

# Cannabis and Health

Module 6

Lecture 1: What Is Opioid Use Disorder

# Opioid Basics

- Prescription Opioids
  - can be prescribed by doctors to treat moderate to severe pain, but can also have serious risks and side effects.
  - common types are oxycodone (OxyContin), hydrocodone (Vicodin), morphine, and methadone
- Heroin
  - an illegal opioid
  - use has increased across the U.S. among men and women, most age groups, and all income levels
- Fentanyl
  - synthetic opioid pain reliever
  - many times more powerful than other opioids and is approved for treating severe pain, typically advanced cancer pain.
  - Illegal fentanyl has been on the rise as have overdose deaths



# More Basics

- **Opioid** refers to natural and synthetic substances that act at one of the three main opioid receptor systems (mu, kappa, delta). Opioids can have analgesic and central nervous system depressant effects as well as the potential to cause euphoria.
- **Opiate** refers to a subclass of opioids consisting of alkaloid compounds that occur naturally in the opium poppy, including morphine and codeine.
- **Heroin** is a derivative of morphine and is the opioid most commonly abused by injection. The chemical name for heroin is diacetylmorphine.
- **Synthetic opioids** – Oxycodone and hydrocodone are semi-synthetic opioids. Synthetic opioid include fentanyl, tramadol, and methadone

# What is Opioid Use Disorder (OUD)?

- About 2.1 million Americans had opioid use disorder in 2016
- OUD is defined in the DSM-5 as a problematic pattern of opioid use leading to clinically significant impairment or distress
- OUD was previously classified as Opioid Abuse or Opioid Dependence in DSM-IV



# OUD defined as having 2 or more within 12 months

- Using larger amounts of opioids or over a longer period than was intended
- Persistent desire to cut down or unsuccessful efforts to control use
- Great deal of time spent obtaining, using, or recovering from use
- Craving, or a strong desire or urge to use substance
- Failure to fulfill major role obligations at work, school, or home due to recurrent opioid use
- Continued use despite recurrent or persistent social or interpersonal problems caused or exacerbated by opioid use
- Giving up or reducing social, occupational, or recreational activities due to opioid use
- Recurrent opioid use in physically hazardous situations
- Continued opioid use despite physical or psychological problems caused or exacerbated by its use
- Tolerance (marked increase in amount; marked decrease in effect)
- Withdrawal syndrome as manifested by cessation of opioids or use of opioids (or a closely related substance) to relieve or avoid withdrawal symptoms.

# Opioid Use Disorder

- Tolerance and withdrawal criteria are not considered for those taking opioids solely under appropriate medical supervision.
- Severity of opioid use disorder is categorized as mild (presence of 2-3 symptoms), moderate (4-5 symptoms), or severe (6 or more symptoms)

# What is the U.S. Opioid Epidemic?

- In the late 1990s, pharmaceutical companies assured the medical community that patients would not become addicted to opioid pain relievers
- Thus, healthcare providers began to prescribe opioids at greater rates
- Increased prescription of opioid medications led to widespread misuse of both prescription and non-prescription opioids
- It later became clear that these medications could be highly addictive

# Opioid Crisis Statistics

- Roughly 21 to 29 percent of patients prescribed opioids for pain misuse them
- Between 8-12% develop an OUD
- Between 4-6% who misuse prescription opioids transition to heroin
- About 80% of people who use heroin first misused prescription opioids
- Opioid overdoses increased 30 percent from July 2016 through September 2017 in 52 areas in 45 states
- The Midwestern region saw opioid overdoses increase 70 percent from July 2016 through September 2017
- Opioid overdoses in large cities increase by 54 percent in 16 states

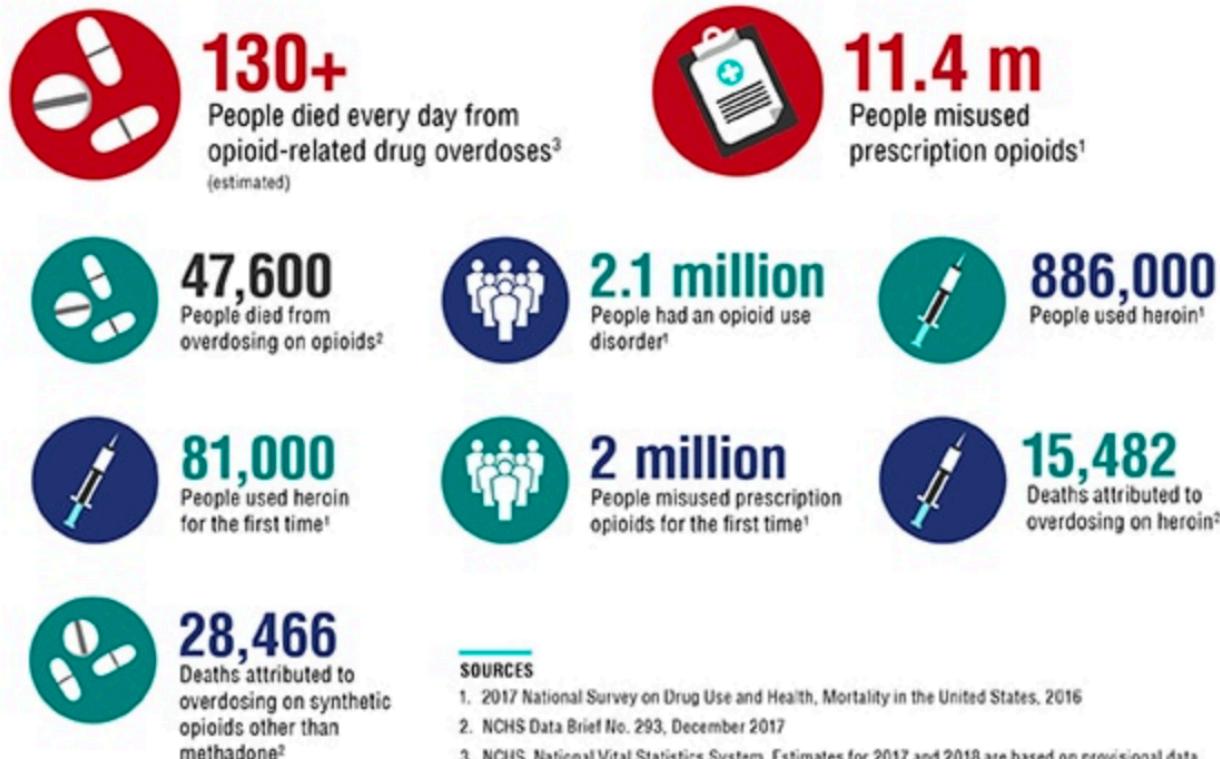


# Opioid Crisis Statistics: Overdoses and Overdose Deaths

- 70,237 drug overdose deaths in the U.S. in 2017
- Opioids—mainly synthetic opioids (other than methadone)—are currently the main driver of drug overdose deaths
- Opioids were involved in 47,600 overdose deaths in 2017 (67.8% of all drug overdose deaths)
- 30% increase in emergency department visits for overdoses
- People who have had at least one overdose are more likely to have another

In 2017 HHS declared a public health emergency and announced a 5-point strategy to combat the opioid crisis

## THE OPIOID EPIDEMIC BY THE NUMBERS



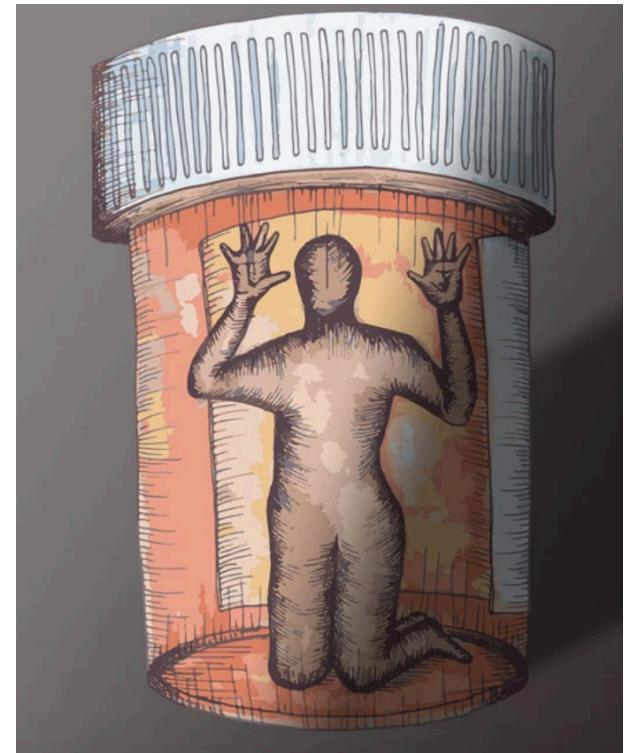
# What else is being done about the opioid crisis?

- In April 2018 at the National Rx Drug Abuse and Heroin Summit, NIH Director Francis S. Collins, M.D., Ph.D., announced the launch of the HEAL (Helping to End Addiction Long-term) initiative, an aggressive, trans-agency effort to speed scientific solutions to stem the national opioid public health crisis
- HEAL will bolster research across NIH to improve treatment for opioid misuse/addiction and enhance pain management.



# Risk Factors for OUD and Overdose

- Risk factors for developing OUD
  - past or current substance abuse
  - untreated psychiatric disorders
  - younger age
  - social or family environments that encourage misuse
- Risk factors for overdose
  - being middle aged
  - other substance abuse
  - psychiatric comorbidities
  - suicides sometimes misclassified as opioid overdose deaths



# Other risk factors for OUD

- Consuming high daily doses of prescribed opioids
  - even after just a few days of consistent use
- Living in rural areas
  - higher rates of unemployment, poverty and lower education
- Having chronic pain
  - e.g., self-medication
- Being on Medicaid
  - OUD prevalence in Medicaid beneficiaries is more than 10x higher than in those who receive private insurance coverage
- Being prescribed opioids for postoperative pain relief
  - some patients continue to fill prescriptions long after what would be considered normal surgical recovery period

# Strategies for Prevention of Opioid Use Disorder

- Prescription drug monitoring program
- State prescription drug laws
- Formulary management strategies in insurance programs
  - prior authorization, quantity limits, and drug utilization review
- Educate providers about opioid prescribing guidelines
- Facilitate conversations with patients about risks and benefits of pain treatment options
- Quality improvement programs in health care systems to increase implementation of recommended prescribing practices
- Patient education on safe storage and disposal of prescription opioids



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# THE PRESIDENT'S COMMISSION ON COMBATING DRUG ADDICTION AND THE OPIOID CRISIS

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## Roster of Commissioners

Governor Chris Christie, Chairman

Governor Charlie Baker

Governor Roy Cooper

Congressman Patrick J. Kennedy

Professor Bertha Madras, Ph.D.

Florida Attorney General Pam Bondi



# President's Commission Report on Opioid Epidemic (2017)

- Conclusions Relevant to Cannabis
  - concluded that there was no evidence suggesting that cannabinoids might play a beneficial role in the opiate epidemic
  - found no evidence regarding safety and efficacy of cannabis for pain
  - found that the dangers of cannabis products outweigh any potential benefits in terms of pain or the opioid epidemic
  - found that cannabis use leads to opioid abuse

# Conclusions

- Opioid epidemic is a big problem
  - Almost 50,000 overdose deaths per year
  - Now statistically more likely to die from opioid overdose than car accident
- 25% of those people who are prescribed opioids will misuse them, 10% of those who misuse will develop OUD, 5% will transition to heroin, 80% of those who use heroin started with prescription opioids
- National resources have been mobilized (e.g., NIH HEAL)
- President's commission found that cannabis is dangerous and likely to make problem worse

# Discussion

- Do you expect that the opiate epidemic will improve or worsen over the next several years?  
Provide some reasons for your answer
- What might be some answers to the epidemic?