

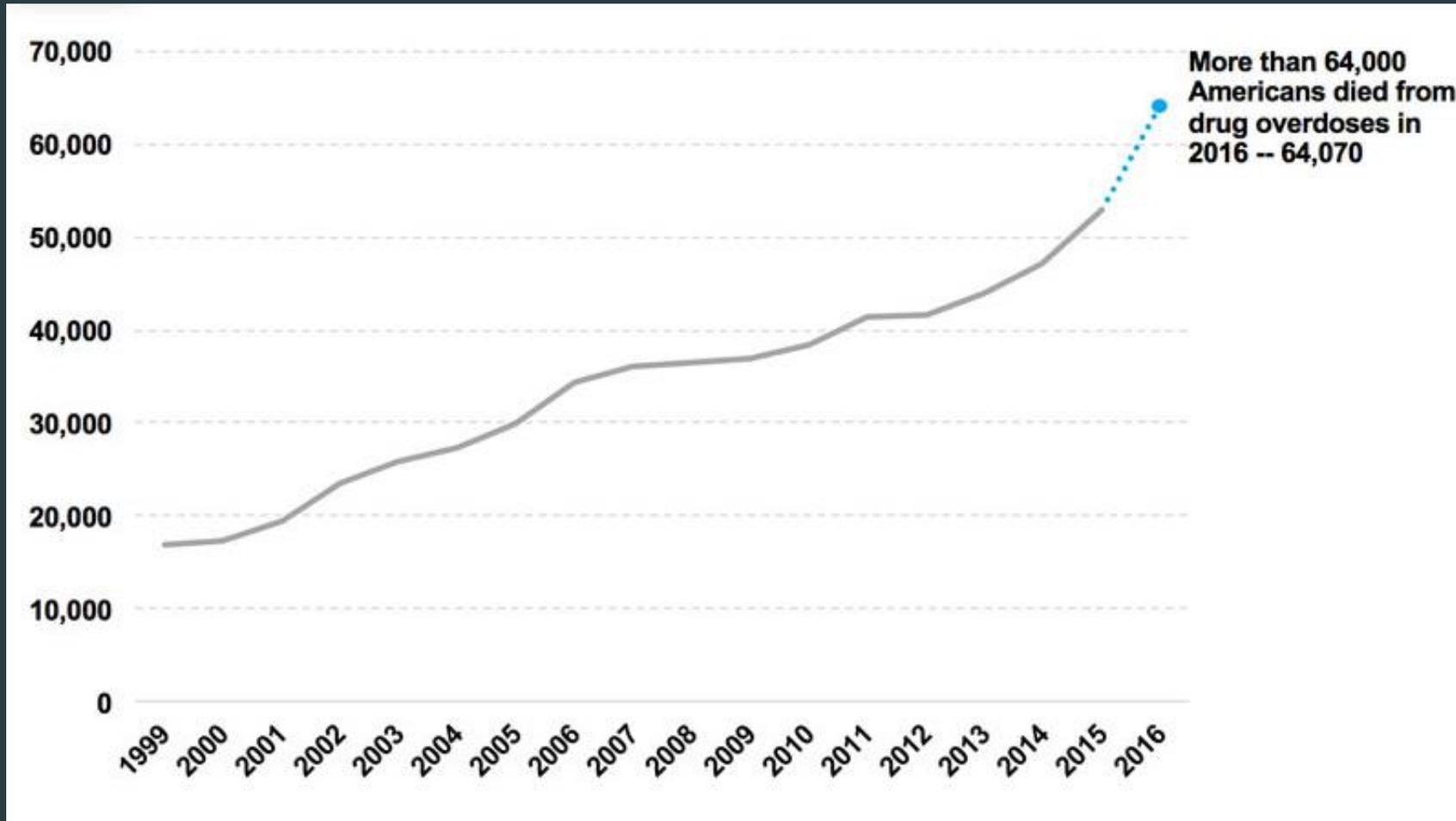
# Best Practices with Opioid Use Disorders

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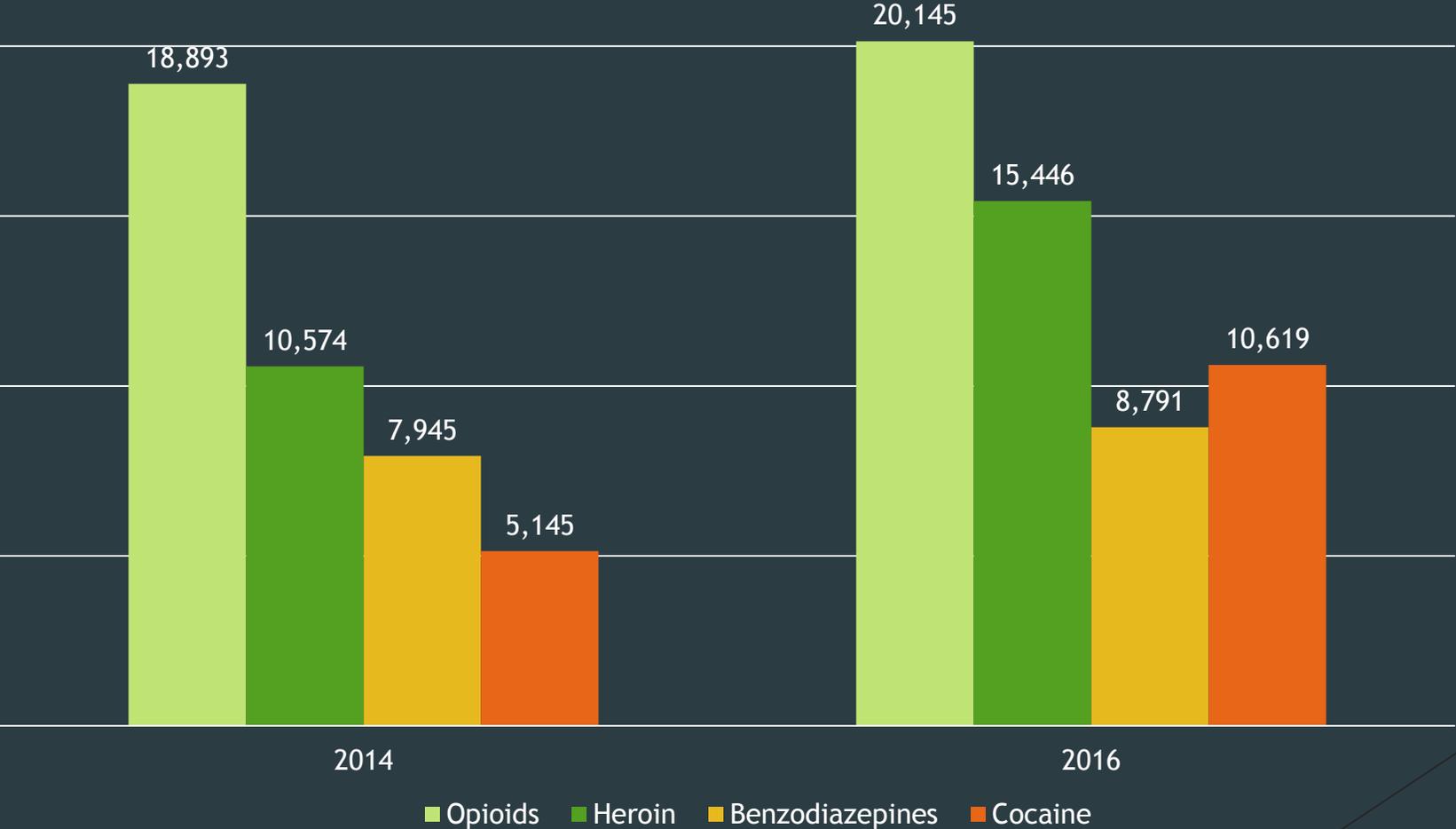
# Agenda

1. We Have an Epidemic!
2. What Are Opioids and Opioid Use Disorder?
3. Is it Treatable?
4. Stigmas & Myths
5. Treatment Effectiveness & Outcomes

# National Drug Overdose Deaths in 2016

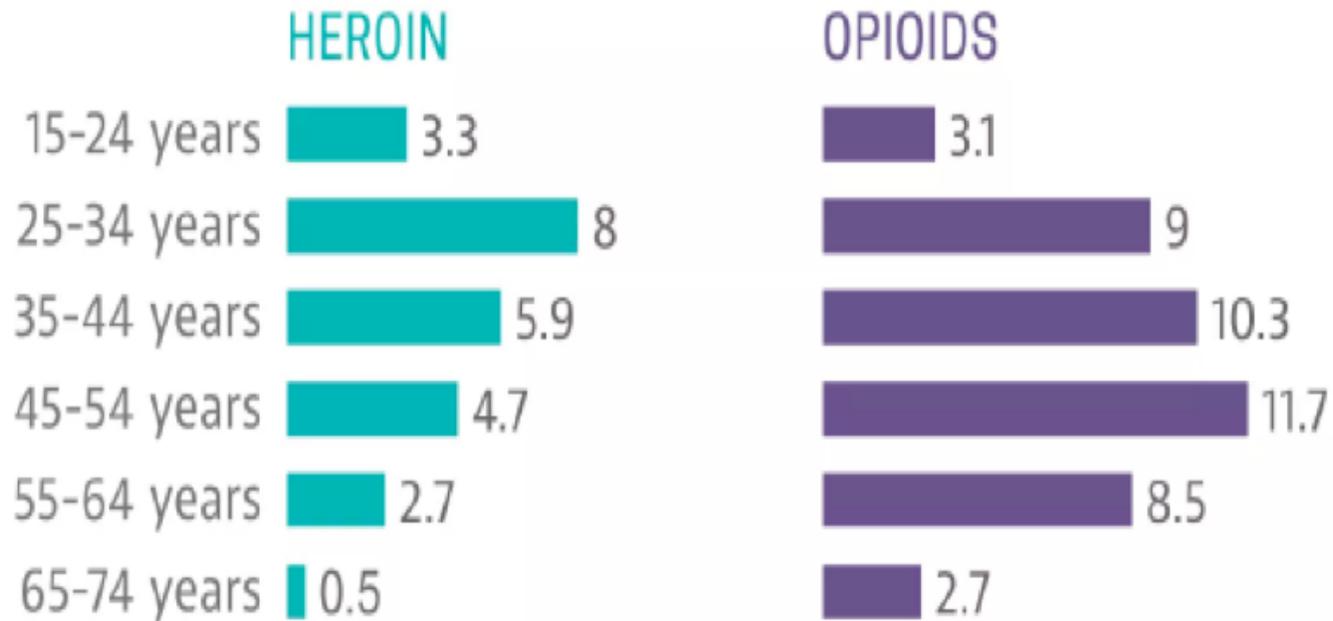


# National Drug Overdose Deaths Rising



Data sources: CDC Wonder and drugabuse.gov

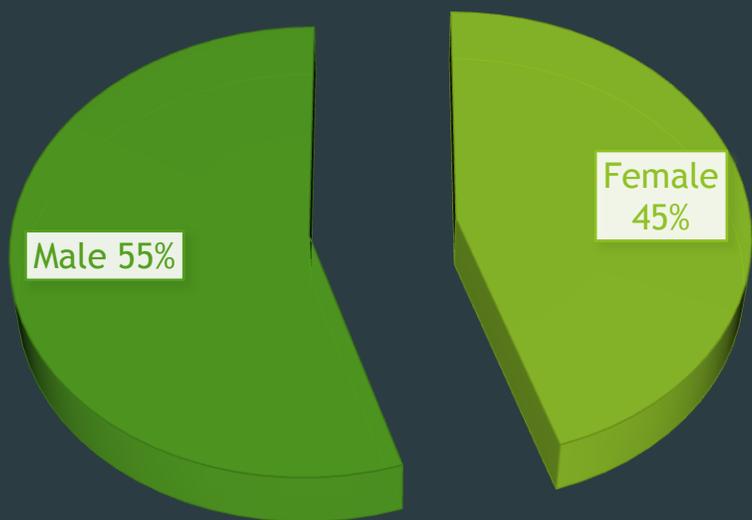
# Overdose Deaths by Age in 2014 per 100,000 people



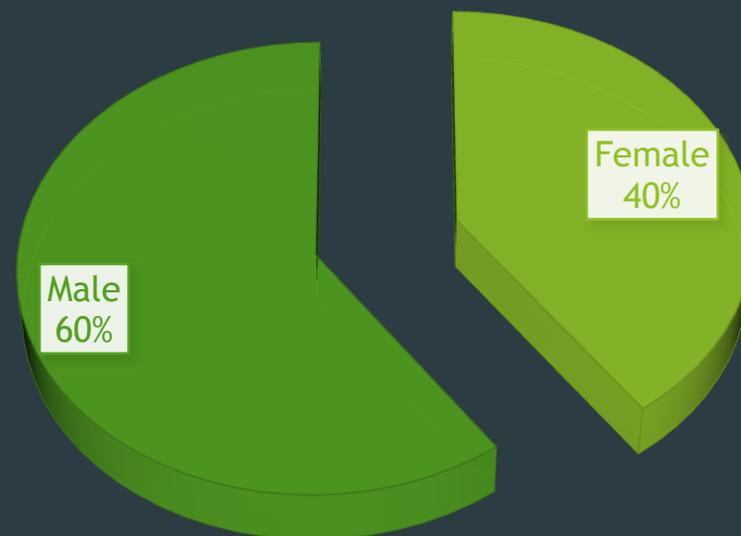
Data: CDC

# By Gender

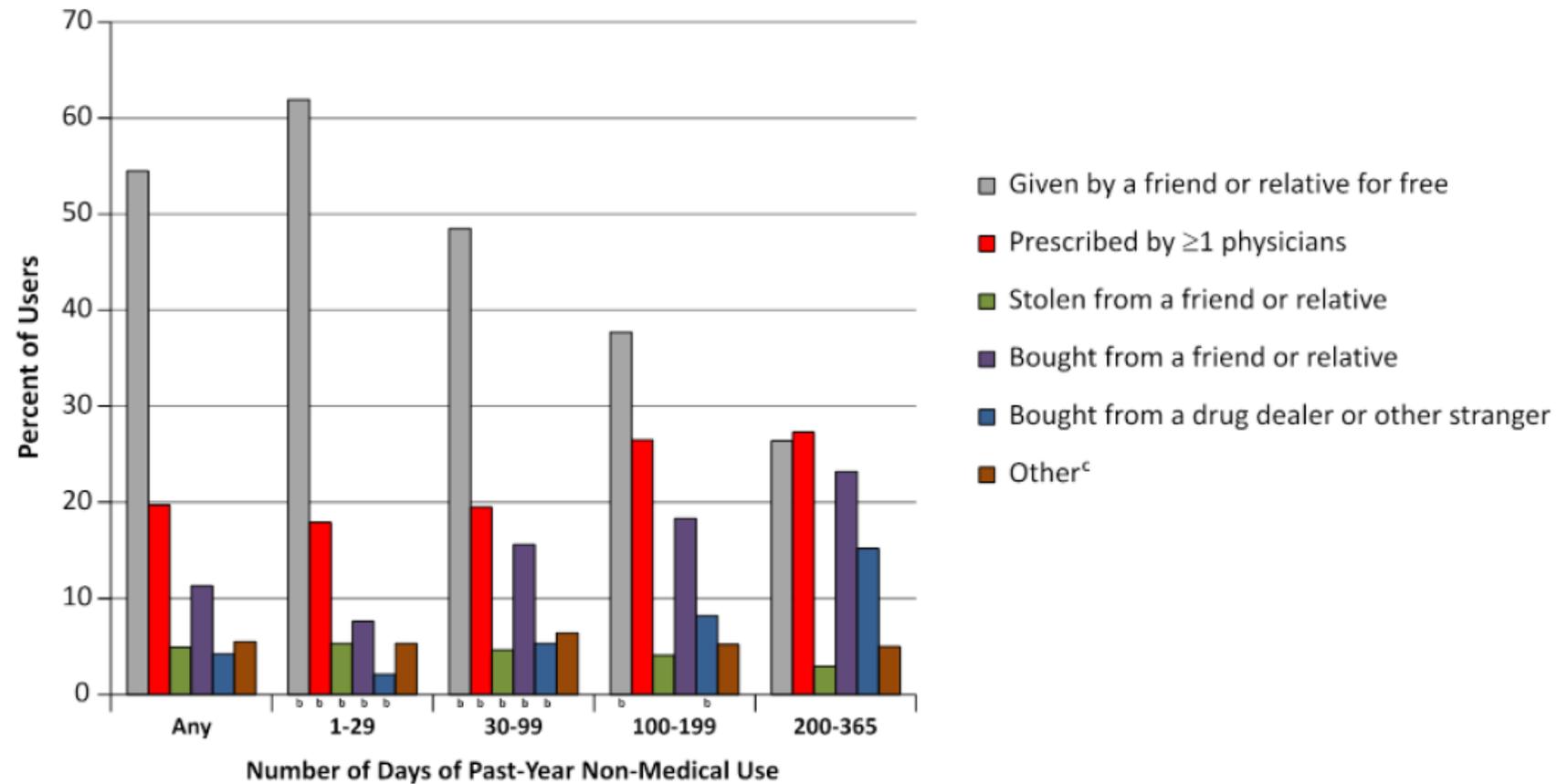
NON MEDICAL USERS  
OF OPIOID PAIN  
RELIEVERS



HEROIN USERS



## Sources of Prescription Painkillers Among Past-Year Non-Medical Users<sup>a</sup>



<sup>a</sup> Obtained from the US National Survey on Drug Use and Health, 2008 through 2011.<sup>5</sup>

<sup>b</sup> Estimate is statistically significantly different from that for highest-frequency users (200-365 days) ( $P < .05$ ).

<sup>c</sup> Includes written fake prescriptions and those opioids stolen from a physician's office, clinic, hospital, or pharmacy; purchases on the Internet; and obtained some other way.

SOURCE: Jones C, Paulozzi L, Mack K. Sources of prescription opioid pain relievers by frequency of past-year nonmedical use: United States, 2008–2011. *JAMA Int Med* 2014; 174(5):802-803.





# Contributors to the epidemic

- ▶ Human “nature”/genetics
- ▶ Availability of Rx opioids, at least partially due to the “enlightening” of physicians in the 1990s about our inadequate treatment of pain, accompanied by unprecedented pharmaceutical company marketing of opioids
- ▶ Availability of purer heroin, making intranasal use an effective route of use, which vastly increased the number of willing users

# We have a problem!

- ▶ Overall, Americans consume up to 80% of the World's prescription opioids. Source: Centers for Disease Control and Prevention
- ▶ On an average day in the U.S., according to the Department of Health and Human Services, health care professionals dispense more 650,000 Opioid Prescriptions.
- ▶ Each day: 3,900 people initiate nonmedical use of prescription opioids for the first time.
- ▶ Each day: 580 people use heroin for the first time.
- ▶ Each day: 78 People die from an opioid-related overdose. (U.S. DHHS)
- ▶ Overdose deaths have surpassed motor vehicle fatalities as the country's leading cause of injury death.
- ▶ Overdose deaths are leading cause of death for individuals under age 50

# Agenda

- ✓ We Have an Epidemic!
- 2. **What Are Opioids and Opioid Use Disorder?**
- 3. Is it Treatable?
- 4. Stigmas & Myths
- 5. Treatment Effectiveness & Outcomes

# What Are Opioids?

- ▶ Medicines that relieve pain
- ▶ Can be natural (from the poppy plant) or synthetic (man-made)

## Common Prescription Opioids:

- ▶ **Hydrocodone (Ex: Vicodin, Lortab); Oxycodone (Ex: OxyContin, Roxicodone, Percocet)**
  - ▶ Commonly prescribed for a variety of painful conditions, including dental and injury-related pain
- ▶ **Morphine (Ex: DepoDur, Astramorph, Duramorph)**
  - ▶ Often used before and after surgical procedures to alleviate severe pain
- ▶ **Fentanyl**
  - ▶ 50-100 times more potent than Morphine; Used to treat severe pain, often in patch form
- ▶ **Codeine**
  - ▶ Often prescribed for mild pain; Can also be used to relieve coughs and severe diarrhea

# What Do Opioids Do?

- ▶ Reduce and relieve pain
- ▶ Can sometimes create a sense of euphoria
- ▶ HIGHLY habit forming and addictive

## Side Effects:

- ▶ Drowsiness and sedation
- ▶ Mental Confusion
- ▶ Nausea and vomiting
- ▶ Constipation
- ▶ Pinpoint (constricted) pupils
- ▶ Slowed or depressed vital signs
  - ▶ Body temperature, blood pressure, pulse and respiration rates
- ▶ Overdose and Death



# What is HEROIN?

- ▶ An illegal narcotic used recreationally to achieve effects similar to those caused by prescription opioids
- ▶ Comes from the opium poppy flower
- ▶ Can look like white or brown powder or black tar
- ▶ Stronger, cheaper, easier to get than prescriptions pills
  - ▶ Also more dangerous- you never know what it is cut/mixed with
  - ▶ Other names: horse, smack, junk, brown sugar

# How is it used?

- ▶ Injection (most common and most dangerous)
- ▶ Snort
- ▶ Smoke
- ▶ No matter how you use it, it gets to the brain quickly.
- ▶ Heroin is HIGHLY ADDICTIVE- you quickly build a tolerance for it and need more each time to feel the same results.

# What is HEROIN? (cont.)

## How does it make you feel?

- ▶ Relieves pain
- ▶ Instant rush
  - ▶ good feelings and happiness
  - ▶ Followed by slow, dreamlike euphoria

## Side Effects and Risks

- ▶ Slows vital signs (heart and pulse rate, breathing, blood pressure)
- ▶ Itching
- ▶ Nausea and vomiting
- ▶ Collapsed veins
- ▶ Infections of the heart lining and valves
- ▶ Skin infections like abscesses and cellulitis
- ▶ High risk of contracting HIV/AIDS, hepatitis B, and/or hepatitis C
- ▶ Lung diseases (pneumonia and tuberculosis)
- ▶ Miscarriage

# Opioid Misuse/Dependence

## Signs and Symptoms

### Physical Signs

- ▶ Change in appetite
- ▶ Pupil size
  - ▶ Small: opioid intoxication
  - ▶ Large: opioid withdrawal
- ▶ Nausea
- ▶ Vomiting
- ▶ Sweating
- ▶ Shaking

### Behavioral Signs

- ▶ Change in personality/attitude
- ▶ Change in friends
- ▶ Change in activities, sports, hobbies
- ▶ Poor attendance / grades
- ▶ Increased isolation; secrecy
- ▶ Wearing long sleeved shirts
- ▶ Moody, irritable, nervous, giddy, or nodding off
- ▶ Stealing

# Chronic Disease

- ▶ Once you have it, you've got it
- ▶ “Disease” implies there is a “medical” component
- ▶ Causes are usually multifactorial
- ▶ Treatments must usually be multi-modal
- ▶ Response rates are variable and depend on the patient, the treatment itself, and outside factors

## Drug Dependence, a Chronic Medical Illness

- ▶ Title of an article in JAMA, Oct 4, 2000, Vol. 284, no. 13, pp 1689-1695
- ▶ Compares drug dependence to type 2 diabetes, hypertension, and asthma
- ▶ Genetic heritability, personal choice, and environmental factors are comparably involved
- ▶ Medication adherence and relapse rates similar across these illnesses

# Chronic Disease Comparison

## Diabetes

- ▶ Genetic predisposition
- ▶ Lifestyle choices are a factor in development of the disease
- ▶ Severity is variable
- ▶ There are diagnostic criteria
- ▶ Once diagnosed, you've got it

## Addiction

- ▶ Genetic predisposition
- ▶ Lifestyle choices are a factor in development of the disease
- ▶ Severity is variable
- ▶ There are diagnostic criteria
- ▶ Once diagnosed, you've got it

# American Medical Association

- ▶ Classified addiction as a medical illness in 1956
- ▶ Added addiction to the International Classification of Diseases codes in 1991
- ▶ Despite AMA and Surgeon General, we still have an uphill battle to fight in regards to treating addiction like the disease it is AND not trying to arrest our way out of addiction.

# Agenda

- ✓ We Have an Epidemic!
- ✓ What Are Opioids and Opioid Use Disorder?

## 3. Is it Treatable?

4. Stigmas & Myths

5. Treatment Effectiveness & Outcomes

# Medication Assisted Treatment (MAT) of Substance Use Disorders

- ▶ MAT = FDA approved medication + behavioral therapy
- ▶ Involves a combination of medication that targets the brain AND psychosocial interventions (i.e. counseling, skills development)
- ▶ Aimed at improving treatment outcomes
- ▶ For most, medications combined with psychosocial treatment is superior to drug or psychosocial treatment on its own.
- ▶ Appropriate and effective treatment for the chronic, relapsing condition of opioid use disorder
- ▶ Nature and duration of treatment should be informed by patients' functioning and NOT a pre-determined schedule

# MAT Options: One size does NOT fit all

- ▶ Opioid treatment medications work in quite different ways and may be more or less effective for particular types of patients.
- ▶ In the midst of an epidemic of opioid overdose and opioid use disorder, all evidence-based medications should be accessible to patients and considered by their health care providers.

# MAT Options: Methadone

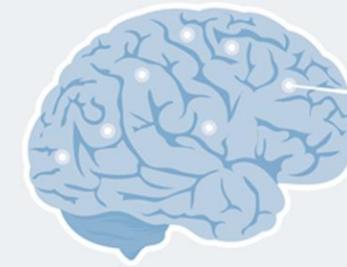
## How it works

- ▶ Activates opioid receptors in the brain
- ▶ Blocks the effects of heroin and painkillers
- ▶ Daily dosing

## Why it works

- ▶ Lessens cravings for heroin and other opioids
- ▶ Lessens withdrawal symptoms
  - ▶ Leads to less heroin use
  - ▶ Fewer medical complications
  - ▶ Improves social and work functioning
- ▶ Dispensing is highly regulated
  - ▶ Can only be used in Opioid Treatment Programs

How OUD Medications Work in the Brain



Empty opioid receptor

Methadone



Full agonist:  
generates effect

# MAT Options: Buprenorphine

## How it works

- ▶ Partially activates opioid receptors in the brain
- ▶ Daily dosing as a pill or film
- ▶ 6-month dosing as an implant inserted beneath the skin

## Why it works

- ▶ Reduces drug use and protects patients from overdoses
- ▶ Considered safer than methadone
  - ▶ Less monitoring needed
  - ▶ Can be prescribed by primary care providers who complete a special training course

### How OUD Medications Work in the Brain



Empty opioid receptor

### Buprenorphine



*Partial agonist:  
generates limited effect*

# MAT Options: Naltrexone (also known as Vivitrol)

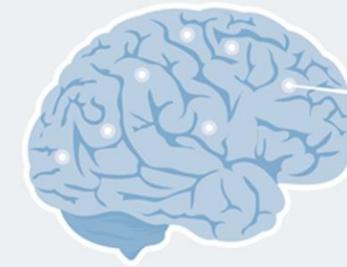
## How it works

- ▶ Completely blocks opioid receptors in the brain
- ▶ Daily dosing in oral forms
- ▶ Monthly dosing as extended-release injectable forms

## Why it works

- ▶ Used after detoxification to prevent relapse
- ▶ No abuse potential
- ▶ No overdose risk
- ▶ No withdrawal when medication is stopped
- ▶ Can be administered in a primary care physician's office
  - ▶ Single doses effective up to 30 days

How OUD Medications Work in the Brain



Empty opioid receptor

Naltrexone



Antagonist:  
blocks effect

# Role of Naloxone (Narcan)

- ▶ Opioid antagonist
- ▶ Reverses opioid effects, thereby can reverse overdose
- ▶ Has been used by EMS for decades
- ▶ Recent proposal to allow first responders and citizen to use it
- ▶ Must always notify authorities to take over
- ▶ SC's new law: docs, pharmacists, first responders
- ▶ Holds harmless anyone who prescribes/dispenses/administers in good faith
- ▶ Some states also grant immunity to drug users present who try to help; they will not be arrested for possession/use during this helping episode
  - ▶ SC's law does NOT grant this "immunity"

# Pregnancy Considerations

- ▶ Misuse of short-acting opioid drugs is associated with complications: miscarriage, infections, premature delivery, low birth weight and others
- ▶ Other factors influence outcomes: access to prenatal care, socioeconomic status, use of nicotine/alcohol/non-opiate drugs, and other factors
- ▶ Relapse to opioid drugs after a detoxification (medically supervised withdrawal) is >90%
- ▶ After decades of research, the standard of care is: methadone maintenance through pregnancy
- ▶ Measurable/treatable neonatal abstinence syndrome is preferable to fetal abstinence syndrome
- ▶ Buprenorphine appears to be equal in efficacy

# Agenda

- ✓ We Have an Epidemic!
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## 4. Stigmas & Myths

## 5. Treatment Effectiveness & Outcomes

# Why All the Negative Press?

- ▶ Continued social stigma attached to addiction, especially if you can't "fix it yourself"
- ▶ Continued stigma on the part of the treatment community---outcomes-based science has not yet replaced ideology
- ▶ Opioid-addicted individuals stigmatize themselves, believing they are "guilty"
- ▶ Federal regulations for methadone treatment did not promote adequate quality or quantity of programs
- ▶ Federal regulations operationalized as more of a barrier to, than a catalyst for, effective use of methadone
- ▶ Consequently, treatment was inconsistent in programs, which varied between "low-dose" and "methadone mills"

# Common Myths About Medicated Assisted Treatment (MAT)



Myth #1: MAT just trades one addiction for another.

FACT: Methadone is a treatment for opioid addiction, not a substitute for heroin. Methadone is long-acting, requiring one daily dose. Heroin is short-acting, and generally takes at least 3-4 daily doses to prevent withdrawal symptoms from emerging.

Myth #2: Once on stable doses of Methadone, patients become addicted to it.

FACT: Patients taking methadone are physically dependent on it, but not addicted. When used in MAT, methadone is a medication for a chronic illness, such as insulin for diabetes, inhalers for asthma, and blood pressure pills for hypertension.

# Common Myths About Medicated Assisted Treatment (MAT)



Myth #3: MAT patients are not able to perform well in many jobs.

FACT: Patients on a stable methadone dose, not using other non-prescribed or illicit medications should be able to do any job they are otherwise qualified to do. A person stabilized on the correct dose is not sedated, in withdrawal, or euphoric. The most common description of how a person feels on methadone is “normal.”

Myth #4: Methadone is not advisable for pregnant women.

FACT: Evidence has shown that the best possible outcome for a pregnant woman addicted to opioids and her fetus is to take either methadone or buprenorphine rather than tapering off and attempting to be abstinent during pregnancy. Methadone does not cause abnormalities in the fetus and does not appear to cause cognitive or any other abnormalities as their children grow.

# Agenda

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- ✓ Stigmas & Myths

## 5. Treatment Effectiveness & Outcomes

# Treatment Effectiveness

## Medicated Assisted Treatment...

- ▶ Significantly increases a patient's adherence to treatment
- ▶ Increases a patient's social functioning by learning skills and building networks necessary for long-term recovery
- ▶ Reduces illicit opioid use compared with nondrug approaches
- ▶ Saves lives by reducing opioid related overdose deaths
- ▶ Reduces criminal activity
- ▶ Reduces infectious disease transmission

# Correlates of Good Outcomes in Opioid Maintenance

- ▶ Adequate dosing
- ▶ Length of retention in treatment (this is true for all addiction treatment services)
- ▶ Consistent therapeutic relationship with a counselor
- ▶ Psychosocial services, including psychiatric evaluation and treatment when needed

# 10 Years of Continued Research Showed

- ▶ Decrease in antisocial behavior measured by arrest and/or incarceration
- ▶ Increase in social productivity measured by employment and/or schooling or vocational training
- ▶ Clinical impression of freedom from heroin “hunger” confirmed by negative urine specimens after stabilization on methadone
- ▶ Recognition of, and willingness to accept help for, psychiatric and other problems, **including those related to excessive use of alcohol or other drugs**

# Treatment Gap

Many patients unable to access the benefits of MAT

- ▶ Treatment programs have been slow to offer MAT drugs
  - ▶ Only 23% of publicly funded treatment programs reported offering any FDA-approved medications to treat substance use disorders
  - ▶ Less than half of private sector treatment programs reported their physicians prescribed FDA- approved medications
- ▶ Limited insurance coverage for MAT
- ▶ Lack of qualified medical personnel
  - ▶ 30 million Americans live in counties that do not have any physicians who can prescribe buprenorphine for MAT
- ▶ It is particularly important that Medicaid cover a broad range of treatment options because of its influence on available program services

# Surgeon General Report

- ▶ In November 2016, Former Surgeon General Dr. Vivek Murthy put out the biggest Surgeon General Report on addiction since the landmark 1964 report addressing tobacco.
- ▶ Dr. Murthy emphasized addiction was a disease that caused changes in the brain circuitry and was NOT a moral failing
- ▶ Dr. Murthy emphasized that MAT was crucial in combating the opioid epidemic and that it was NOT substituting one drug for another. Further adding that MAT should take years for best outcomes.
- ▶ That addiction should be treated holistically much like diabetes and cancer.
- ▶ That 90% of people with a substance use disorder do not get treatment. Only 1 in 10 seek help.

# 21<sup>st</sup> Century Cures Act

- ▶ Enacted December 2016 and included:
  - ▶ Landmark mental health reform bill
  - ▶ Monies for states to fight opioid epidemic
    - ▶ Prescription drug monitoring programs
    - ▶ Primary care involvement
    - ▶ Training in best practices
    - ▶ Prevention education

# SUMMARY

- ▶ Opioid addiction is a chronic, relapsing “disease” similar to diabetes mellitus type 2
- ▶ While primary treatment for both is “counseling,” medications are often/usually necessary
- ▶ Relatively few medications exist for opioid addiction, but efficacy is good
- ▶ MAT is the standard of care for pregnant patients with opioid addiction
- ▶ Naloxone should have an increasing role in preventing overdose deaths
- ▶ The choice of medication should be individualized, as always in medicine -- there is no “one size fits all”
- ▶ Ideology, stigma and lack of knowledge still remain significant barriers to effective MAT