

# Wisconsin Death Report: Unintentional Injury Mortality

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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.”<sup>1</sup>

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.

## Unintentional Injury

Injuries represent any harm or damage to the body resulting from an external force, which can be physical (e.g., fire, blast, shock) or chemical (e.g., poison, prescription). The definition excludes psychological trauma. The intent of injuries is classified as unintentional, self-inflicted, assaults, or undetermined (when the intent is unknown or unclear).

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

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

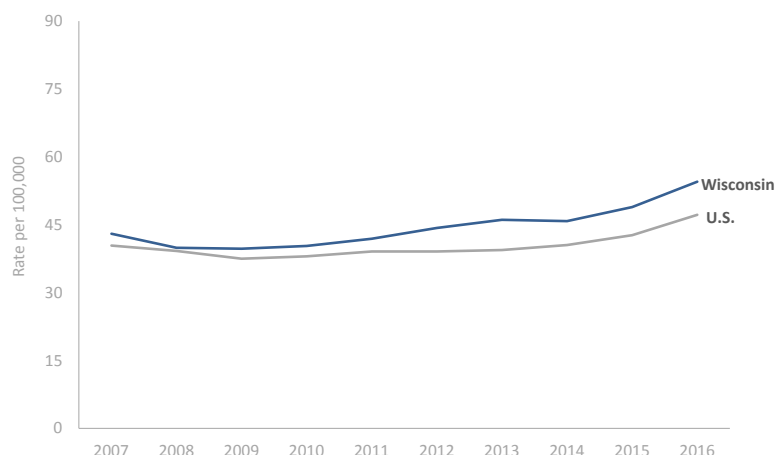
# UNINTENTIONAL INJURY MORTALITY

Unintentional injuries were the leading cause of death among people ages 1 to 44 years and the third leading cause of death overall. The total number of unintentional injury deaths in Wisconsin has been increasing since 2009. Wisconsin age-adjusted unintentional injury mortality rates have been higher than the U.S. rate for the past eight years (Figure 12).

As seen in Table 7, the crude unintentional injury mortality rate was four times higher among the 65 and older population than both the 26 to 64 population and the 18 to 25 population.

The age-adjusted mortality rate for males was 65 percent higher than for females. NH Native Americans had the highest age-adjusted mortality rates compared to NH African Americans and NH Whites. When looking by region, the southern and southeastern regions had the highest unintentional injury mortality rates.

**Figure 12. Age-adjusted rate of unintentional injury deaths for the U.S. and Wisconsin**



**Table 7. Number of unintentional injury deaths and age-adjusted rates by demographics, 2016**

Demographics	Total Injury Deaths	Percent of Injury Deaths	Crude rate per 100,000 population	Age-adjusted rate per 100,000 population
<b>Age</b>				
Less than 5	41	1.2	12.1	NA
5 to 17	66	1.9	6.9	NA
18 to 25	257	7.3	46.0	NA
26 to 64	1,396	39.9	46.4	NA
65 and older	1,742	49.7	193.3	NA
<b>Sex</b>				
Female	1,535	43.8	52.9	41.3
Male	1,967	56.2	68.7	68.1
<b>Race/Ethnicity</b>				
Non-Hispanic White	3,117	89.0	65.3	54.8
Non-Hispanic African American	218	6.2	55.4	66.1
Non-Hispanic Native American	48	1.4	85.3	96.2
Non-Hispanic Asian	21	0.6	12.7	17.0
Hispanic	97	2.8	25.4	34.7
<b>DHS Region</b>				
Northeastern	627	17.9	50.4	43.6
Northern	297	8.5	60.8	50.2
Southeastern	1,421	40.6	67.0	62.0
Southern	752	21.5	66.6	60.8
Western	402	11.5	51.1	45.5

# UNINTENTIONAL INJURY MORTALITY

The leading causes of death due to unintentional injuries were falls, poisoning, motor vehicle crashes, suffocation, drowning, and fire. Table 8 shows the total number of unintentional injuries by external causes from 2007 to 2016. Falls were the leading cause of unintentional injury death during the entire period. Beginning in 2011, poisoning surpassed motor vehicle crashes as the second leading cause of unintentional injury death. This was driven by the increase in drug overdose deaths, which were counted among poisonings. Figure 13 shows that until 2008, motor vehicle crashes were the leading cause of unintentional injury deaths among males, but were surpassed by falls starting in 2009 and poisoning in 2011. Among females, falls have been the leading cause of unintentional injury deaths for the past 10 years. Females had on average a 30 percent higher age-adjusted mortality rate for falls than males.

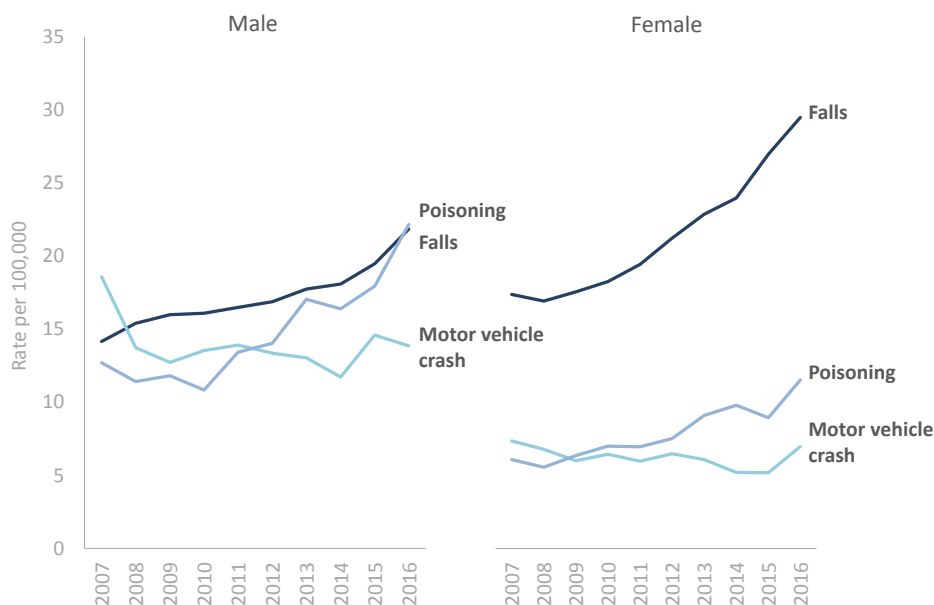
**Table 8. Number of unintentional injury deaths, 2007-2016**

Cause of injury	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fall	891	918	954	978	1,026	1,091	1,166	1,211	1,342	1,483
Poisoning	529	481	515	507	580	615	748	752	774	970
Motor vehicle crash (MVC)	730	581	531	567	566	566	547	486	569	600
Suffocation	94	101	94	94	99	103	93	120	104	98
Drowning	41	59	49	65	60	61	52	43	60	48
Fire/flame	64	46	44	38	43	53	46	44	47	40
All others	236	249	244	243	237	298	266	279	282	257
<b>Total</b>	<b>2,593</b>	<b>2,443</b>	<b>2,432</b>	<b>2,496</b>	<b>2,615</b>	<b>2,789</b>	<b>2,927</b>	<b>2,940</b>	<b>3,186</b>	<b>3,502</b>

Starting in 2012, unintentional injury by chemical poisoning was the second leading cause of unintentional injury deaths among males. Poisoning refers to the ingestion of any natural or synthetic toxic substance (plant, metal, gaseous, venom, or other chemical byproducts/ medicines), either by mouth, by skin contact, inhalation, or parental injection, that interferes with normal body functions.

Among females, there has been a significant, steady increase in deaths due to falls, especially in recent years. Poisoning rates surpassed motor vehicle crashes as the second leading cause of unintentional injury death starting in 2009.

**Figure 13. Age-adjusted rate for unintentional injury death (external causes), by type and sex**



# UNINTENTIONAL INJURY MORTALITY

Table 9 presents the number and percent distribution of physical and anatomical locations of injuries that resulted in death. Nearly 24 percent of unintentional injury deaths were due to multiple injuries. Head and neck injuries represented 16 percent of all unintentional injury deaths and, stratified by sex, represented the second leading type of unintentional injury deaths for males. Lower extremity injuries were the second leading type of unintentional injuries among females. Drug overdose deaths are included in the “Other” category. However, drug overdose deaths are examined in more detail in the next section of this report.

**Table 9. Number of unintentional injury deaths by injury location and sex, 2016**

Injury Location	Male		Female		Total
	N	%	N	%	
Multiple injuries	454	23.1	372	24.2	826
Head/neck	333	16.9	238	15.5	571
Lower extremities	166	8.4	309	20.1	475
Chest	33	1.7	24	1.6	57
Abdomen/spine/pelvis	11	0.6	46	3.0	57
Upper extremities	13	0.7	22	1.4	35
Other/foreign/frostbite	957	48.7	524	34.1	1,481
<b>Total</b>	<b>1,967</b>	<b>100.0</b>	<b>1,535</b>	<b>100.0</b>	<b>3,502</b>

From 2007 to 2016, multiple injuries as a cause of death increased by 23 percent from 670 deaths to 826 deaths. The large increase seen in the “Other” category is likely due to drug overdose deaths being included in this group, as mentioned above. Lower extremity injuries had a relatively consistent increase over time. These injuries have increased 40 percent, from 339 deaths in 2007 to 475 deaths in 2016 (Table 10).

**Table 10. Number of unintentional injury deaths by injury location, 2007-2016**

Injury Location	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Multiple injuries	670	596	597	587	637	642	649	616	717	826
Head/neck	548	488	472	512	515	544	603	530	547	571
Lower extremities	339	343	349	350	347	392	383	435	460	475
Chest	69	75	56	63	56	59	53	61	81	57
Abdomen/spine/pelvis	39	46	41	45	39	62	53	48	55	57
Upper extremities	15	20	8	17	16	26	23	19	30	35
Other/foreign/frostbite	913	875	909	922	1,005	1,064	1,163	1,231	1,296	1,481
<b>Total</b>	<b>2,593</b>	<b>2,443</b>	<b>2,432</b>	<b>2,496</b>	<b>2,615</b>	<b>2,789</b>	<b>2,927</b>	<b>2,940</b>	<b>3,186</b>	<b>3,502</b>

# UNINTENTIONAL INJURY MORTALITY

In 2016, the highest unintentional injury mortality rates were in Marquette, Vilas, and Iowa counties. The lowest unintentional injury mortality rates were in Manitowoc, Portage, and St. Croix counties (Map 4).

**Map 4. Age-adjusted mortality rate (per 10,000) for unintentional injury cause of death by County, 2016**

