



# Unintentional Poisoning Deaths in U.S. Infants, Children, and Adolescents

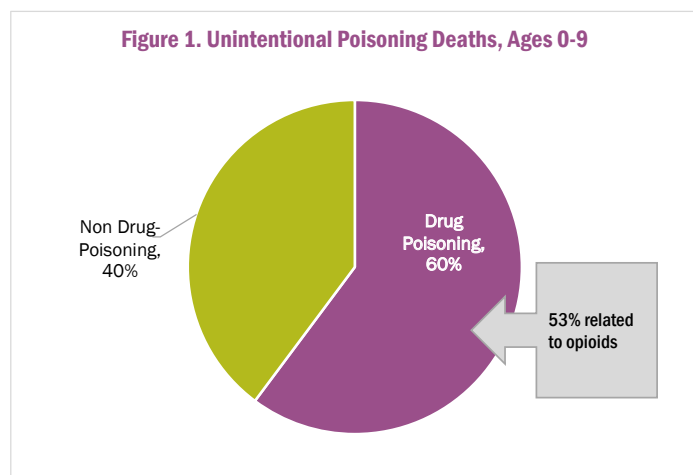
According to the Centers for Disease Control and Prevention (CDC),<sup>1</sup> “a poisoning occurs when a person’s exposure to a natural or man-made substance has an undesirable effect.” Unintentional poisoning refers to poisoning that was not inflicted by deliberate means and was described as accidental.<sup>2</sup> Unintentional drug poisoning includes drug overdoses that result from drug misuse, drug abuse, and taking too much of a drug for medical reasons.<sup>1</sup>

Unless otherwise noted, 2016-2020 CDC WISQARS data is used, which is based on the fatality data in the National Vital Statistics System. Deaths were defined as unintentional poisoning according to the International Classification of Diseases, 10th Revision (ICD-10) underlying cause-of-death codes X40-X49. Unintentional drug poisoning deaths were identified using ICD-10 codes X40-X44.

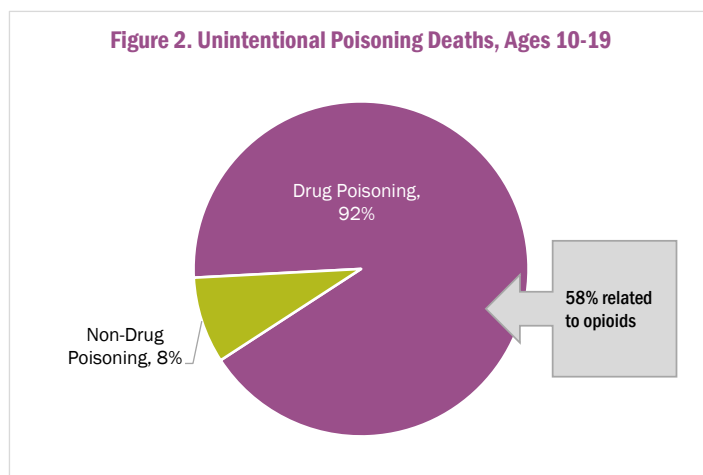
## On average before the COVID-19 pandemic between 2016-2019<sup>3</sup>

Approximately 49 U.S. infants and children ages 0-9 died from unintentional poisoning each year.

Approximately 725 U.S. adolescents ages 10-19 died from unintentional poisoning each year.



Source: CDC WISQARS, 2016-2019



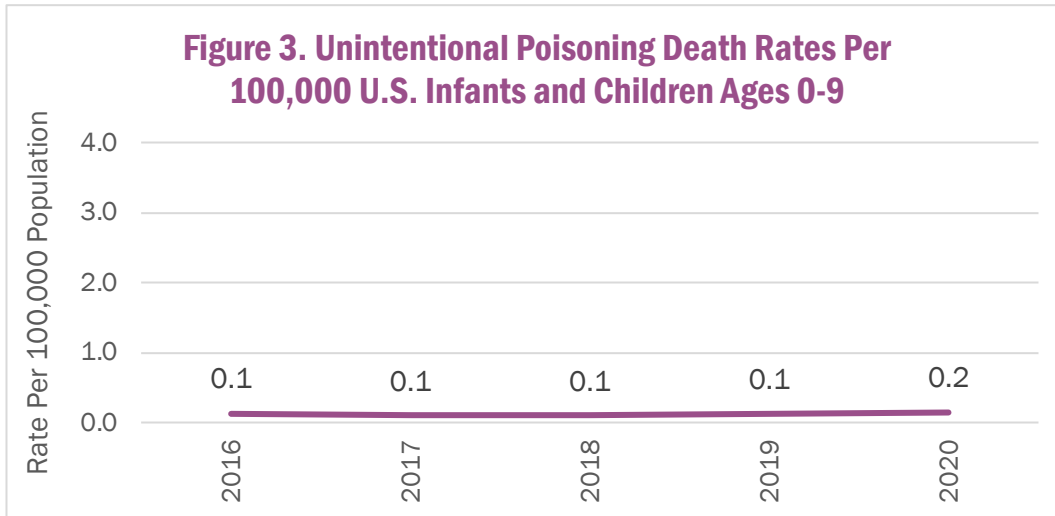
Source: CDC WISQARS, 2016-2019

Note: Non-drug poisoning includes alcohol, organic solvent, other gas, vapor, and other/unspecified chemical.

# Unintentional Poisoning Death Rates Higher in 10-19 Age Group than in 0-9 Age Group

For infants and children ages 0-9, in 2020,<sup>4</sup>

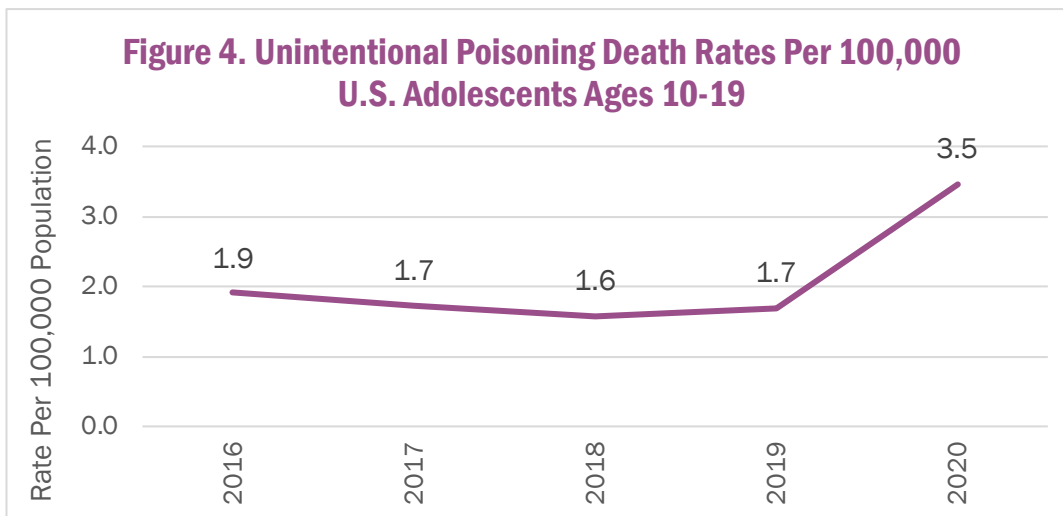
- The number of unintentional poisoning deaths was 63.
- Drug poisoning was related to 73% of the unintentional poisoning deaths.
- Opioids were involved in 54% of the unintentional drug poisoning deaths in this age group.



Data Source: CDC WISQARS, 2016-2020

For adolescents ages 10-19, in 2020,<sup>4</sup>

- The number of unintentional poisoning deaths was 1,448.
- Drug poisoning was related to 96% of the unintentional poisoning deaths.
- Opioids were involved in 73% of the unintentional drug poisoning deaths in this age group.



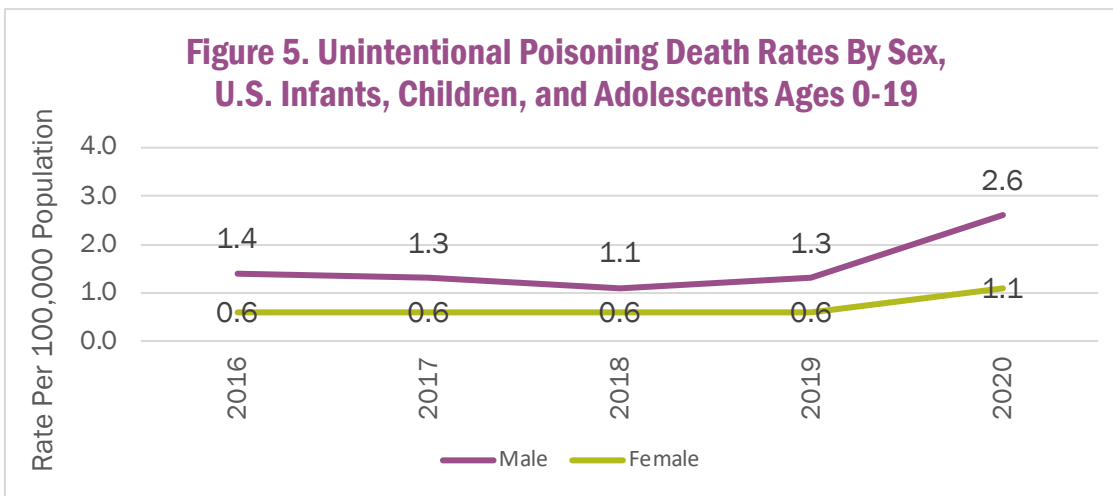
Data Source: CDC WISQARS, 2016-2020

A recent *Morbidity and Mortality Weekly Report* study used CDC’s State Unintentional Drug Overdose Reporting System (SUDORS) data from July 2019–December 2021 found that among adolescents ages 10-19,<sup>5</sup>

- Approximately 90% of deaths involved opioids, and 84% involved illicitly manufactured fentanyl.
- Approximately 41% of decedents had documented mental health history, including mental health treatment, diagnosed depression, or suicidal or self-harm behaviors.
- Nearly 60% of the deaths occurred at the decedent’s home.
- Potential bystanders were present in 67% of the deaths, although most provided no overdose response.

## Unintentional Poisoning Death Rates Higher in Male than Female Infants, Children, and Adolescents

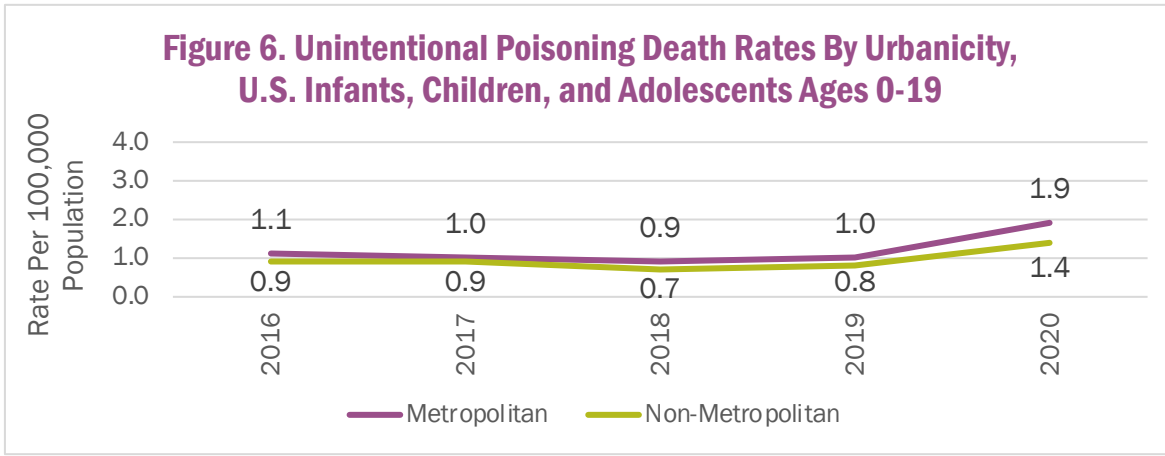
- Aggregated data from 2016-2019 shows that the unintentional poisoning death rate was higher for male (1.3 per 100,000) compared to female (0.6 per 100,000) infants, children, and adolescents.<sup>3</sup>
- The death rate in 2020 was 100% higher than the death rate in 2019 for male infants, children, and adolescents. For female infants, children, and adolescents, the rate in 2020 was approximately 83% higher than in 2019.<sup>4</sup>



Data Source: CDC WISQARS, 2016-2020

## Unintentional Poisoning Death Rates Vary by Metropolitan/Non-Metropolitan Area

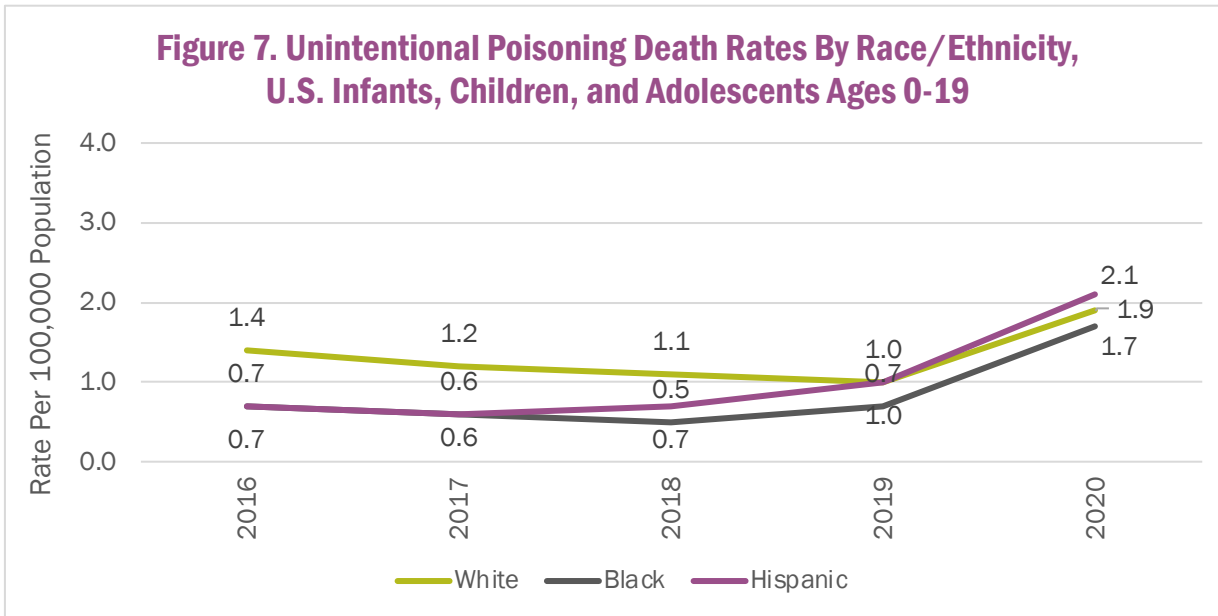
- Between 2016-2019, aggregated data indicates slightly higher unintentional poisoning death rate for infants, children, and adolescents in metropolitan areas (1.0 per 100,000) than in non-metropolitan areas (0.8 per 100,000).<sup>3</sup>
- The death rates in 2020 were approximately 90% higher in metropolitan areas and 75% higher in non-metropolitan areas compared to 2019.<sup>4</sup>



Data Source: CDC WISQARS, 2016-2020

### Race/Ethnicity Gap in Unintentional Poisoning Death Rates Narrowing Over Time

- Aggregated data from 2016-2019 shows higher rates of unintentional poisoning death for American Indian/Alaska Native (1.9 per 100,000), followed by White (1.2 per 100,000), Hispanic (0.7 per 100,000), Black (0.6 per 100,000), and Asian/Pacific Islander (0.3 per 100,000) infants, children, and adolescents.<sup>3</sup>
- Compared to 2019, the death rates in 2020 were approximately 90% higher for White, 110% higher for Hispanic, and 143% higher for Black infants, children, and adolescents.<sup>4</sup>



Data Source: CDC WISQARS, 2016-2020

Note: Death rates for American Indian/Alaska Native and Asian/Pacific Islander children and adolescents are not shown due to unstable values (<20 deaths per year). In 2020, the rates were 2.9 per 100,000 and 0.7 per 100,000, respectively.

## Individual-Level Poisoning Prevention Recommendations

Keep medicine, chemicals, cleaning products and batteries locked, out of sight and out of reach of children.

Keep products in their original containers and read the instructions carefully.

Never call medicine “candy.”

Safely dispose of unused or expired medicine and other hazardous substances.

Save the Poison Help Line in your phone: 1-800-222-1222.

## System-Level Poisoning Prevention Recommendations

Educate providers, youth and the public on drug overdose, including information about the prevalence and dangers of fentanyl and the risks and consequences of mixing drugs.

Educate the public on proper storage and disposal of medications as an important part of medicine safety.

Implement school-based and family-focused programs on resilience and connectedness of adolescents to help prevent substance misuse and related harms.

Strengthen legislation and policies related to the Prescription Drug Monitoring Program (PDMP), Good Samaritan Laws, and Naloxone programs.

Implement and expand harm reduction services, including overdose education, naloxone distribution, fentanyl test strips and syringe services.

Implement anti-stigma campaigns to remove barriers to treatment and to medications for treatment.

## Resources

- Health Resources and Services Administration’s Poison Help – [www.poisonhelp.hrsa.gov](http://www.poisonhelp.hrsa.gov)
- Centers for Disease Control and Prevention PROTECT Initiative – [www.cdc.gov/medicationsafety/protect/protect\\_initiative.html](http://www.cdc.gov/medicationsafety/protect/protect_initiative.html)
- Centers for Disease Control and Prevention Promising Strategies – [www.cdc.gov/drugoverdose/strategies/index.html](http://www.cdc.gov/drugoverdose/strategies/index.html)
- American Academy of Pediatrics Tips for Parents – [www.healthychildren.org/English/safety-prevention/all-around/Pages/Poison-Prevention.aspx](http://www.healthychildren.org/English/safety-prevention/all-around/Pages/Poison-Prevention.aspx)
- Children’s Safety Network Webinar on Poisoning Prevention: New Challenges and a Novel Tool – [www.childrenssafetynetwork.org/events/csn-webinar/poisoning-prevention-new-challenges-novel-tool](http://www.childrenssafetynetwork.org/events/csn-webinar/poisoning-prevention-new-challenges-novel-tool)
- Children’s Safety Network Leveraging Funding Sources and Partnerships in Child and Adolescent Injury Prevention – <https://www.childrenssafetynetwork.org/resources/leveraging-funding-sources-partnerships-child-adolescent-injury-prevention>

## References

1. Centers for Disease Control and Prevention. Unintentional Drug Poisoning in the United States. Available from [https://www.cdc.gov/medicationsafety/pdfs/cdc\\_5538\\_ds1.pdf](https://www.cdc.gov/medicationsafety/pdfs/cdc_5538_ds1.pdf)
2. Centers for Disease Control and Prevention. Definitions for Leading Causes of Nonfatal Injury Reports. Updated February 9, 2016. Available from [https://www.cdc.gov/injury/wisqars/nonfatal\\_help/definitions\\_leading.html](https://www.cdc.gov/injury/wisqars/nonfatal_help/definitions_leading.html)
3. Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS), 2016-2019. Available from <http://wisqars.cdc.gov/fatal-reports>
4. Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS), 2020. Available from <http://wisqars.cdc.gov/fatal-reports>
5. Tanz LJ, Dinwiddie AT, Mattson CL, O'Donnell J, Davis NL. [Drug Overdose Deaths Among Persons Aged 10–19 Years — United States](#), July 2019–December 2021. *MMWR Morb Mortal Wkly Rep* 2022;71:1576–1582.