiction in America:

The Surgeon General’s Report on Alcohol, Drugs, and Health 2016

Treatment Barriers
NEGATIVE ATTITUDES

- Negative attitudes among health care professionals toward people with OUD can contribute to a reluctance to treat these patients.

Treatment Barriers
MISUNDERSTANDING

- Negative attitudes and misunderstandings about addiction medications held by the public, providers, and patients.

"Medicated Assisted Treatment merely replaces one addiction or drug with another."

Treatment Barriers

- Paucity of trained prescribers
- Many treatment-facility managers and staff favor an abstinence model
- Prescription of inadequate doses further reinforces the lack of faith in MATs, since the resulting return to opioid use perpetuates a belief in their ineffectiveness.

Nora D. Volkow, M.D., Thomas R. Frieden, M.D., M.P.H., Pamela S. Hyde, J.D., and Stephen S. Cha, M.D.

N Engl J Med 2014; 370:2063-2066May 29, 2014DOI: 10.1056/NEJMp1402780

Policy and Regulatory Barriers

Utilization Management

- Limits on dosages prescribed
- Limits on annual or lifetime medication
- Initial authorization and reauthorization requirements
- Minimal counseling coverage
- “Fail first” criteria requiring that other therapies be attempted first

Although these policies may be intended to ensure that MAT is the best course of treatment, they may hinder access and appropriate care.

www.asam.org/docs/advocacy/Implications-for-Opioid-Addiction-Treatment

Closing the treatment gap

Increase access to MAT

Increase state and federal funding to expand access to OUD treatment.

Public and private insurers

Cover all medications and behavioral health services recommended by clinical guidelines for the treatmentof OUD.

Reduce stigma by education

Law enforcement

Health Providers

Care Providers

On the Horizon…

- Vaccines
- Injectable suboxone- ”Sublocade”
- Newer and better agonists, antagonists
- Genetic analysis

OPIOID USE IN VETERANS

Stephanie O’Connell, LCSW-C
Program Manager of Addiction Treatment Services
Baltimore VA Medical Center

How does opioid use in Vets compare to the general population?

- A study published this year in The American Journal of Addictions examined disorder rates, socio-demographics, co-morbidities, and quality of life among male veterans and non-veterans with opioid use disorder*
- Findings…..
  - Veterans of a racial minority group are more likely to have an OUD than non-veterans of the same racial minority
  - Veterans with OUD are significantly more likely to have co-morbid psychiatric diagnoses and SUD that veterans without OUD (this is the same for non veterans also)
  - Quality of life rated equally poor by Veterans and non-veterans with OUD. Significantly lower than those without OUD

*Rhee, T.G. & Rosenheck, R.A. Comparison of Opioid Use Disorder among Male Veterans and Non-veterans: Disorder Rates, Socio-Demographics, Co-Morbidities, and Quality of Life. *The American Journal on Addictions*. 2019; XX: 1-9.

CONCLUSIONS

- Veterans and non-Veterans experience similar risk of OUD
- Comparable vulnerability of Veterans to non-veterans in both the risk of OUD and poor quality of life indicators
- OUD not related to any distinctive feature of military service
- Increase in OUD in Veterans is likely due to the general expansion of prescription opioid use (as also seen in the general US population)
- Treatment shown to be successful with the general population with OUD would be applicable with Veterans as well

But wait, this is different than previous data…

- Previous data on Veterans with OUD was collected by VHA, therefore only veterans seeking treatment at a VA facility was collected
- This new study is population based
- We do see a significant difference in the Veterans getting OUD treatment at the VA in Baltimore. These patients are:
    - Much older
    - Significant medical/pain issues
    - Co-morbid psychiatric issues
    - Low income
    - Homeless
    - Lack of other health resources (VHA benefits only)

VA supports MAT

- OATP at Baltimore VA Medical Center
- OBOT (expand into primary care, psychiatry, etc)
- Location limitations….use of telemental health
- Residential treatment
- IOP
- Access to medical treatment, housing, psychiatry, etc
- Contingency Management
  - Increase in cocaine related overdose deaths due to fentanyl in the cocaine

Oh the bureaucracy…..

- If you are working with a Veteran who would like to access treatment at the VA we can help! (no really, we can!)
- We also like to contract with community programs to give Veterans more treatment options
- Kara Boyd – Intake Coordinator 410-605-7404
- Or call me, Stephanie O’Connell, 410-605-7000 ext 55539