

Cannabis and Health

Module 6

Lecture 2: Epidemiology of Opioid Use Disorder

Opioids and High Risk Populations: Adolescents

- In 2015, 276,000 adolescents were nonmedical users of pain relievers; 122,000 were addicted
- In 2015, 21,000 adolescents had used heroin in the past year
 - 5,000 were current heroin users
 - 6,000 had a heroin use disorder in 2014
- Most adolescents who misuse prescription pain relievers are given them by a friend or relative
- Prescribing rates for prescription opioids in adolescents and young adults nearly doubled from 1994 to 2007
- The age group with the greatest past-year nonmedical use of opioids is young adults aged 18 to 25, yet the greatest use (i.e., exposure) of prescription opioids is among adults aged 26 and older.

Opioids and High Risk Populations: Women

- Women are more likely to have chronic pain, be prescribed prescription pain relievers, be given higher doses, and use them for longer
- Women may become dependent on prescription pain relievers more quickly
- 48,000 women died of prescription pain reliever overdoses between 1999 and 2010
- Prescription pain reliever overdose deaths among women increased more than 400% from 1999 to 2010, compared to 237% among men
- From 2010 through 2013, female heroin overdoses increased from 0.4 to 1.2 per 100,000

Opioids and High Risk Populations: Chronic Pain Patients

- more than 30% of Americans have some form of acute or chronic pain (40% in older adults)
- opioid analgesics are most commonly prescribed class of medications in the US
- 3 to 4% of the adult population (9.6 million to 11.5 million persons) were prescribed longer-term opioid therapy
- 37% of the 44,000 drug-overdose deaths that were reported in 2013 were attributable to pharmaceutical opioids
- major source of diverted opioids is physician prescriptions

Opioids and High Risk Populations: Military Veterans

- About 68,000 veterans had OUD in 2015, a 3x increase in 12 years
- 2014 report from the U.S. Department of Veterans Affairs: Veterans are 2x as likely as nonveterans to die from accidental overdoses
- PTSD and chronic pain are common diagnoses in veterans
 - both associated with high rates of opioid prescribing
- VA has taken steps in recent years to improve safety of opioid prescribing and increase treatment for veterans with OUD
- Opioid Safety Initiative in 2013

Descriptive Epidemiology

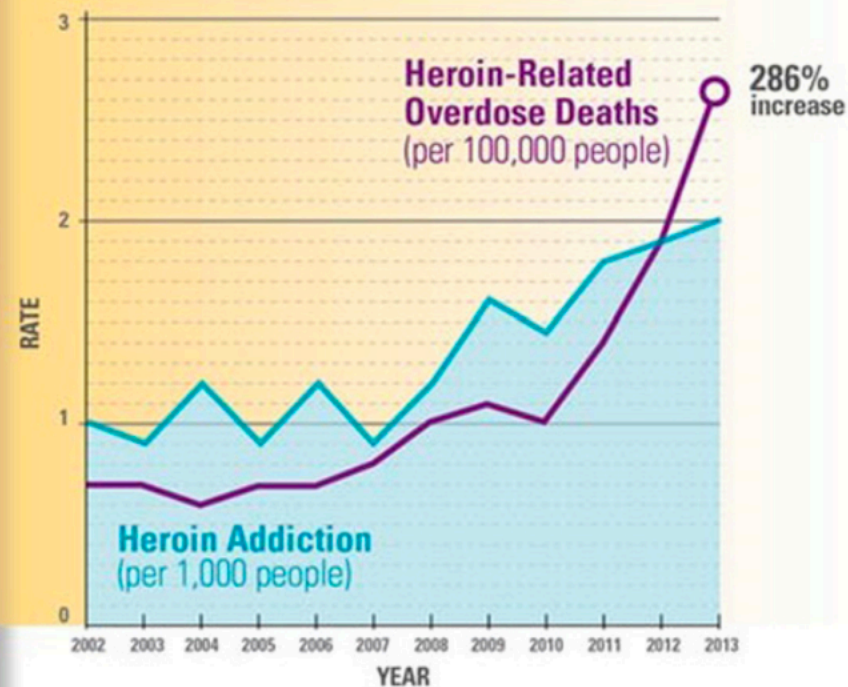
- From 2011-2013, the number of people who reported using heroin in the past year was 2.6 per 1000, an increase of 62.5% from 2002-2004
- Demographics for prescription opioid abuse are similar to the demographics of non-prescription heroin abuse and dependence
- Gap between males and females and other demographic measures is closing
- People at risk for and abusing opioids: males or females, any age and ethnicity, any socioeconomic background, live in suburban or rural areas

Heroin Use and Addiction

Heroin Use Has INCREASED Among Most Demographic Groups

	2002-2004*	2011-2013*	% CHANGE
SEX			
Male	2.4	3.6	50%
Female	0.8	1.6	100%
AGE, YEARS			
12-17	1.8	1.6	--
18-25	3.5	7.3	109%
26 or older	1.2	1.9	58%
RACE/ETHNICITY			
Non-Hispanic white	1.4	3	114%
Other	2	1.7	--
ANNUAL HOUSEHOLD INCOME			
Less than \$20,000	3.4	5.5	62%
\$20,000-\$49,999	1.3	2.3	77%
\$50,000 or more	1	1.6	60%
HEALTH INSURANCE COVERAGE			
None	4.2	6.7	60%
Medicaid	4.3	4.7	--
Private or other	0.8	1.3	63%

Heroin Addiction and Overdose Deaths are Climbing



SOURCES: National Survey on Drug Use and Health (NSDUH), 2002-2013.
National Vital Statistics System, 2002-2013.

Common Psychiatric Comorbidities

- Opioid medications are associated with high rates of depression and anxiety.
 - e.g., Depressed patients initiate opioid therapy more often than non-depressed patients and are twice as likely to transition to long-term opioid use
- Opioid medications can induce treatment resistant depression, anxiety and pain
 - e.g., opioids can cause anxiety through development of dependence and withdrawal
- Discontinuing opioids can improve symptoms of depression and anxiety

Common Medical Comorbidities

- Long-term opioid use is often associated with worsening chronic pain
 - pain sensitization hypothesis
- Gastrointestinal issues (side effect of short- and long-term use of opioids)
- Sleep problems
- Serious complications for women using opioids during pregnancy
- Opioid use is associated with increased likelihood of hospitalization for both medical and psychiatric reasons in men and women

Combined with other drugs...

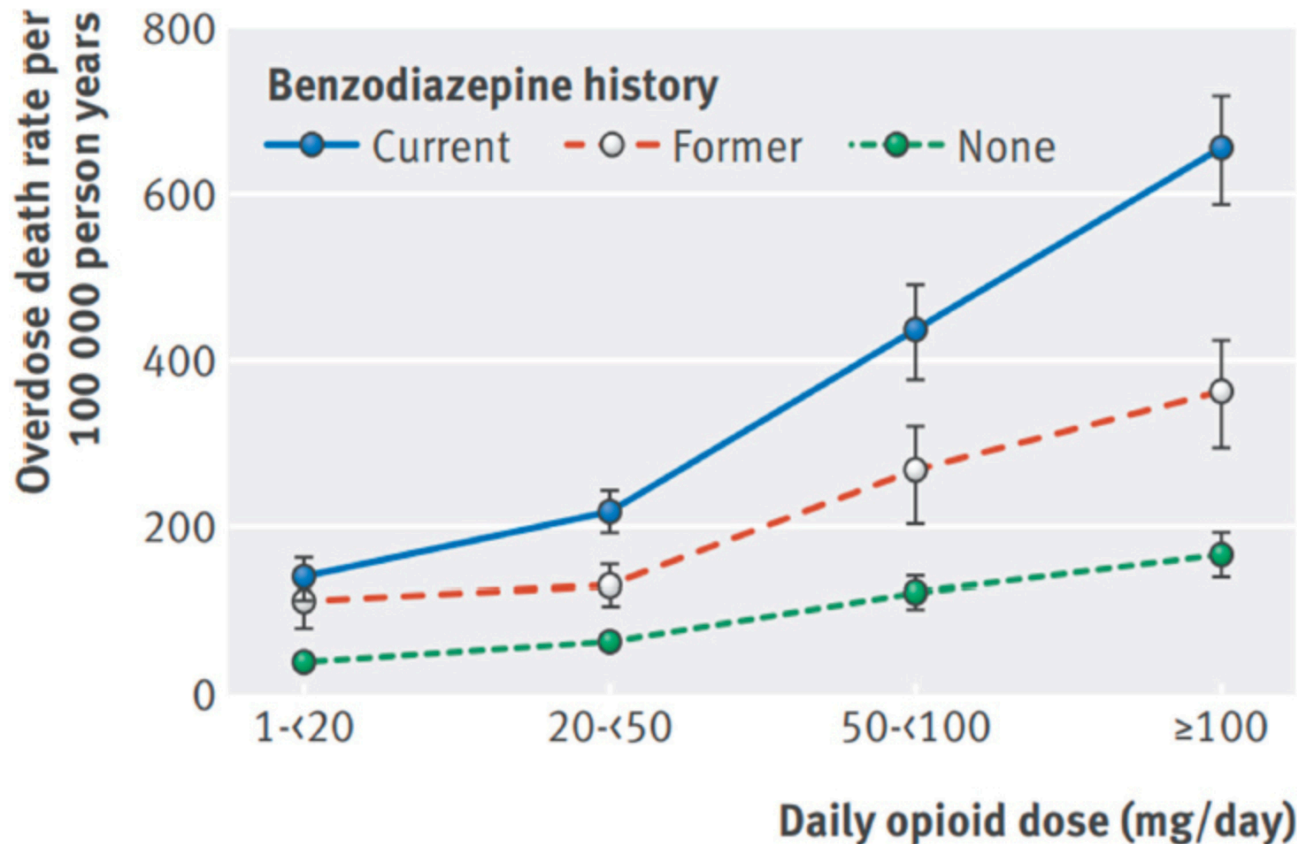


FIGURE 4-1 Benzodiazepine prescribing patterns and deaths from drug overdose among U.S. veterans receiving opioid analgesics: Case-cohort study. Overdose deaths rise sharply when opioid dose is 50 mg or greater and benzodiazepine is also used

SOURCE: [Park et al., 2015](#).

Clinical Challenges

- Diversion of prescribed opioids
- Stigma surrounding opioid misuse, physician biases
- Limited efficacy of other treatments for chronic pain
- Limited efficacious pharmacological treatment options for OUD
- Frequent comorbidity with other substance use and various psychiatric disorders
- No such thing as a “typical patient” with OUD
 - Increasingly heterogeneous population

Ongoing OUD Research Goals

- Research Priorities Outlined by the National Institute on Drug Abuse (NIDA):
 - Develop and test non-opioid medication targets for chronic pain
 - Develop and test adjunctive therapies to reduce dose of opioids to control pain
 - Develop and test nonpharmacological pain treatment strategies such as neural stimulation therapies (e.g., transcranial magnetic stimulation, electrical deep brain stimulation), biofeedback, and behavioral treatments
 - Identify and test strategies for improving opioid prescribing and patient management practices to reduce the development of opioid use disorders

Conclusions

- Adolescents, women, chronic pain patients, and veterans at high risk
- Psychiatric comorbidities include depression and anxiety
- Medical comorbidities include GI problems, sleep problems, worsening of pain over time