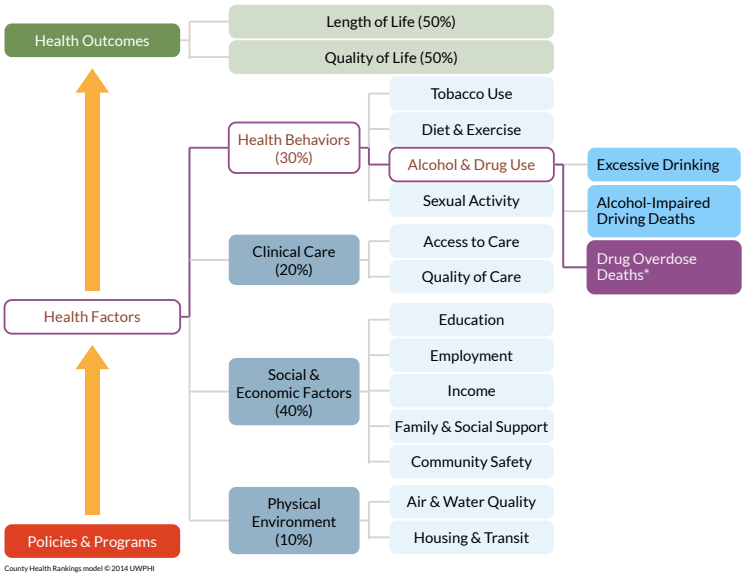
County Health Rankings & Roadmaps

Drug Overdose Deaths*

An Alcohol and Drug Use measure



Measures marked with an asterisk (*) are not included in summary calculations for Health Outcomes and Health Factors.

About

Number of drug poisoning deaths per 100,000 population. The 2024 Annual Data Release used data from 2019-2021 for this measure.

Drug overdose deaths are a leading contributor to premature death and are largely preventable.[1] Currently, the United States is experiencing an epidemic of drug overdose deaths. In 2021, the number of people who died of a drug overdose was six times the number who died in 1999.[2] Overall, between 1999 and 2021, more than one million people died of a drug overdose.[3] Both prescribed opioids (e.g., methadone, oxycodone, and hydrocodone) and illicit opioids (e.g., fentanyl and heroin) contribute largely to drug overdose deaths; in 2021, 75% of drug overdose deaths involved opioids.[2] Between 1999 and 2021, more than 640,000 people died from an opioid overdose.[2]

Find strategies to address Drug Overdose Deaths*

Data and methods

Data | Methods

Search by county, state or ZIP code

Search

Select year

2024

Data Source

National Center for Health Statistics - Mortality Files; Census Population Estimates Program

The National Center for Health Statistics (NCHS) provides birth and death data drawn from the National Vital Statistics System (NVSS). These data are submitted to the NVSS by the vital registration systems operated in the jurisdictions legally responsible for registering vital events (i.e., births, deaths, marriages, divorces, and fetal deaths).

The Census Bureau's Population Estimates Program (PEP) uses data on births, deaths, and migration to estimate population changes occurring since the most recent decennial census and produce a vintage, or annual time series of estimates. Each vintage includes the current data year and revised estimates for any earlier years since the last decennial census. Because each vintage of estimates includes all years since the most recent decennial census, the latest vintage supersedes all other estimates produced since the previous decennial census. See the Population Estimates Program methodology for statements and release notes for each vintage of population estimates.

Website to download data

Key Measure Methods

Drug Overdose Deaths is a rate

Rates measure the number of events (e.g., deaths, births) in a given time period divided by the average number of people at risk during that period. Rates help us compare health data across counties with different population sizes. Drug Overdose Deaths is the number of deaths due to drug poisoning per 100,000 population.

Drug Overdose Deaths is a rare event (statistically speaking)

While Drug Overdose Deaths is an important indicator of the size of prescription and illicit drug use, small numbers of deaths can result in unreliable and suppressed estimates at the county level, even with multiple years of combined data.

Deaths are counted in the county of residence for the person who died, rather than the county where the death occurred

It is important to note that deaths are counted in the county of residence of the deceased. So, even if a drug overdose death occurred across the state, the death is counted in the home county of the individual who died.

Some data are suppressed

A missing value is reported for counties with fewer than 10 drug poisoning deaths in the time period.

The method for calculating Drug Overdose Deaths has changed

In the 2024 Annual Data Release, data from the Census Bureau's Population Estimates Program were used in the calculation of the denominator for this measure. In previous data releases, the denominator was calculated from the National Center for Health Statistics Bridged-Race Population Estimates; this data series was discontinued in 2023. The denominator change and updates to race categories in the 2024 Annual Data Release mean that comparisons with previous years should be made with caution.

Caution should be used when comparing these estimates across years

Caution should be used when comparing across years due to methods changes described in the “The method for calculating Drug Overdose Deaths has changed” section.

Numerator

The numerator includes deaths from accidental, intentional, and undetermined drug poisoning by and exposure to: 1) nonopioid analgesics, antipyretics and antirheumatics, 2) antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified, 3) narcotics and psychodysleptics (hallucinogens), not elsewhere classified, 4) other drugs acting on the autonomic nervous system, and 5) other and unspecified drugs, medicaments and biological substances, over a 3-year period. ICD-10 codes used include X40-X44, X60-X64, X85, and Y10-Y14.

Denominator

The denominator is the aggregate annual population over the three-year period.

Can This Measure Be Used to Track Progress

This measure can be used to track progress with some caveats. It is important to note that the estimate provided in the Health Snapshots is a three-year average. However, in most counties, it is relatively simple to obtain single-year estimates from the resource below. Drug overdose deaths data can also be further broken down by year, intent, and drug type. These breakdowns could help measure the impact of interventions specific to drug overdose prevention.

Finding More Data

Disaggregation means breaking data down into smaller, meaningful subgroups. Disaggregated data are often broken down by characteristics of people or where they live. Disaggregated data can reveal inequalities that are otherwise hidden. These data can be disaggregated by:

- Age
- Gender
- Race

We recommend starting with the CDC WONDER database, which contains information on drug overdose rates by race, ethnicity, age, gender, geography, and more. Rates can be exported as crude or age-adjusted. Small counties might need to combine multiple years of data to see rates, as CDC suppresses any rates when there are fewer than 10 deaths.

In addition, many states support databases of drug-related hospitalizations or emergency department visits.

References

[1] Shiels MS, Berrington de González A, Best AF, et al. Premature mortality from all causes and drug poisonings in the USA according to socioeconomic status and rurality: An analysis of death certificate data by county from 2000–15. The Lancet Public Health. 2019;4(2):e97-e106.

[2] Centers for Disease Control and Prevention (CDC). Understanding the Opioid Overdose Epidemic. 2023. Accessed February 27, 2024. https://www.cdc.gov/opioids/basics/epidemic.html

[3] Centers for Disease Control and Prevention (CDC). Drug Overdose Deaths. 2023. Accessed February 27, 2024. https://www.cdc.gov/drugoverdose/deaths/index.html

Find strategies in What Works for Health

Strategic Goal

Support responsible marketing and provision of alcohol and other legal drugs

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Strategic Goal

Reduce availability of alcohol and other drugs

Strategic Goal

Implement broad initiatives to reduce alcohol and drug use

Strategic Goal

Improve access to substance abuse counseling and treatment
