



OPIOID USE, OVERDOSE, AND SUICIDE

Suicide and unintentional overdose represents a major threat to public health. The number of deaths from both suicide and unintentional overdose increased from 41,364 in 2000 to 110,749 in 2017. These conditions have connections with both pain and opioid use; however, less is known about how opioids contribute to suicidality. This issue of *CLIPs* explores how suicide and overdoses may be related to each other. If you need further information, please contact the Center for Healthcare Innovation and Patient Outcomes Research (CHIPOR) at chipor@samford.edu.

Bohnert A, Ilgen MA. Understanding links among opioid use, overdose, and suicide. *N Engl J Med.* 2019;380:71-9.

Pain, suicidality, and overdose

- Pain is associated with changes in neurocircuitry related to reward, which may increase vulnerability to suicidality.
- Epidemiologic data indicate that chronic pain diagnoses are linked to suicide.
- Suicidality is also linked to opioid use, as it relates to the quantity of opioids prescribed.

Drivers of opioid prescribing / supply and demand

- Opioids became more commonly used to treat chronic pain in the United States beginning in the early 2000 due to the declaration of pain being the “fifth vital sign”.
- As a result, the average dose of prescribed opioids in the US increased from approximately 100 to 700 morphine mg equivalents per person per year between 1997 and 2007.
- Increases in demand for opioids and the increased supply of opioids also played a role in overdoses and suicidalities.
- Opioid use worsens depressive symptoms and increases the risk of suicide from both intentional and unintentional deaths.
- Higher dosages of prescribed opioids are associated with a higher risk of overdose.

Intent of overdose

- Intentional overdoses may be classified as a type of suicide.
- Few suicide notes are found in overdose deaths.

Risk factors for suicide and overdose

- Several factors are related to suicide and overdose.
- Both suicide and unintentional overdose were twice as high among men as among women.
- In 2017, Death rates for both were highest among whites or Native Americans compared to those who were black or Asian.
- Higher rates for both were during midlife (41 to 64 years of age).
- Although suicide rates remain high for white men aged 65 years or older, unintentional overdose declined greater after 64 years.
- Black and Native American men and women, as well as white women, had higher rates of unintentional overdose than of suicide during midlife.
- Most mental health conditions and unintentional overdose are linked to an increased risk of suicide.
- Patients with substance abuse disorders have depressive symptoms that are associated with suicide attempts and nonfatal overdoses.

Suicide / overdose prevention

- Several electronic risk scores have been developed to calculate a patient's level of risk for suicide, overdose, or both based on data from electronic health records.
- Counseling or psychotherapy are mainstays of treatment.
- Reduction in opioid dosage can be considered; however, clinicians should inquire about patients' access to opioids to reduce lethal means of causing an intentional or unintentional opioid overdose.
- Tapering protocols have been developed that reduces the use of opioids gradually, but it is unknown whether tapering changes suicidal ideations.
- Patients may benefit from improving access to medication-assisted therapy (e.g., methadone, buprenorphine-naloxone, or naltrexone). The death risk is highest when the medication is first initiated or stopped abruptly.

Unresolved issues

- More research needs to be done in a variety of areas.
- There are concerns that opioid tapering has resulted in transitioning to heroin use and uncontrolled pain; thereby, increasing the risk of suicidality.
- The risk of overdose or suicide is largely based on data from medical claims or records.
- As a result, additional modalities to assess opioid misuse needs to be developed, validated, and more commonly used.

Conclusion

- Rates of suicidality and overdose has increased substantially in the US.
- Opioid use has been associated with some of these increases.
- Interventions that address shared risk factors (e.g., programs to improve pain care, expand access to psychotherapy, and increased access to medication-assisted treatment for opioid use disorders) may be used to address both problems.