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Opioid Use Disorder: An Overview

MRC-1189 October 2026

Learning Objectives

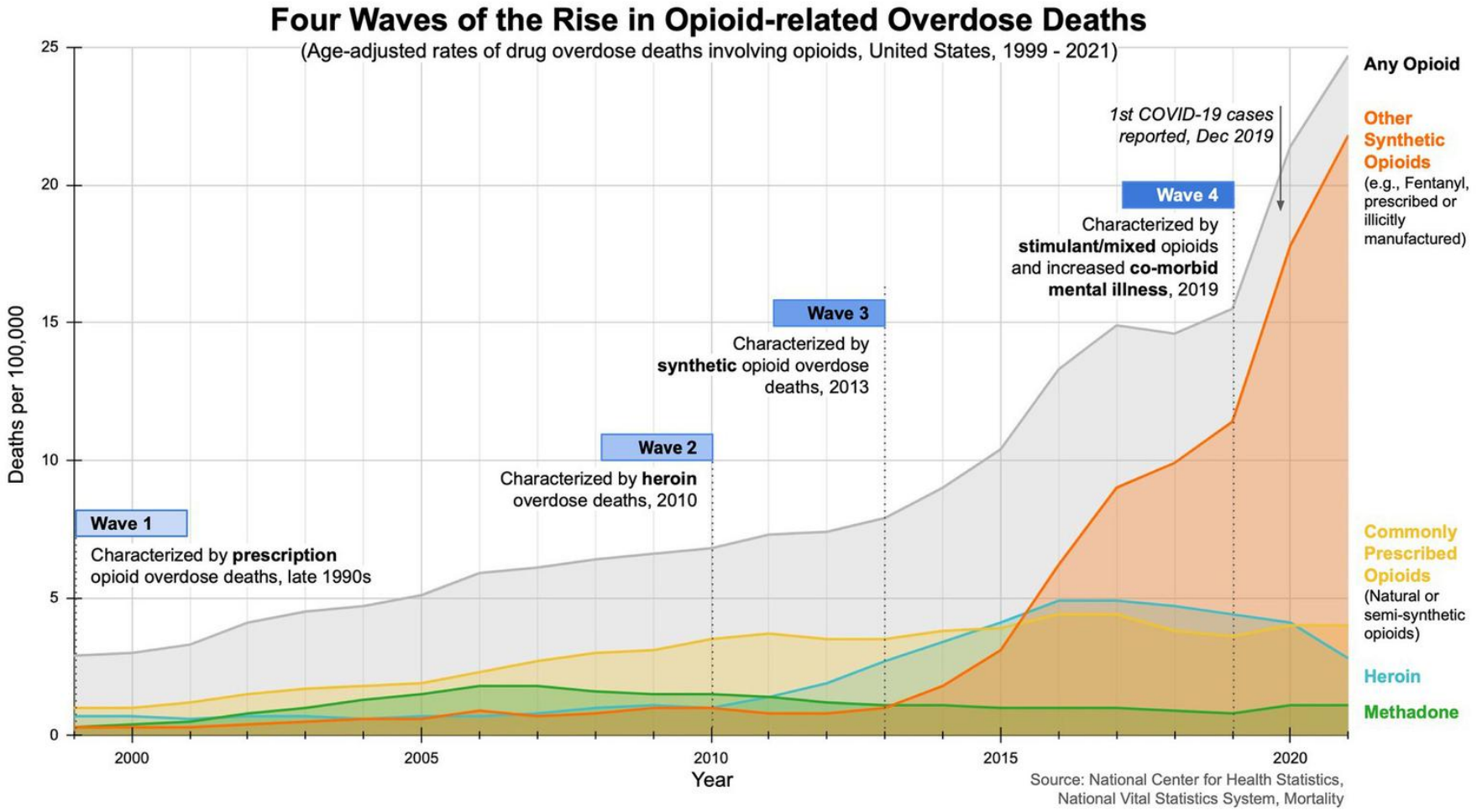
- Describe the scope, evolution, and economic burden of the opioid crisis in the United States
- Explain the neurobiology of opioid use disorder, including mechanism of action, the brain's reward system, and the neural basis of withdrawal
- Identify the diagnostic criteria, risk factors, and clinical presentation of OUD, including withdrawal assessment tools (SOWS, COWS)
- Describe FDA-approved pharmacologic and psychosocial treatment approaches for OUD
- Recognize barriers to effective OUD treatment, including the impact of stigma, gaps in MOUD access and disparities in the criminal justice population

COWS, clinical opiate withdrawal scale; FDA, Food and Drug Administration; MOUD, medications for opioid use disorder; OUD, opioid use disorder; SOWS, subjective opiate withdrawal scale.

The Opioid Crisis

Outlining The Opioid Crisis

Since the 1990s, the rise in opioid-related overdose deaths in the United States can be outlined by 4 distinct waves:



Choe K, et al. *Front Public Health*. 2023;11

The Opioid Crisis in the United States



7.6 million
Misused an opioid (2024)[1]



4.8 million
People with opioid use disorder (2024)[1]



938,969
Opioid-related ED visits (2024)[2]



54,743
Opioid-related deaths (2024)[3]



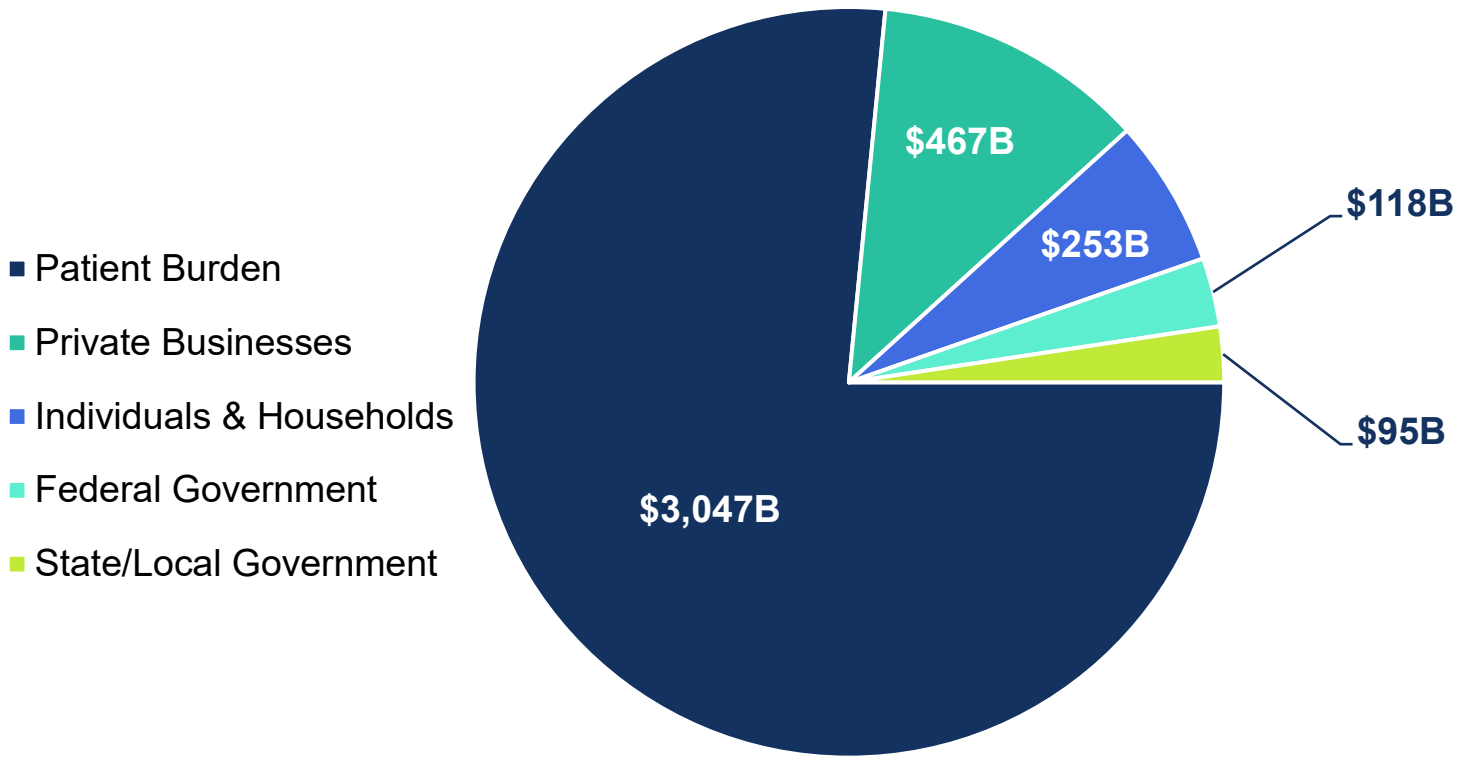
48,422
Opioid-related deaths involving synthetic opioids (2024)[3]



$4 trillion
Total costs related to opioid crisis (2024)[4]

ED, emergency department. 1. Substance Abuse and Mental Health Services Administration. Key substance use and mental health indicators in the United States: results from the 2024 National Survey on Drug Use and Health. Publication No. PEP25-07-007. 2025. Accessed April 30, 2026. https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health/national-releases 2. Substance Abuse and Mental Health Services Administration. Drug Abuse Warning Network: National Estimates From Drug-Related Emergency Department Visits, 2024. Publication No. PEP25-07-005. 2025. 3. Centers for Disease Control and Prevention. U.S. Overdose Deaths Decrease Almost 27% in 2024 [press release]. 2025. Accessed March 19, 2026. https://www.cdc.gov/nchs/pressroom/releases/20250514.html. 4. Avalere Health. The Cost of Opioid Addiction: Opioid Use Disorder in the United States. 2025. Avalere-Health-White-Paper_The-cost-of-opioid-addiction_OUD-in-the-United-States.pdf

The Economic Cost of OUD: A $4 Trillion Annual Burden



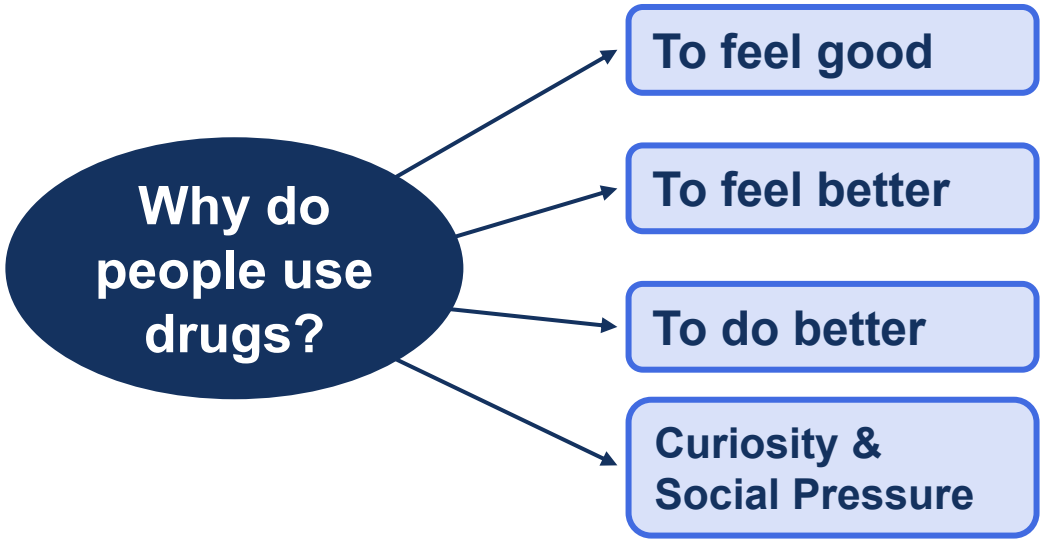
- **Patient burden**: value of lost life, lost quality of life
- **Private businesses**: private insurance, employer lost productivity, OUD treatment
- **Individuals/households**: costs of loss of household productivity, out-of-pocket healthcare costs, lost employee productivity
- **Federal, state, and local government**: costs of Medicare/other payers, lost taxes, Medicaid, criminal justice OUD treatment

LAI, long-acting injectable; OUD, opioid use disorder. Avalere Health. The Cost of Opioid Addiction: Opioid Use Disorder in the United States. 2025. Avalere-Health-White-Paper_The-cost-of-opioid-addiction_OUD-in-the-United-States.pdf

Clinical Overview of Opioid Use Disorder

Opioid Use Disorder

Opioid Use Disorder (OUD) is a chronic, relapsing brain disorder characterized by compulsive drug seeking and use despite adverse life consequences



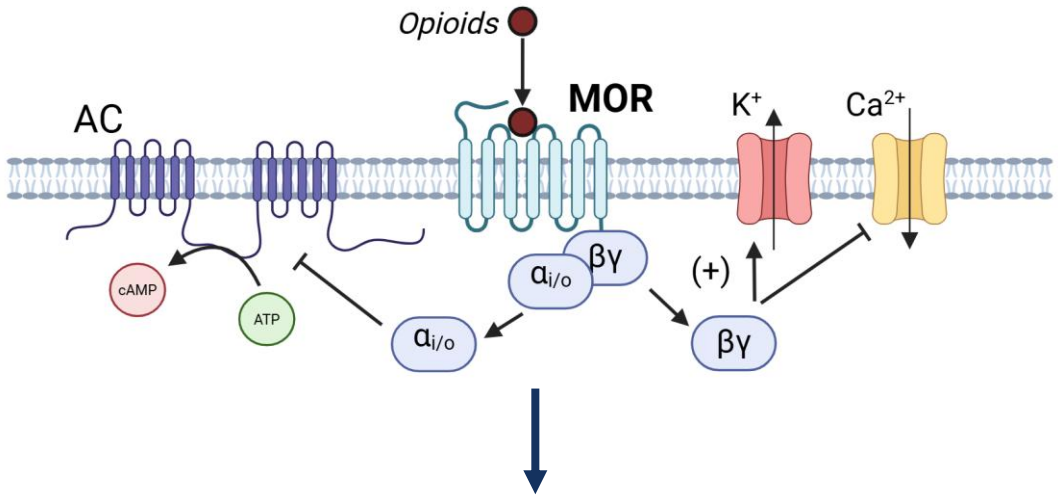
Implications of continued drug use

- The initial decision to use drugs is typically voluntary
- With continued use, self-control may become seriously impaired due to physical changes in the brain that are critical for:
  - Judgment
  - Decision-making
  - Learning and memory
  - Behavior control
- This impairment of self-control is the hallmark of addiction

OUD, opioid use disorder. National Institute on Drug Abuse. Drug Misuse and Addiction. 2020. Accessed March 19, 2026. https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/drug-misuse-addiction

Opioid Mechanism of Action

- Opioids bind to multiple receptor types — Mu (MOR), Kappa (KOR), and Delta (DOR) — but **MOR is the primary target** for most clinically used opioids
- **MOR activation suppresses brain activity** → Produces pain relief, sedation, and respiratory depression with higher potency/doses
- With repeated use**, the brain adapts** — reducing sensitivity to opioids and driving the cycle of dependence



Decreased neurotransmission

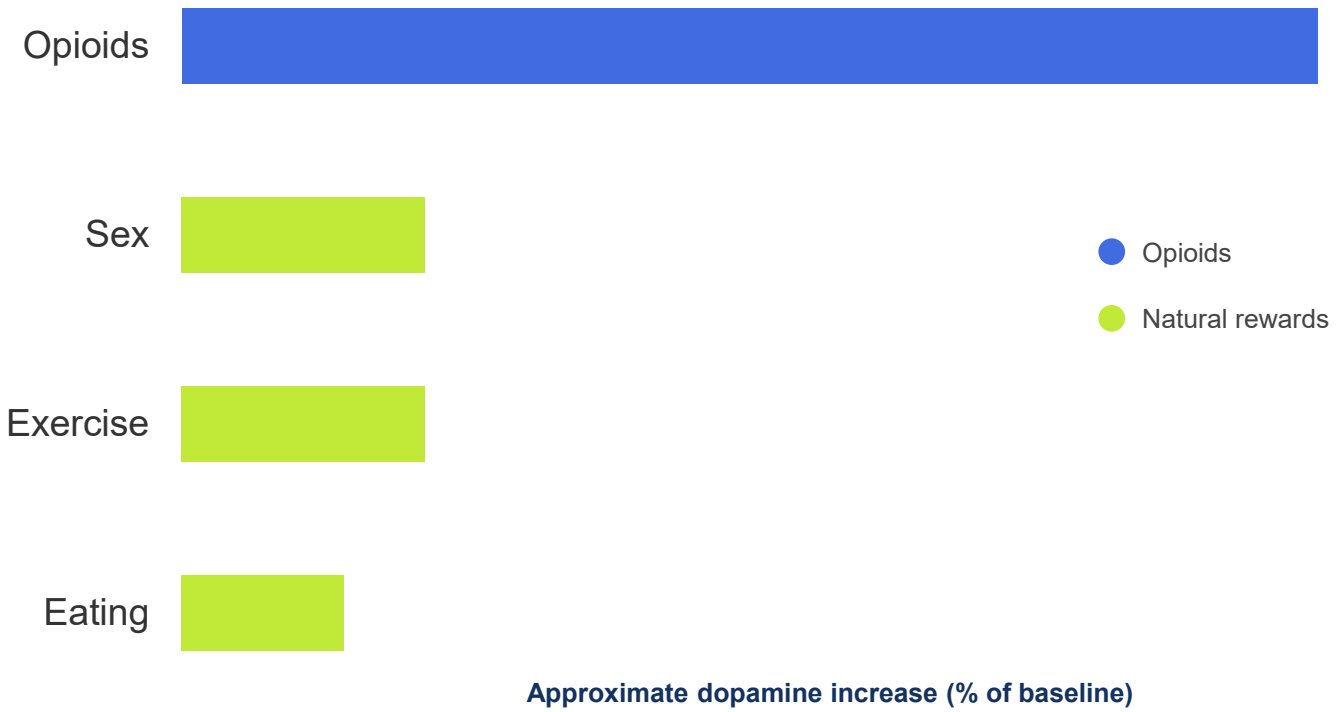
Clinical effects associated with MOR activation:

- Pain relief (analgesia)
- Sedation
- Respiratory depression
- Euphoria

$\alpha_{i/o}$, inhibitory G-protein alpha subunit; βγ, G-protein beta–gamma subunit; AC, adenylate cyclase; ATP, adenosine triphosphate; Ca^{2+}, calcium ion; cAMP, cyclic adenosine monophosphate; DOR, delta opioid receptor; K^{+}, potassium ion; KOR, kappa opioid receptor; MOR, mu opioid receptor. Dhaliwal A, Gupta M. Physiology, Opioid Receptor. StatPearls. 2023. Accessed March 23, 2026. https://www.ncbi.nlm.nih.gov/books/NBK546642/; Schematic made in BioRender.com

Opioids Flood the Brain's Reward System

Relative magnitude of dopamine increase above baseline in the nucleus accumbens (% above baseline)*[1–2]



Why This Matters for OUD

- Opioids cause dopamine surges **much greater (~200-300%)** than those from eating, music, or social interaction[1–3]
- With repeated use, the brain **recalibrates its baseline** — everyday activities no longer feel rewarding[4]
- Repeated/escalated use **increases the risk of overdose and death**[5]

*Approximate dopamine increases in the nucleus accumbens relative to baseline, based on in vivo microdialysis studies in rodents. Values vary by dose, route of administration, and brain subregion. OUD, opioid use disorder.

1. Di Chiara G, Imperato A. *Proc Natl Acad Sci USA*. 1988;85(14):5274–5278. 2. Pontieri FE, Tanda G, Di Chiara G. *Proc Natl Acad Sci USA*. 1995;92(26):12304–12308. 3. National Institute on Drug Abuse. Drug Misuse and Addiction. 2020. Accessed March 19, 2026. https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/drug-misuse-addiction 4. Volkow ND, Michaelides M, Baler R. *Physiol Rev*. 2019;99(4):2115–2140. 5. Bohnert ASB, Ilgen MA. *N Engl J Med*. 2019;380(1):71-79.

Cycle of Addiction for Opioid Use Disorder[1–2]



1 Binge/Intoxication

Brain region: Basal ganglia

A person uses opioids to feel euphoria, pleasure, or relief. Over time, the brain adjusts by reducing the effects of natural rewards and normalizing the effects of opioids, making it hard to feel pleasure from anything besides opioids.

2 Withdrawal/Negative Affect

Brain region: Extended amygdala

Without opioids a person experiences negative physical and emotional symptoms like depressed mood and sensitivity to stress and anxiety. A person continues to use opioids to relieve these symptoms and not to get "high."

3 Craving

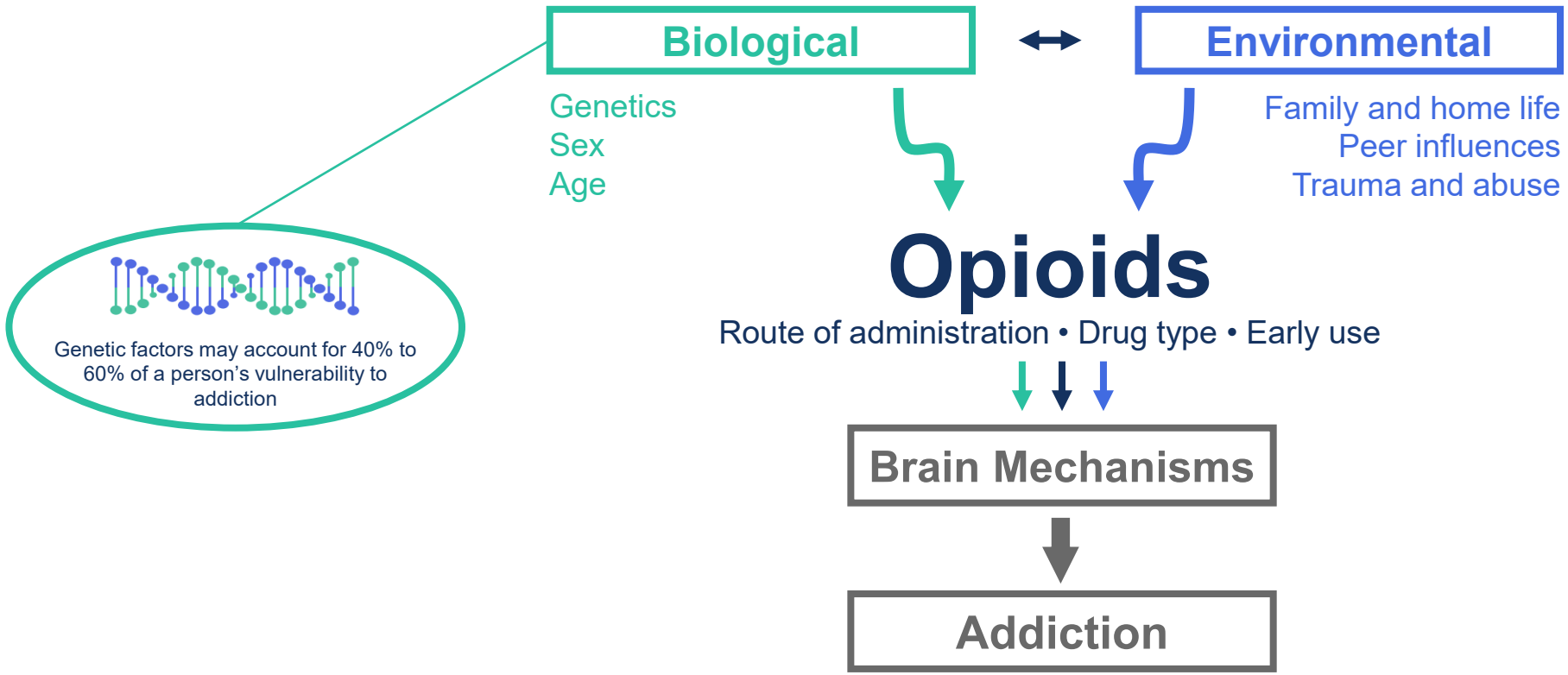
Brain region: Prefrontal cortex

Due to changes in the brain, a person experiences an intense desire to use opioids that they cannot control even when faced with harmful consequences.

1. Koob GF, Volkow ND. Neuropsychopharmacology. 2010;35(1):217-238. 2. Volkow ND, et al. *N Engl J Med*. 2016;374(4):363-371.

Risk Factors

- No single factor determines the risk of developing OUD — biological, environmental, and drug-related factors all play a role
- Combined with these factors, continued drug use drives physiological brain changes that impair judgment, decision-making, memory, and behavior control, leading to addiction



OUD, opioid use disorder. National Institute on Drug Abuse. Drug Misuse and Addiction. 2020. Accessed March 19, 2026. https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/drug-misuse-addiction

OUD Symptoms and Diagnosis

- OUD is diagnosed and classified based on DSM-5 criteria:
  - *Presence of **at least 2 of the 11 specified symptoms**, occurring within a 12-month period*

OUD Severity Classification

Category	Description
Mild	Presence of 2-3 symptoms
Moderate	Presence of 4-5 symptoms
Severe	Presence of 6 or more symptoms

	DSM-5 Criteria for Diagnosis of Opioid Use Disorder
1	Opioids taken in larger amounts or over a longer period than intended
2	Persistent desire or unsuccessful efforts to cut down or control use
3	Great deal of time spent obtaining, using, or recovering from opioids
4	Craving, or strong desire or urge to use opioids
5	Recurrent use resulting in failure to fulfill major role obligations
6	Continued use despite persistent social or interpersonal problems
7	Important activities given up or reduced because of opioid use
8	Recurrent use in physically hazardous situations
9	Continued use despite knowledge of a physical or psychological problem
10	*Tolerance, as defined by either of the following: (1) A need for markedly increased amounts of opioids to achieve intoxication or desired effect (2) Markedly diminished effect with continued use of the same amount of an opioid
11	*Withdrawal, as manifested by either of the following: (1) The characteristic opioid withdrawal syndrome (2) The same (or closely related) substance taken to relieve/avoid withdrawal

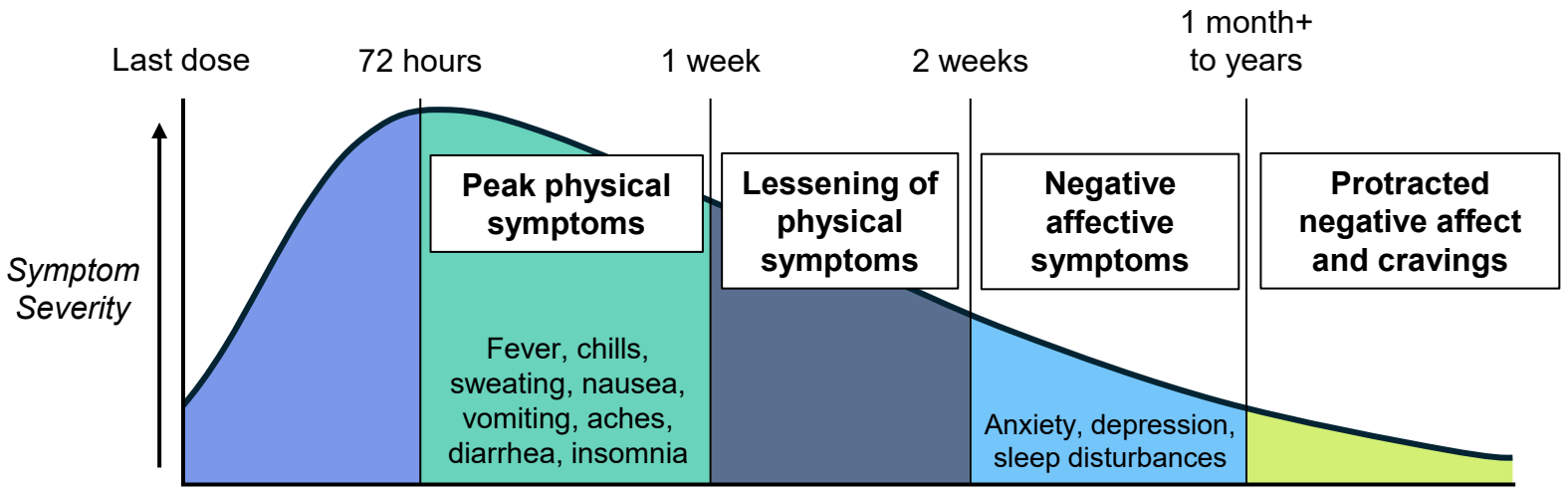
**Not counted in patients receiving opioids solely under appropriate medical supervision.*

DSM-5, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. OUD, opioid use disorder. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. American Psychiatric Publishing; 2013.

Opioid Withdrawal

- Patients may develop tolerance and dependence with persistent, chronic use of opioids[1]
- **Opioid withdrawal** is the manifestation of intense, unpleasant physical and psychological symptoms when an opioid-dependent individual stops or reduces their opioid use[1]

Timeline of Opioid Withdrawal Symptoms[1]

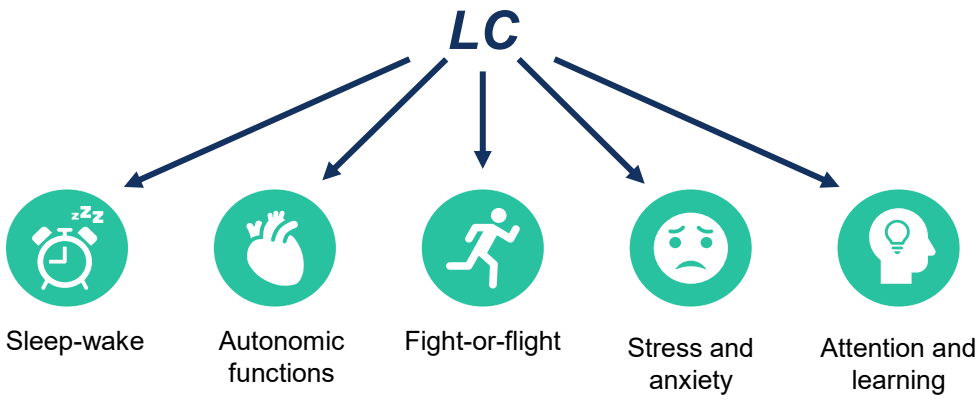


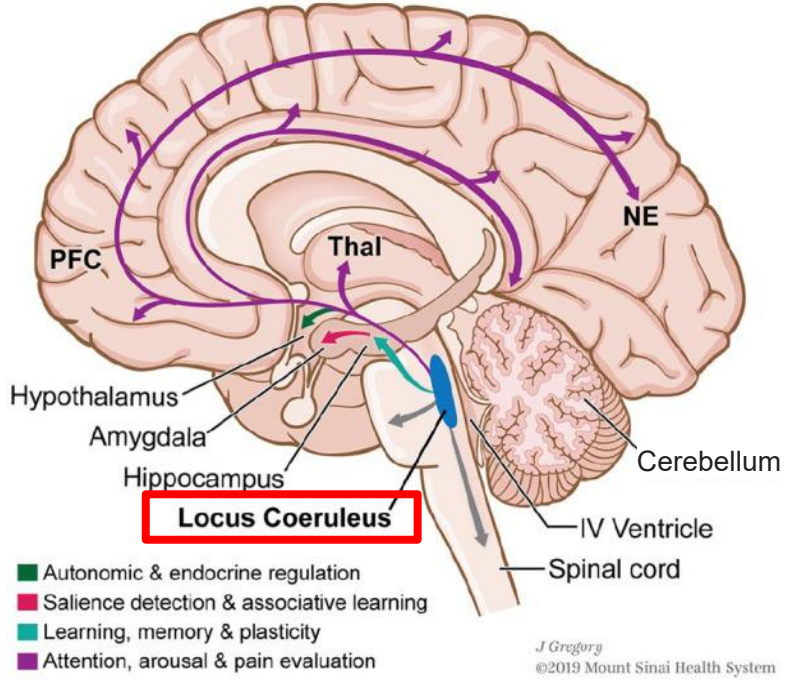
"Avoiding withdrawal" is cited as a leading cause for continued opioid use in patients with and without chronic pain[2]

1. Pergolizzi JV Jr, Raffa RB, Rosenblatt MH. *J Clin Pharm Ther*. 2020;45(5):892-903. 2. Weiss RD, et al. *J Subst Abuse Treat*. 2014;47(2):140-145.

The Neural Basis of Opioid Withdrawal

- Many brain regions involved in opioid withdrawal (locus coeruleus, habenula, amygdala, etc.)[1–2]
- Key example: Locus Coeruleus (LC) – role in physical symptoms of acute withdrawal[1]
  - LC is the major source of **norepinephrine** in the CNS[1]
  - MOR densely expressed in LC neurons; inhibits activity[1]
  - LC exhibits **rebound hyperactivity** during abstinence[1,3]
- This is just one neural mechanism of a biologically complex process





Adapted from Morris LS, et al. Brain Neurosci Adv. 2020;4:2398212820930321.

CNS, central nervous system; LC, locus coeruleus; MOR, mu opioid receptor. 1. Mazei-Robison MS, et al. *Cold Spring Harb Perspect Med*. 2012;2(7):a012070. 2. Welsch L, et al. *Biol Psychiatry*. 2020; 87:54-63. 3. Srivastava AB, Mariani JJ, Levin FR. New directions in the treatment of opioid withdrawal. *Lancet*. 2020;395(10241):1938-1948.

Clinical Assessment of Withdrawal: COWS

Clinical Opiate Withdrawal Scale

Symptom	Score Range	Max
Resting Pulse Rate	0: ≤80 | 1: 81-100 | 2: 101-120 | 4: >120	4
Sweating	0: None | 1: Chills/flushing | 2: Flushed | 3: Beads of sweat | 4: Streaming	4
Restlessness	0: Sits still | 1: Difficulty sitting | 3: Shifting/movements | 5: Can't sit still	5
Pupil Size	0: Pinned/normal | 1: Possibly larger | 2: Moderately dilated | 5: Only rim visible	5
Bone/Joint Aches	0: None | 1: Mild discomfort | 2: Severe aching | 4: Rubbing joints	4
Runny Nose/Tearing	0: None | 1: Stuffy/moist eyes | 2: Running/tearing | 4: Constantly running	4
GI Upset	0: None | 1: Cramps | 2: Nausea | 3: Vomiting/diarrhea | 5: Multiple episodes	5
Tremor	0: None | 1: Felt not observed | 2: Slight observable | 4: Gross tremor	4
Yawning	0: None | 1: Once or twice | 2: Three+ times | 4: Several times/min	4
Anxiety/Irritability	0: None | 1: Increasing | 2: Obviously anxious | 4: Difficult to assess	4
Gooseflesh Skin	0: Smooth | 3: Piloerection felt | 5: Prominent piloerection	5

Total Score Interpretation:

5-12: Mild	13-24: Moderate	25-36: Mod. Severe	>36: Severe

COWS, clinical opiate withdrawal scale. Wesson DR, Ling W. *J Psychoactive Drugs*. 2003;35(2).

Patient Assessment of Withdrawal: SOWS

Subjective Opiate Withdrawal Scale

Symptom	Score (0-4) 0=Not at all 1=A little 2=Moderately 3=Quite a bit 4=Extremely	Max
1. I feel anxious		4
2. I feel like yawning		4
3. I am perspiring		4
4. My eyes are tearing		4
5. My nose is running		4
6. I have goosebumps		4
7. I am shaking		4
8. I have hot flushes		4
9. I have cold flushes		4
10. My bones and muscles ache		4
11. I feel restless		4
12. I feel nauseous		4
13. I feel like vomiting		4
14. My muscles twitch		4
15. I have stomach cramps		4
16. I feel like using now		4

Total Score Interpretation:

1-10: Mild	11-20: Moderate	21-30: Severe

SOWS, subjective opiate withdrawal scale. Handelsman L, et al. *Am J Drug Alcohol Abuse*. 1987;13(3):293-308.

Treatment Approaches for OUD

Treatment Approaches for OUD

Once a patient is diagnosed with OUD and is determined to be medically and psychiatrically stable, the next step is to determine treatment

Treatment options include medications and psychosocial therapy

Treatment choice should be a shared decision between the clinician and patient	Evidence suggests that treatment with medications for OUD is superior to withdrawal management alone	Medication combined with psychosocial treatment is generally associated with the best clinical results

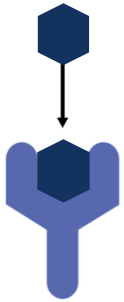
OUD, opioid use disorder. American Society of Addiction Medicine. The ASAM national practice guideline for the treatment of opioid use disorder: 2020 focused update. *J Addict Med*. 2020;14(2S).

FDA-Approved Medications for the Treatment of OUD

Methadone

Dosage Form:
- Oral (daily)

Treatment Considerations:
- Typically requires daily OTP visits
- Risk of misuse/abuse
- Monitoring required (e.g., risk of QTc prolongation and drug-drug interactions)



Full Agonist

Buprenorphine

Dosage Form:
- Transmucosal (daily)
- Subcutaneous injection (weekly or monthly)

Treatment Considerations:
- Blocks the effects of illicit opioids at therapeutic doses
- Precipitated withdrawal risk
- Risk of misuse/abuse

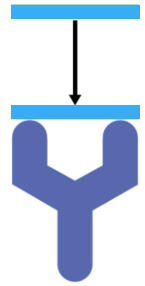


Partial Agonist

Naltrexone

Dosage Form:
- Intramuscular injection (monthly)

Treatment Considerations:
- Non–habit forming
- Precipitated withdrawal risk
- Loss of tolerance increases OD risk if opioids resumed
- Requires 7-10 opioid-free days



Antagonist

OD, overdose; OTP, opioid treatment program; OUD, opioid use disorder; QTc, corrected QT interval. American Society of Addiction Medicine. The ASAM national practice guideline for the treatment of opioid use disorder: 2020 focused update. *J Addict Med*. 2020;14(2S).

Treatment Goals of Pharmacologic Treatment for OUD

Treatment Goal

01

Suppress opioid withdrawal

Treatment Goal

02

Block the effects of illicit opioids

Treatment Goal

03

Reduce opioid craving and stop or reduce the use of illicit opioids

Treatment Goal

04

Promote and facilitate patient engagement in recovery-oriented activities including psychosocial intervention

OUD, opioid use disorder. The ASAM National Practice Guideline for the Treatment of Opioid Use Disorder: 2020 Focused Update. *J Addict Med*. 2020;14(2S).

Psychosocial Treatment for OUD

Psychosocial treatment: "*Any nonpharmacological, professionally administered interventions carried out in a therapeutic context at an individual, family, or group level*"

–American Society of Addiction Medicine (ASAM)

Therapeutic goals of psychosocial treatment are generally to:

1. Modify underlying processes that reinforce use behavior
2. Encourage adherence to treatment plan; and
3. Treat any concomitant psychiatric disorders that either complicate OUD or act as a trigger for relapse

A patient's decision to decline psychosocial treatment or the absence of available psychosocial treatment **should not preclude or delay MOUD**



MOUD, medications for opioid use disorder; OUD, opioid use disorder. American Society of Addiction Medicine. The ASAM national practice guideline for the treatment of opioid use disorder: 2020 focused update. *J Addict Med*. 2020;14(2S).

Assessment of Treatment Efficacy

Key Outcome Measures

Treatment Retention
- Duration of engagement in MOUD or psychosocial treatment programs[1–2]

Illicit Opioid Use Reduction
- Urine drug screening (UDS), self-reported opioid use, and reduction in frequency and intensity of relapse[1,3]

DSM-5 Remission Status
- Evaluated at 3, 6, and 12 months using DSM-5 OUD criteria[1–2]

Patient-Reported Outcomes
- Quality of life, functioning, and patient-centered treatment goals[1]

Morbidity & Mortality
- Overdose events, emergency department visits, and all-cause mortality[1]

Clinical Tools
- COWS, SOWS, and opioid craving scales may indicate treatment response[6]

Challenges in Measuring Efficacy

- No gold-standard outcome measure exists; significant heterogeneity across clinical trials limits cross-study comparisons[2]
- Abstinence-based measures may not reflect the goals of every individual patient[4]
- Missing UDS data and short assessment windows can skew results[1]
- Psychiatric comorbidities complicate evaluation; a majority of patients with OUD have a co-occurring mental health condition[5]

COWS, clinical opiate withdrawal scale; DSM-5, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; FDA, Food and Drug Administration; MOUD, medications for opioid use disorder; NIDA, National Institute on Drug Abuse; OUD, opioid use disorder; OUD-COS, opioid use disorder core outcomes set; SOWS, subjective opiate withdrawal scale; UDS, urine drug screening.

1. FDA Guidance: OUD: Endpoints for Demonstrating Effectiveness of Drugs for Treatment. 2020. 2. Karnik NS, et al. *Addiction*. 2022;117:2438-2447. 3. Rush AJ, et al. *Addict Sci Clin Pract*. 2024;19(1):14. 4. Hooker SA, et al. J *Subst Abuse Treat*. 2022;141:108804. 5. Santo T Jr, et al. *Drug and Alcohol Dependence*. 2022;238:109551. 6. Boyett B, et al. *Drug Alcohol Depend*. 2021;229:109057.

Barriers to MOUD Treatment

Opioid overdose deaths decline but treatment gaps remain

17%

Of 4.8M people ages 12+ with OUD received MOUD in 2024[1]

Disparities in Treatment Access

- Adolescents & ages 18-25
- Females
- Black & Hispanic individuals
- Unemployed or unhoused
- Regional / geographic disparities

Overdose deaths declining — but <1 in 5 patients receive medication treatment[1]

ED, emergency department; MOUD, medications for opioid use disorder; OUD, opioid use disorder. 1. Substance Abuse and Mental Health Services Administration. Key substance use and mental health indicators in the United States: results from the 2024 National Survey on Drug Use and Health. Publication No. PEP25-07-007. 2025. Accessed April 30, 2026. https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health/national-releases

Factors that limit MOUD access

Patient, provider, and system-level barriers limit MOUD access

Patient Barriers

- **Stigma** from family, friends, employers, and healthcare providers – most common barrier
- **Myths & misconceptions** drive negative MOUD perceptions: “trading one addiction for another,” “liquid handcuffs”
- **47%** of adults with OUD don’t think they need treatment; 30% received non-MOUD treatment[1]
- Employment, transportation, and immigration status barriers
- Racial and ethnic patient mistrust of the healthcare system

Provider Barriers

- **Time constraints** and limited resources for addiction treatment
- **Staffing shortages** and inadequate reimbursement for MOUD services
- **Provider stigma** across clinics, EDs, hospitals, and pharmacies
- Insufficient education and training in addiction medicine

System Barriers

- **Treatment deserts** in rural areas; shortage of addiction medicine providers
- **Pharmacy access:** 40–50% of US pharmacies lack available buprenorphine
- **31.9%** of patients unable to obtain buprenorphine due to pharmacy barriers; most common: “out of stock”
- **Methadone restrictions** and closing brick-and-mortar pharmacies[2–3]
- Insurance coverage and cost barriers[4]

ED, emergency department; MOUD, medications for opioid use disorder; OUD, opioid use disorder; US, United States. 1. Dowell, D, et al. *MMWR*. 2024;73(25);567-574. 2. Kazerouni, N. et al. *Drug Alcohol Depend*. 2021;224:108729. 3. Hendy L, et al. *JAMA Network Open*. 2025;8(8):e2527418. 4. McGinty EE, et al. *Health Aff Sch*. 2024;2(3).

Impact of Stigma on People with OUD

Substance use disorders are some of the **most stigmatized health conditions** and are more likely to be viewed as a personal choice or “bad character” compared to other health conditions, which can deter individuals from seeking or continuing treatment[1–2]

Societal Views[3]

~9 in 10 Believe the burden of solving the overdose crisis falls on individuals with OUD

>80% View opioid overdose as a serious problem — yet stigma persists

38/58% Unwilling to live near/ marry someone with OUD, respectively

Institutional Systems[1]

Healthcare Systems

Reinforce a moral binary between "good" and "bad" opioid users — perpetuating stigma in people with OUD

Criminal Justice Systems

Misconceptions about the purpose and benefits of treatment leading to programs that are often unavailable or poorly implemented

Policy Implications[1]

Higher stigma drives preference for punitive over public health–oriented opioid policies

May hinder **evidence-based policy** for prevention and treatment of OUD including:

- Expanded treatment access
- Harm reduction programs
- Non-punitive approaches

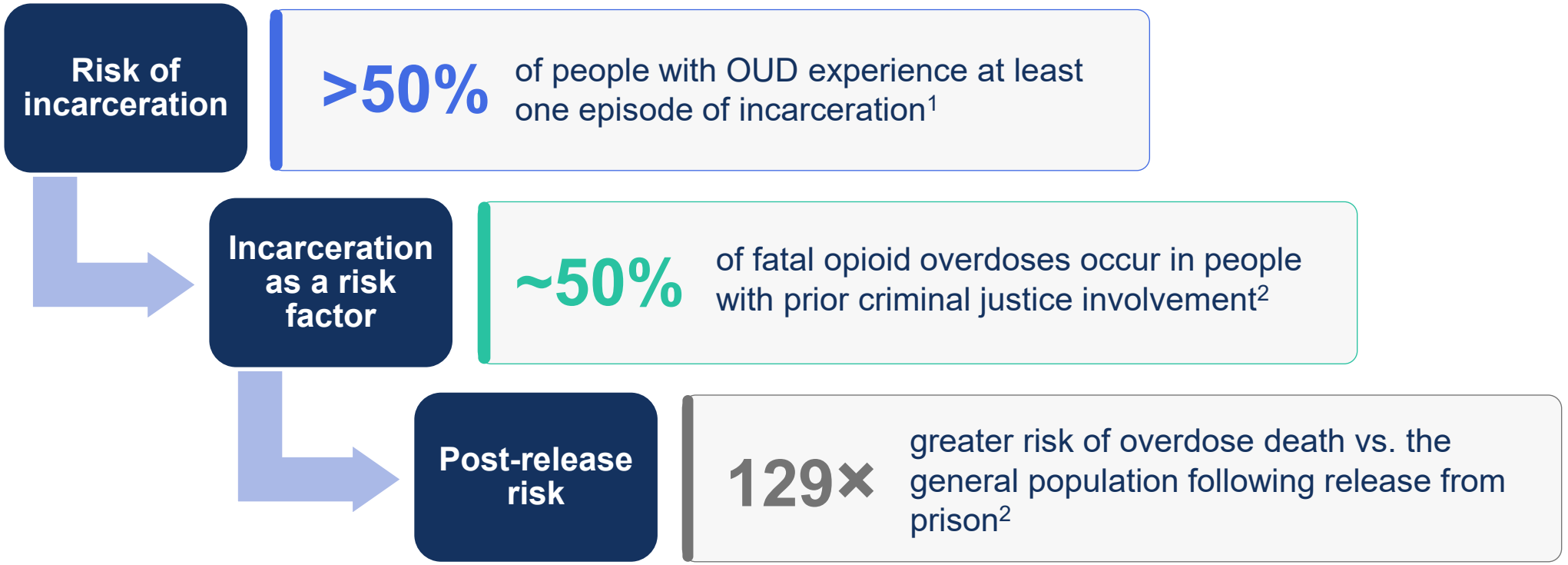
OUD, opioid use disorder. 1. Cheetham A, et al. *Subst Abuse Rehabil*. 2022 Jan 25;13:1-12. 2. Zweben JE. *J Addict Med.* 2021;15: 454–460. 3. McGinty EE, et al. *JAMA Netw Open*. 2026;9(1):e2554314.

Language Matters

STIGMATIZING	NON-STIGMATIZING
⊗ Substance abuser ⊗ Addict ⊗ Abuser ⊗ Drug abuser ⊗ User ⊗ Junkie	✓ Person with a substance use disorder
⊗ Drug habit ⊗ Problem ⊗ Abuse	✓ Substance use disorder or addiction ✓ Use, misuse ✓ Risky, unhealthy, or heavy use
⊗ Clean	✓ Person in recovery ✓ Abstinent ✓ Not taking drugs
⊗ Substitution or replacement therapy ⊗ Clean, dirty	✓ Treatment or medication for addiction ✓ Positive, negative (toxicology screen results) ✓ Medication for opioid use disorder
⊗ Addicted babies ⊗ Born addicted	✓ Babies born with an opioid dependency

Boston Medical Center. Reducing stigma. Accessed March 19, 2026. https://www.bmc.org/addiction/reducing-stigma

OUD in the Criminal Justice System



OUD, opioid use disorder. 1. Lutgen-Nieves L. From the general public to America's jails: MAT saves lives. NCCHC Foundation. 2021. Accessed March 19, 2026. https://www.ncchc.org/wp-content/uploads/From_the_General_Public_to_Americas_Jails_-_MAT_Saves_Lives.pdf. 2. Berk J, et al. *J Addict Med*. 2022;16(4):396-398.

Prevalence and Impact of OUD in the Criminal Justice System

OUD Prevalence in Correctional Settings

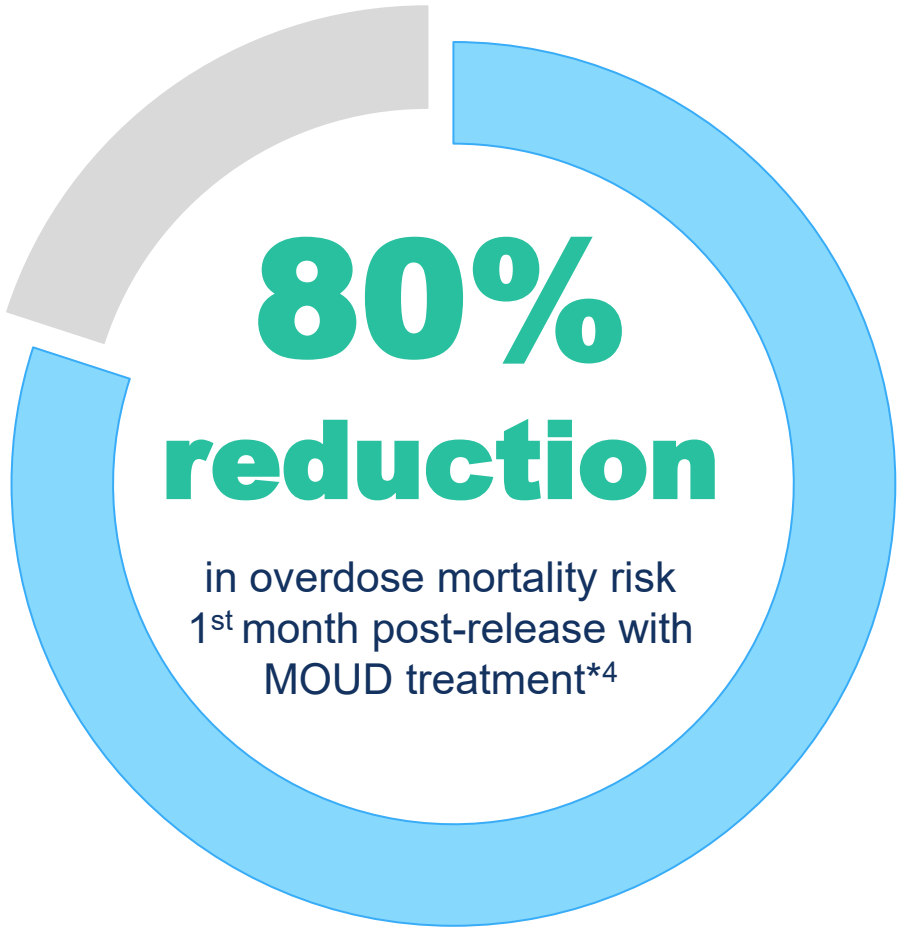
- 15% of the 1.8 million individuals incarcerated in the US have OUD[1]
- 75% of individuals incarcerated have OUD in some local cases[2]

Criminal Justice Costs

- $52 billion OUD-related costs from US criminal justice system in 2024[3]
- ~80% of these costs were accounted for by state/local criminal justice systems[3]

MOUD Treatment Access & Outcomes

- Significant reduction in overdose mortality risk 1st month post-release with MOUD treatment*[4]
- Only 12-43% of facilities provide MOUD depending on program criteria[5]
    - Southern states report <10% treatment access[6]



*Based on MOUD in NYC jails, 2011-2017. MOUD, medications for opioid use disorder; NYC, New York City; OUD, opioid use disorder; US, United States. 1. Thakrar AP, et al. *JAMA Netw Open*. 2021;4(12):e2138807. 2. Weisend A. The Columbian. 2024. Accessed April 21, 2026. https://www.columbian.com/news/2024/apr/17/as-fentanyl-use-increases-clark-county-jail-grapples-with-opioid-withdrawals/ 3. Avalere Health. The Cost of Opioid Addiction. 2025. 4. Lim S, Cherian T, Katyal M, et al. *Addiction*. 2023;118(3):459–467. 5. Flanagan Balawajder E, Ducharme L, Taylor BG, et al. JAMA Netw Open. 2024;7(9):e2434704.6. Wolfe, C., Gaiazov, S., Valera, P., Mullen, W., MacDonald, R., & Heidbreder, C. *Journal of Correctional Health Care.* 2026;32(2), 132-144.

Key Takeaways

- OUD is a **chronic, relapsing brain disorder** (not a moral failing) driven by neurobiological changes in the brain's reward, stress, and self-control circuits
- The opioid crisis remains a major public health emergency: **4.8 million** people have OUD, with an estimated **$4 trillion** in annual economic burden
- Three FDA-approved medications (**methadone, buprenorphine, naltrexone**) combined with psychosocial treatment offer the most effective approach
- Despite declining overdose deaths, significant **treatment gaps persist**: fewer than 1 in 5 adults with OUD receive MOUD, with disparities across age, race, and geography
- Stigma is a critical barrier: it shapes public opinion, limits evidence-based policy, and discourages individuals from seeking treatment
- Criminal justice populations face disproportionate OUD burden, with **129× greater overdose risk** post-release — underscoring the need for treatment continuity

FDA, Food and Drug Administration; MOUD, medications for opioid use disorder; OUD, opioid use disorder.

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thank you.