

Wisconsin Death Report: Drug Overdose Deaths

20

16

June 2018 Release

INTRODUCTION

This report presents information about deaths that occurred in 2016 among Wisconsin residents. Information from previous years (2007 onward) is also presented to show changes over time. This report includes information on the number and rate of deaths, demographic characteristics of the decedents, such as age and race/ethnicity, characteristics of deaths by geographic location, and disposition of bodies.

Mortality data presented in this report are primarily based on the underlying cause of death, which the World Health Organization defines as “the disease or injury that initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury.”¹

State rates in the report are age-adjusted rates per 100,000 standard population. County rates are age-adjusted rates per 10,000 standard population.

Beginning September 1, 2013, Wisconsin began collecting data using a new web-based data entry system for funeral directors, medical examiners, coroners, and certifying physicians. The new system adopted the 2003 U.S. Standard Certificate of Death. Many changes have been made to the data collection process; some information is no longer collected, new information has been added, and some data definitions have been altered. Please refer to the technical notes for a more complete description of these changes.

This report uses resident death certificate files. All data refer to Wisconsin residents unless otherwise noted. Also, the information presented is based on the place of residence, which means that events have been assigned to the area where the person lived (usually legal residence) regardless of where the events occurred.

Note: Due to differences in cutoff dates and out-of-state reporting, U.S. rates for 2016 were from provisional data available from the National Center for Health Statistics. Unfortunately, provisional rate estimates were not available separated by sex.

Comments, suggestions, and requests for further information may be addressed to:

Ousmane Diallo
Office of Health Informatics
Division of Public Health
1 W. Wilson Street, Rm 118
Madison, WI 53703
Telephone: 608-267-7173
Email: dhshealthstats@dhs.wisconsin.gov

1 <http://www.who.int/topics/mortality/en/>

DRUG OVERDOSE DEATHS

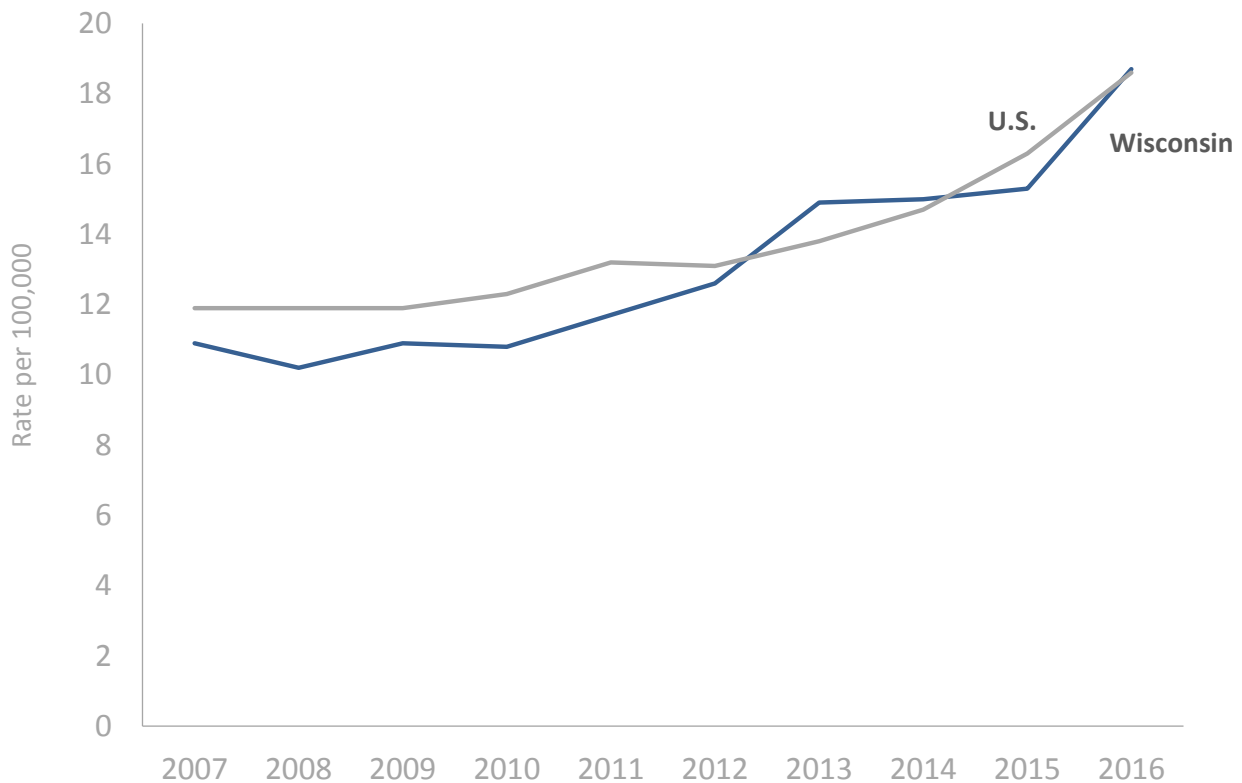
Working-age adults, males, non-Hispanic Native Americans, and non-Hispanic African Americans have higher rates of drug overdose deaths than other population groups.

A drug overdose is a poisoning by drugs or medicine that is taken in an amount that is higher than normally used or is prescribed independently of the intent. These drugs are byproducts of natural substances (e.g. opiates) or semi-synthetics/synthetics (e.g. opioids) used legally or illegally. For example, morphine is a byproduct of opium (opiate), which is harvested from naturally occurring poppy plants, while oxycodone is semi-synthetic (opioid) where the chemical structure resembles and acts like morphine.

The drug overdose death epidemic continues in the U.S., fueled by prescription drugs and heroin. The Wisconsin drug overdose age-adjusted mortality rates were not statistically different than the U.S. rates. The average percent change of the age-adjusted rates from 2010 to 2015 was similar for Wisconsin (42 percent) and the U.S. (49 percent).

Overall, in Wisconsin, the age-adjusted rates of drug overdose deaths increased 72 percent from 2007 to 2016 (Figure 14). The total number of drug overdose deaths significantly increased from 872 deaths in 2015 to 1,031 deaths in 2016. This corresponds with a 22 percent increase in the age-adjusted mortality rates from 2015 to 2016.

Figure 14. Age-adjusted rate of drug overdose deaths for the U.S. and Wisconsin



DRUG OVERDOSE DEATHS

The demographic distribution for drug overdose deaths shows that working-age adults experienced a higher burden of drug overdose deaths. The drug overdose mortality rate was five times higher among people ages 26 to 64 compared to those ages 65 and older, and almost twice as high compared to those ages 18 to 25 years. Males experienced 69 percent higher age-adjusted mortality rates for drug overdose than females. NH African Americans had a higher age-adjusted mortality rate for drug overdose compared to NH Whites. NH Native Americans had the highest crude mortality rate. The Southeastern region had the lowest crude mortality rate in the state but also had the highest age-adjusted mortality rate (Table 11). This indicates that deaths due to drug overdose are occurring in younger age groups in the Southeastern region compared to the rest of the state.

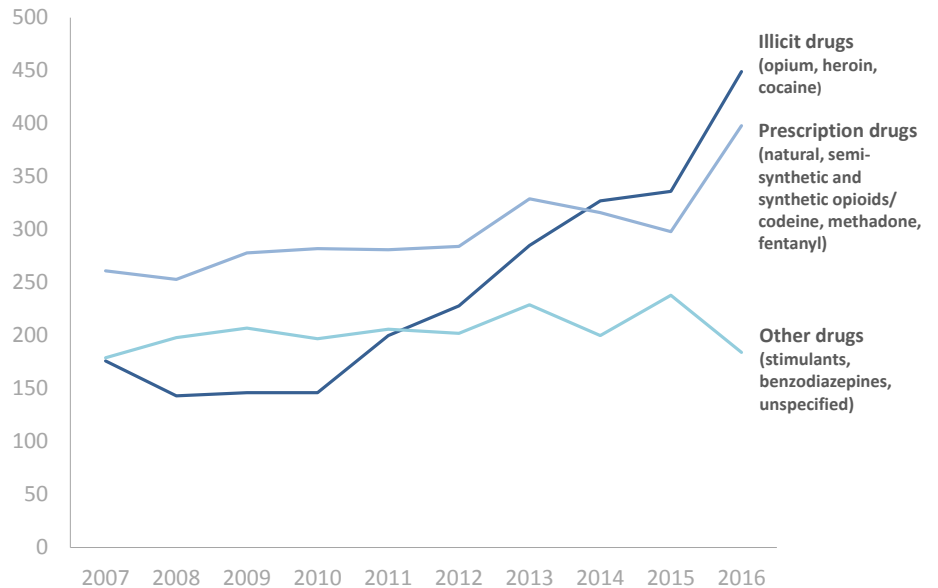
Table 11. Number of drug overdose deaths and age-adjusted rates by demographics, 2016

Demographics	Total Drug Overdose Deaths	Percent of Drug Overdose Deaths	Crude rate per 100,000 population	Age-adjusted rate per 100,000 population
Age				
Less than 5	<5	-	-	NA
5 to 17	7	0.7	0.7	NA
18 to 25	122	11.8	21.8	NA
26 to 64	846	82.1	28.1	NA
65 and older	52	5.0	5.8	NA
Sex				
Female	386	37.4	13.3	13.7
Male	645	62.6	22.5	23.1
Race/Ethnicity				
Non-Hispanic White	862	83.9	18.1	18.9
Non-Hispanic African American	100	9.7	25.4	29.3
Non-Hispanic Native American	16	1.6	28.4	-
Non-Hispanic Asian	<5	-	-	-
Hispanic	49	4.8	12.9	13.8
DHS Region				
Northeastern	156	15.2	12.6	13.1
Northern	56	5.4	11.5	12.2
Southeastern	504	49.0	3.8	24.3
Southern	235	22.8	20.8	21.2
Western	78	7.6	9.9	10.2

DRUG OVERDOSE DEATHS

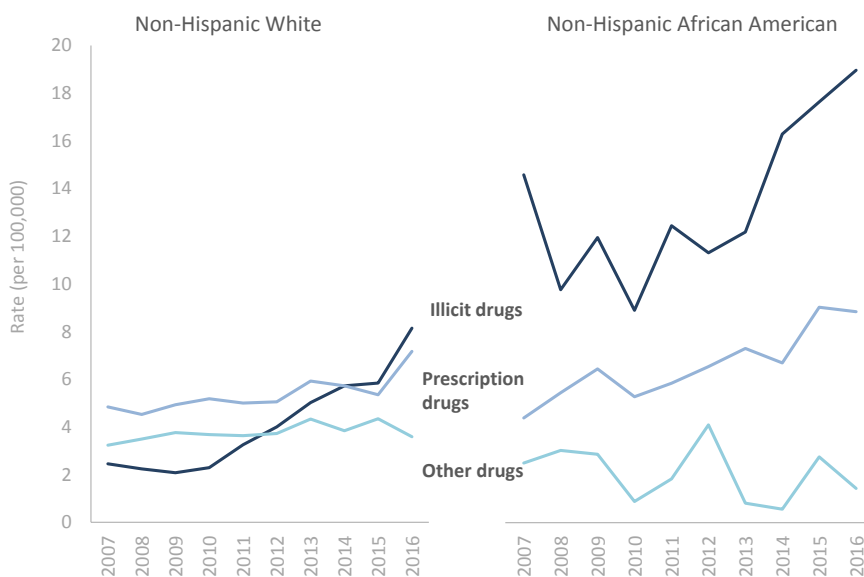
Illicit drugs (heroin and cocaine) were the leading cause of drug overdose deaths followed by prescription opioids. Together, they represented over 80 percent of all drug overdose deaths (Figure 15). Before 2012, illicit drugs were the third leading cause of drug overdose deaths in Wisconsin, but they have been steadily increasing each year since then. After 2014, illicit drug deaths surpassed prescription drug deaths and became the leading cause of drug overdose deaths. From 2015 to 2016, both illicit drug and prescription drug deaths increased by 34 percent (from 336 to 449 deaths and from 298 to 398 deaths, respectively).

Figure 15. Number of drug overdose deaths by type of drug



Although the number of NH Whites that died from an illicit drug overdose was greater, the age-adjusted mortality rate by illicit drug overdose was two times higher among NH African Americans than among NH Whites (Figure 16). Although not depicted here, NH Native Americans had the greatest crude mortality rate.

Figure 16. Age-adjusted drug overdose deaths, by drug type and race/ethnicity



For prescription drug overdose mortality rates, NH African Americans were 24 percent higher than NH Whites. From 2007 to 2016, illicit drug overdose mortality rates increased by over 200 percent among NH Whites. During this same time, prescription drug overdose mortality rates increased 50 percent for NH Whites. In contrast, among NH African Americans, illicit drug overdose mortality rates increased 30 percent while prescription drug overdose mortality rates increased over 100 percent between 2007 and 2016.

DRUG OVERDOSE DEATHS

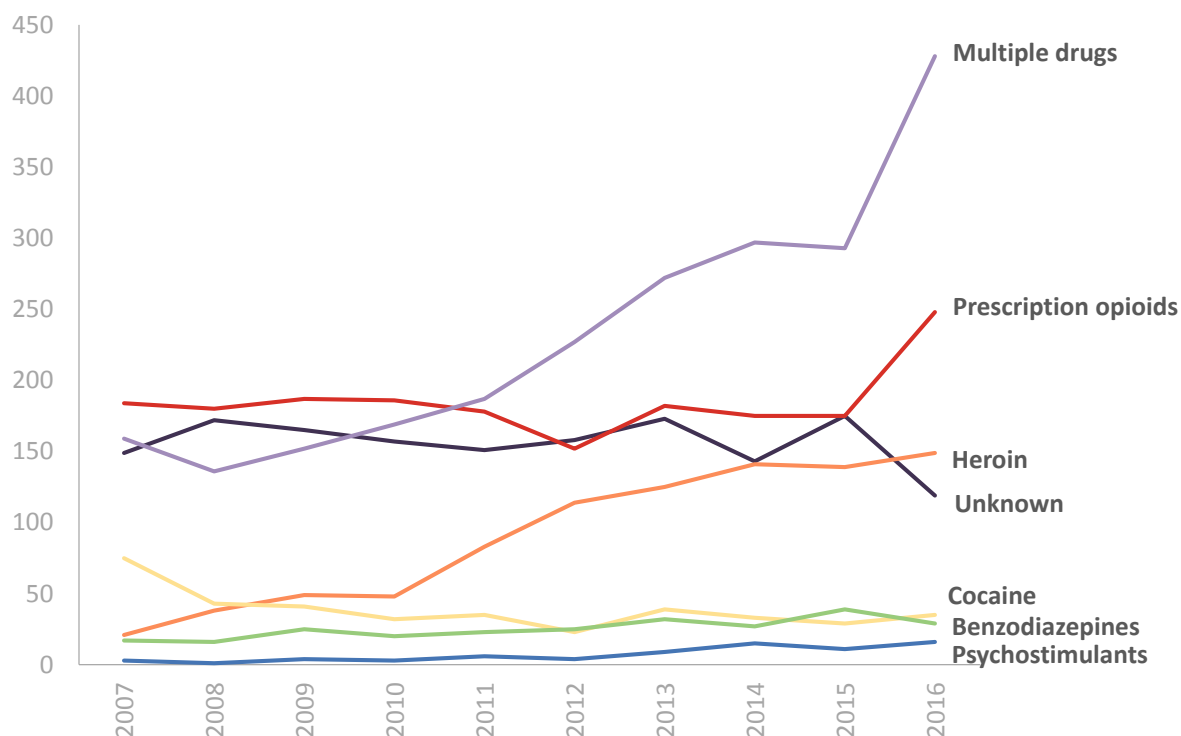
For both males and females, multiple drugs was the leading cause of death, followed by prescription opioids alone, and heroin alone. Prescription opioid-only deaths made up a greater proportion of the overdose deaths for females than males (26 percent vs. 23 percent). However, 63 percent of all drug overdose deaths were males (Table 12).

Table 12. Number of drug overdose deaths by drug type and sex, 2016

Drug Type	Male		Female		Total	
	N	%	N	%	N	%
Prescription opioid only	148	22.9	100	25.9	248	24.1
Heroin only	104	16.1	45	11.7	149	14.5
Multiple drugs	272	42.2	156	40.4	428	41.5
Benzodiazepines only	19	2.9	10	2.6	29	2.8
Cocaine only	28	4.3	7	1.8	35	3.4
Psychostimulants only	9	1.4	7	1.8	16	1.6
Narcotics (unspecified)	<5	-	<5	-	7	0.7
Unknown	61	9.5	58	15.0	119	11.5
Total	645	100.0	386	100.0	1,031	100.0

There was a sharp increase in multiple drugs as a cause of drug overdose deaths in 2016. There has also been an increase in prescription opioid deaths since 2015. Heroin deaths have been on the rise since 2010. In contrast, drug overdose deaths from cocaine, benzodiazepines, and psychostimulants have been relatively low and stable for many years.

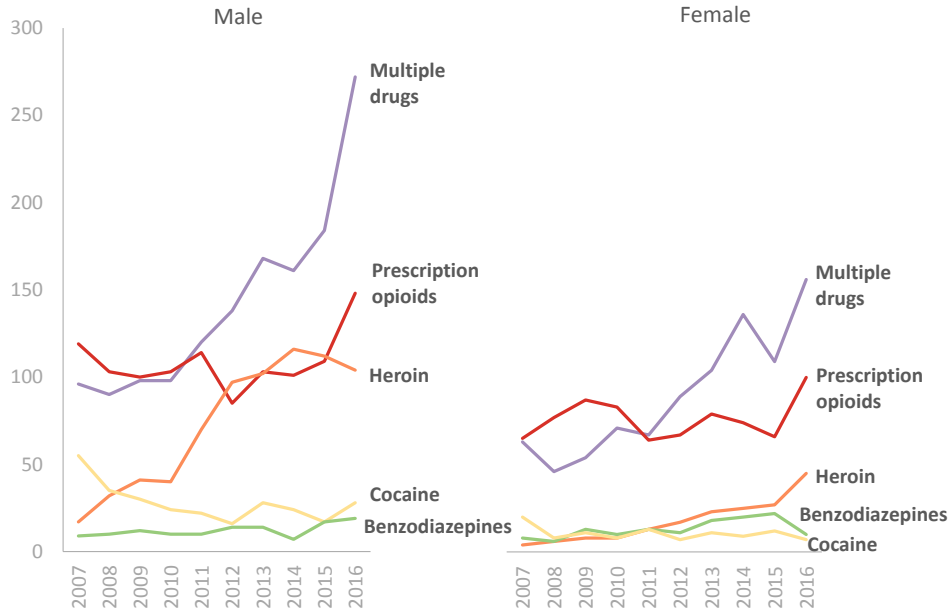
Figure 17. Number of drug overdose deaths by type



DRUG OVERDOSE DEATHS

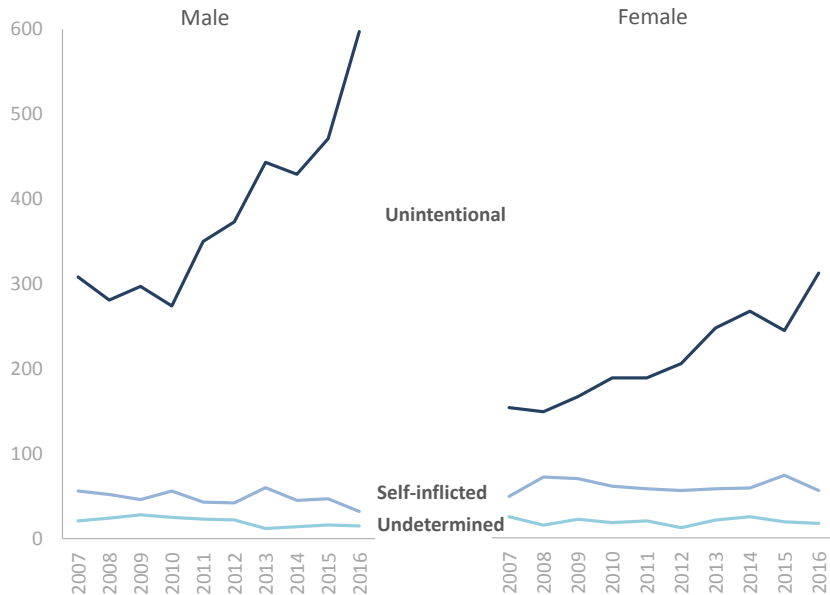
The total number of drug overdose deaths, particularly from multiple drugs, has been on the rise for both males and females. In Wisconsin, the rise of multiple drugs, heroin, and prescription opioid deaths among males has been increasing faster than among females. The number of deaths due to benzodiazepine alone and cocaine alone were stable in Wisconsin in both males and females (Figure 18).

Figure 18. Number of drug overdose deaths, by type and sex



The total number of unintentional drug overdose deaths nearly doubled for males from 308 deaths in 2007 to 597 deaths in 2016, and it increased 103 percent among females, from 154 deaths in 2007 to 313 deaths in 2016. Among males, self-inflicted drug overdose deaths (suicide) decreased 43 percent, from 56 deaths in 2007 to 32 deaths in 2016; among females there was a 14 percent increase, from 49 deaths in 2007 to 56 deaths in 2016. Although there was a percent increase in self-inflicted overdose deaths among females from 2007 to 2016 overall, there was a 24 percent decrease within the last year, from 2015 to 2016.

Figure 19. Number of drug overdose deaths, by intent and sex



DRUG OVERDOSE DEATHS

In 2016, the highest drug overdose mortality rates were in Milwaukee, Dodge, Kenosha, and Sheboygan counties. Bayfield, Door, Florence, Iron, Pepin, Rusk, and Taylor counties had no drug overdose deaths in 2016 (Map 5).

Map 5. Age-adjusted mortality rate (per 10,000) for drug overdose cause of death by County, 2016

