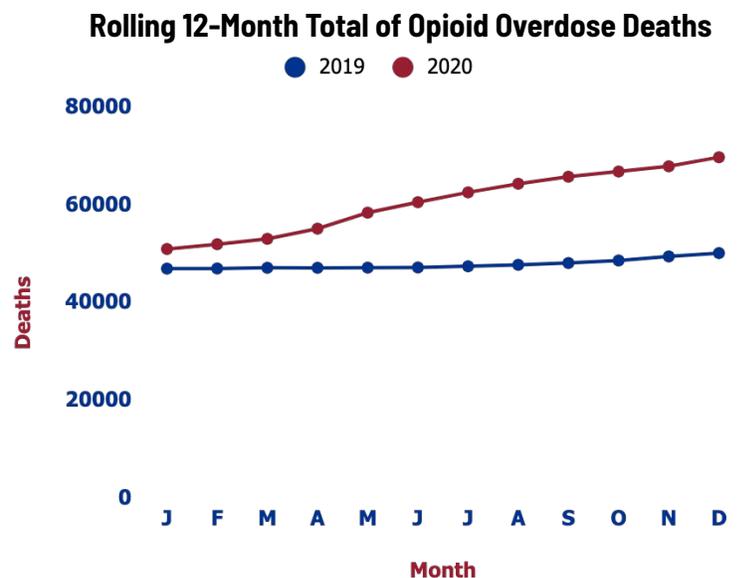


# Opioids: The Epidemic Within the Pandemic

**Opioid Epidemic** The increased prescription of opioids for pain management in the 1990s combined with the rise in distribution and access to heroin have accelerated opioid use in the United States<sup>1</sup>. In the last decade, widespread use of synthetic opioids has caused a spike in opioid-related deaths — over **57,000** deaths by overdose in 2020 were due to synthetic opioids<sup>2,3</sup>. Even with a **44%** decrease in opioid prescriptions in the past decade, drug overdose deaths continue to rise<sup>4</sup>.

**Pandemic Impact** In the 12-month period beginning in March 2020 — when pandemic shutdowns began in the U.S. — drug overdose deaths from opioids rose **38%**<sup>2</sup>. The COVID-19 pandemic has escalated the challenge of combating the already tragic opioid epidemic.

In an analysis of electronic medical records, hospital patients who received a diagnosis of OUD were more likely to have COVID-19<sup>5</sup>. The negative impacts on heart and lung health from OUD increase susceptibility of those with OUD for severe COVID-19.



## How does opioid use lead to opioid use disorder?

In addition to alleviating pain, opioids induce feelings of pleasure by hijacking the body's natural reward system. Tolerance to opioids can build after repeated use, leading to increased amounts being required to reach the same pleasurable feelings or to sustain pain relief. **Opioid use disorder (OUD)** — commonly referred to as opioid addiction — is a disease that consists of chronic opioid use despite negative consequences. Opioid withdrawal, which occurs when usage declines or stops, can be difficult to tolerate.

- Of those using opioids for chronic pain, **8%–12%** develop an OUD<sup>6</sup>.
- Among heroin users, **80%** first misused prescription opioids.
- OUD is pervasive in the U.S., affecting over **2.1 million** Americans<sup>7</sup>.
- **More than 73,000 Americans died of an opioid overdose in 2020**<sup>2</sup>.
- According to an estimate from the CDC, OUD costs in the U.S. total **\$78.5 billion** each year<sup>8</sup>.

**What are opioids?** Opioids are substances used to manage pain. They are produced naturally in the body, are found in nature, and can be chemically synthesized.

## Why is OUD difficult to overcome?

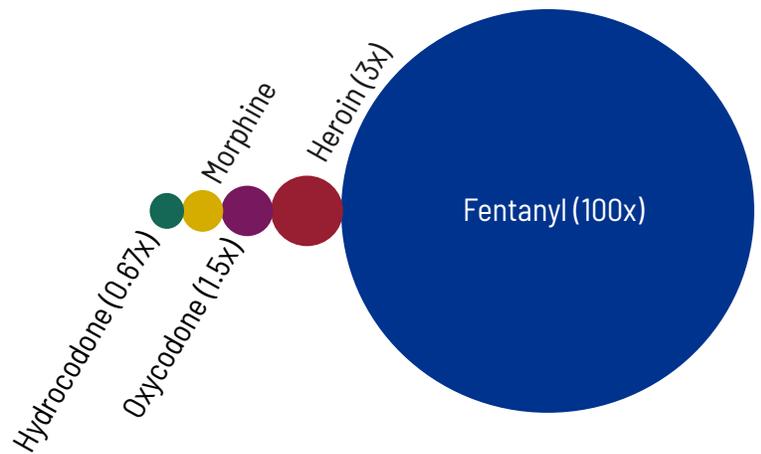
- Long-term opioid use alters brain function.
- Access to care is a major challenge compromising efforts to provide treatment and care<sup>9,10,11,12</sup>.
- People with OUD often face other health conditions: alcoholism, chronic pain, and Hepatitis C<sup>13</sup>. In 2016, **62%** of adults with OUD had a co-occurring mental illness (anxiety, depression, PTSD, ADHD, etc.)<sup>14</sup>. These comorbidities can further complicate treatment and recovery.

## How are overdoses treated?

Naloxone is a life-saving medication used to reverse opioid overdose<sup>15</sup>. It is available as both a nasal spray (brand name Narcan) and an injectable (brand name Evzio). These forms can be administered without medical training.

Naloxone is available in all 50 states and can be obtained without a prescription in most states. While it cannot reverse overdose of non-opioid drugs, it will not cause harm if administered for overdose of other drug classes<sup>15</sup>.

## Opioid Strength (Relative to Morphine)



Sources: <https://jpet.aspetjournals.org/content/136/1/43>  
<https://www.ncbi.nlm.nih.gov/books/NBK537482/table/appannex6.tab2/>

## COVID-19's impact on overdose therapy

During the pandemic, there was a 26% reduction<sup>4</sup> in the number of naloxone prescriptions filled in retail pharmacies, reducing the prevalence of one of the most powerful tools for reversing opioid overdose.

The increase in overdose deaths in 2020 was caused, in part, by the rise in the prevalence of fentanyl<sup>3</sup>. Fentanyl is a synthetic opioid 100 times more potent than morphine, and is added to other drugs (often without the knowledge of the user) to increase potency.

## Therapies for Opioid Use Disorder

While multiple therapies are available to treat OUD, there is no cure.

### Pharmaceutical Intervention (Medication-Assisted Treatment)

**Buprenorphine:** An opioid medication used to treat OUD – it has reduced side effects compared to methadone<sup>i,17</sup>.

**Buprenorphine and naloxone:** Combining naloxone with buprenorphine helps patients manage withdrawal symptoms and reduces the misuse potential of buprenorphine<sup>17</sup>.

**Methadone:** An opioid medication used to manage opioid withdrawal symptoms – it can be used as a maintenance therapy<sup>18</sup>.

**Naltrexone:** A treatment that blocks the effects of opioids and reduces cravings<sup>i,19</sup>.

<sup>i</sup>The injectable form is long-lasting, which can help with medication adherence.

### Behavioral Intervention

**Contingency management:** Rewards patients with gifts or incentives for drug abstinence<sup>20</sup>.

**Community reinforcement:** Weekly therapy sessions help patients overcome their addiction<sup>21</sup>.

**12-step therapy program:** Structured self-help groups work through a 12-step process to achieve abstinence<sup>22</sup>.

## COVID-19 Disrupted Access to Therapy

Research suggests that the COVID-19 pandemic exacerbated the existing shortage of methadone clinics for those pursuing treatment<sup>23</sup>. Social distancing and other COVID-19 restrictions prevented in-person 12-step meetings, which are a critical facet of recovery for many people with OUD<sup>24</sup>. Though some services were made available via telehealth, internet access is a factor limiting who can benefit from telehealth programs<sup>25</sup>.

## Research at Work

### [Medical University of South Carolina \(MUSC\)](#)

The Center for Opioid and Cocaine Addiction (COCA) seeks to understand the neurological mechanisms that contribute to relapse and design treatments that prevent relapse.

### [Icahn School of Medicine at Mount Sinai](#)

Researchers are investigating the genetic basis and neural circuits involved in drug addiction. Funding from NIH's Helping to End Addiction Long-term (HEAL) initiative allows researchers to discover new treatments for drug addiction and accelerate early-phase clinical trials for non-addictive pain therapies.

### [Virginia Tech](#)

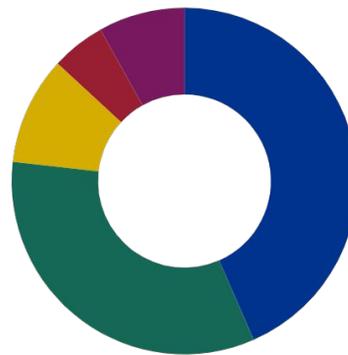
A grant from the National Institute on Drug Abuse (NIDA) at NIH allows Virginia Tech researchers to work on the development of a vaccine to counteract opioid addiction.

### [Yale University School of Medicine](#)

A grant from NIH's HEAL initiative will enable researchers at Yale to launch the IMPOWR-YOU Research Center, which will harness an integrative approach to conducting opioid research.

Please indicate the **extent to which you agree that opioid abuse and addiction is a major problem in your community.**

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2021.



- Strongly Agree (43%)
- Somewhat Agree (33%)
- Somewhat Disagree
- Strongly Disagree
- Not Sure

## The Future of Opioid Research

Elucidating the biological basis of opioid addiction, developing better opioid blockers that are more effective against stronger, synthetic opioids, and investigating new methods of treating chronic pain are a few of the ways research will save countless lives in confronting the opioid epidemic.

Emerging investigations looking at the intersection of the opioid epidemic and COVID-19 pandemic range from assessing the effects of the pandemic on harm reduction to the association of chronic pain and COVID-19 diagnosis or complications.

Resolving complex regulatory issues that bear on opioid research can lead to faster progress. There is interest in Congress on this issue, including hearings, such as [The Overdose Crisis: Interagency Proposal to Combat Illicit Fentanyl-Related Substances](#) and legislation, including the [Streamlining Research on Controlled Substances Act of 2021](#).

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