



## Report Highlights

- Firearms accounted for **63%** of all suicides in Montana
- One Montanan died from a gun-related suicide **every 54 hours**
- **86%** of all firearm-related deaths in Montana were suicides
- Males were **5 times more likely** to die from a firearm-related injury than females
- Gun homicide and nonfatal assault disproportionately affected American Indian/Alaska Native people
- Rates of fatal and nonfatal gun-related injury were highest among residents of rural counties
- Montana's firearm mortality rate was **2 to 5 times higher** than that of states with enhanced firearm safety laws

## Montana EMS and Trauma Systems Section

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# Firearm Injuries In Montana, 2010-2019

## Introduction

Gun violence is a serious public health issue in the United States. Over 700 Americans die from firearm-related injuries every week,<sup>1</sup> and over twice that number are treated for nonfatal firearm injuries weekly.<sup>2</sup> Americans are 11 times more likely to die from any gun injury and 25 times more likely to die from a gun homicide than people in other high-income/peer nations.<sup>3</sup> In Montana, which has the 6<sup>th</sup> highest firearm-related death rate of any state in the US, someone is killed by gunshot every 44 hours.<sup>1,4</sup> Montana also has one of the highest suicide rates in the US, with firearms accounting for 63% of all suicides in Montana over the past decade (2009-2018).<sup>1,4,5</sup>

Firearm-related deaths and injuries have serious impacts that have been demonstrated at a national level to disproportionately affect males, young people, lower-income people, and communities of color.<sup>6</sup> Though Montana differs from other parts of the country in some noteworthy ways (population density, racial makeup, prevalence of hunting culture), many of the same patterns are evident. Communities affected by gun violence often also face poverty, unemployment, and substance use disorder and mental health problems.<sup>7</sup> In addition to the human toll of premature death and disability, gun-related violence imposes enormous medical costs, productivity losses, judicial and incarceration-related costs, and psychological damages that affect society at large.<sup>8</sup>

Using public health data sources, this report examines trends and patterns in firearm-related deaths and injuries in Montana.

## Terminology

The terms **"firearm"** and **"gun"** are used interchangeably in this report

**Firearm injuries:** Deaths (fatal injuries) or nonfatal injuries resulting from a gunshot wound. Also known as firearm-related injuries or gun-related injuries.

**Firearm violence:** Intentional injuries resulting from the purposeful use of a firearm by another person or against oneself, with the intent to harm.

**Firearm assault:** Injury resulting from the use of a firearm by another person, with the intent to harm. A **firearm homicide** is a death resulting from firearm assault.

**Firearm self-harm:** Injury resulting from the use of a firearm against oneself, with the intent to harm. A **firearm suicide** is a death resulting from an intentional self-inflicted firearm injury.

**Unintentional firearm injuries** are not deliberate and occur without the intent to harm. Unintentional firearm deaths and injuries result from accidental discharge or malfunction of firearms.

**Legal intervention:** Firearm injuries inflicted by law enforcement during the course of duty

**Undetermined intent:** Acts where the intent cannot be determined



## Methods

### Case definition

A firearm injury is defined as a penetrating injury from a weapon that uses a powder charge to fire a projectile. The case definition includes injuries sustained from handguns, rifles, shotguns, and other larger firearms, and excludes injuries related to gas, air, or spring-operated guns (e.g., air guns, BB guns, paintball guns, etc.), injuries from rubber bullets, and non-penetrating injuries associated with firearms (e.g., “pistol whipping”). Firearm injuries due to unintentional events, violence (self-harm and assault, including terrorism), undetermined intent, and legal interventions are included in this report, while those due to operations of war and military operations are excluded.<sup>6,9</sup>

### Data sources

Fatal firearm injury data for 2010-2019 were obtained from the Montana Vital Statistics dataset.<sup>10</sup> A record was considered a firearm-related death if the underlying cause of death code was an ICD-10 firearm injury code.<sup>a 11</sup>

Nonfatal firearm injury data for 2010-2019 were obtained from the Montana Hospital Discharge Data System (MHDDS) hospitalization and emergency department (ED) visit datasets.<sup>12</sup> ED visits that resulted in hospital admission were included in the hospitalization dataset only. The number of ED visits and hospitalizations were combined to describe nonfatal firearm injuries. A record was considered a nonfatal firearm-related injury if there was at least one ICD-9-CM or ICD-10-CM firearm injury code<sup>b,c</sup> included in any field, and discharge status of alive.<sup>9</sup> MHDDS records with a discharge date before October 1, 2015 were identified using ICD-9-CM codes, and records with a discharge date on or after October 1, 2015 were identified using ICD-10-CM codes.

Records were only flagged once for a firearm-related injury (i.e., records with more than one firearm injury code were only counted once).<sup>d</sup> For more detail, see Appendix 1. Firearm Injury ICD-10, ICD-9-CM, and ICD-10-CM Codes.

### Analysis

This analysis includes Montana residents of all ages. Records missing county of residence, age, or sex information were excluded. Firearm-related injuries were examined by intent (unintentional, self-harm, assault, undetermined, legal intervention), age, sex, race, and 2013 NCHS urban-rural classification for the injured person’s county of residence (For more detail, see Appendix 2. 2013 NCHS Urban-Rural Classification Scheme).<sup>13</sup> The MHDDS dataset contained information on race for years 2018 and 2019, therefore analysis by race was limited to 2018–2019.

Age-adjusted rates per 100,000 residents and 95% confidence intervals were calculated using 2019 US Census bridged-race population estimates.<sup>14</sup> Age-adjusted rates allow for comparisons between populations of different sizes and ensure that differences in mortality or disease incidence from one year to another, or between one geographic area and another, are not due to differences in the age distribution of the populations being compared. The US 2000 standard population was used for calculating age-adjusted rates. A 95% confidence interval is a range of values around a statistic that is believed to contain the true value of that statistic with 95% probability. Case fatality rates were calculated by summing fatal and nonfatal cases within a given intent category and dividing the fatal cases in each intent category by the sum to determine the proportion of firearm injury cases within the given intent category resulting in death.<sup>6</sup>

Data were analyzed using SAS, version 9.4.

<sup>a</sup> ICD-10 firearm codes: W32-W34, X72-X74, X93-X95, U01.4, Y22-Y24, Y35.0

<sup>b</sup> ICD-9-CM firearm codes: E922.0–E922.3, E922.8, E922.9, E955.0–E955.4, E965.0–E965.4, E979.42, E985.0–E985.4, E970

<sup>c</sup> ICD-10-CM firearm codes: W32, W33, W34.00, W34.09, W34.10, W34.19, X72, X73, X74.8, X74.9, X93, X94, X95.8, X95.9, Y38.42, Y22, Y23, Y24.8, Y24.9, Y35.00–Y35.03, Y35.09

<sup>d</sup> 1 death record and 4 hospitalization records contained firearm codes indicative of multiple intents or gun types

## Results

### Fatal Firearm Injuries

A total of 1,871 firearm-related deaths occurred among Montana residents from 2010-2019, or approximately 187 deaths per year (Table 1). The age-adjusted firearm mortality rate from 2010-2019 was 17.7 per 100,000 population (95% CI: 16.9 - 18.5), compared with the US rate of 10.9 (95% CI: 10.8 - 10.9), from 2009-2018 (Figure 1, Table 2).<sup>15</sup>

Montana's age-adjusted firearm mortality rate was 4.7 times higher among males than females. Overall, 83% of firearm fatalities were males and 17% were females. However, the data suggests that the sex differential varies by age. For example, among teens aged 13-17 years, 32% of firearm fatalities were females (N=22) and among people aged 65 and older, 8% of fatalities were females (N=28). People over 65 represented 20% of all fatalities.

Although 93% of the people who died from firearm-related injuries were white, age-adjusted firearm mortality rates – which adjust for relative population size– were similar among white people (17.7 per 100,000) and American Indian/Alaska Native people (17.4 per 100,000). There was insufficient data to compute rates for Black/African American and Asian/Pacific Islander groups. The firearm-related age-adjusted mortality rate was highest among Montanans residing in rural counties (20.6 per 100,000). Age-adjusted mortality rates were comparable among residents of small metro counties (16.1 per 100,000) and micropolitan counties (16.5 per 100,000). There were 744 deaths to residents of rural counties, or 40% of the total number.

*Table 1. Number of firearm-related deaths by sex, age group, race, urban-rural classification, and type of firearm, Montana, 2010-2019*

		Percent of MT Population <sup>e</sup>	All Firearm Deaths		Firearm Suicides		Firearm Homicides	
			N	%	N	%	N	%
<b>Total</b>		<b>100.0%</b>	<b>1,871</b>	<b>100.0%</b>	<b>1,613</b>	<b>100.0%</b>	<b>169</b>	<b>100.0%</b>
Sex	Female	49.7%	311	16.6%	243	15.1%	58	34.3%
	Male	50.3%	1,560	83.4%	1,370	84.9%	111	65.7%
Age group	0-12	15.9%	13	0.7%	†	†	9	5.3%
	13-17	6.1%	69	3.7%	58	3.6%	5	3.0%
	18-24	9.6%	206	11.0%	173	10.7%	21	12.4%
	25-34	12.7%	302	16.1%	253	15.7%	31	18.3%
	35-44	11.5%	282	15.1%	224	13.9%	36	21.3%
	45-54	12.8%	300	16.0%	248	15.4%	34	20.1%
	55-64	14.5%	329	17.6%	303	18.8%	19	11.2%
	65-74	9.9%	181	9.7%	169	10.5%	9	5.3%
	75-84	4.9%	120	6.4%	116	7.2%	†	†
	85+	2.1%	69	3.7%	67	4.2%	†	†
Race	American Indian or Alaska Native	7.2%	117	6.3%	79	4.9%	27	16.0%
	Asian or Pacific Islander	1.0%	9	0.5%	5	0.3%	†	†
	Black or African American	0.9%	13	0.7%	9	0.6%	†	†
	White	90.9%	1,732	92.6%	1,520	94.2%	135	79.9%
NCHS urban-rural classification <sup>f</sup>	Small Metro	35.3%	604	32.3%	512	31.7%	57	33.7%
	Micropolitan	30.1%	523	28.0%	460	28.5%	43	25.4%
	Rural (Noncore)	34.7%	744	39.8%	641	39.7%	69	40.8%
Type of Firearm <sup>g</sup>	Handgun	N/A	454	24.3%	423	26.2%	22	13.0%
	Rifle, shotgun, larger firearms	N/A	182	9.7%	162	10.0%	12	7.1%
	Other/unspecified firearms	N/A	1,235	66.0%	1,028	63.7%	135	79.9%

†= Suppressed value due to count <5

<sup>e</sup> Percent of the total 2010-2019 MT population is listed to assist with interpretation of the results

<sup>f</sup> See Appendix 2. 2013 NCHS Urban-Rural Classification Scheme for Counties

<sup>g</sup> Based on underlying cause of death ICD-10 code. We did not scan the death certificate for further detail on type of firearm

Figure 1. Age-adjusted firearm-related mortality rates per 100,000 population, Montana compared with US and 7 states with enhanced gun safety laws<sup>h</sup>, 2009-2018<sup>1,16</sup>

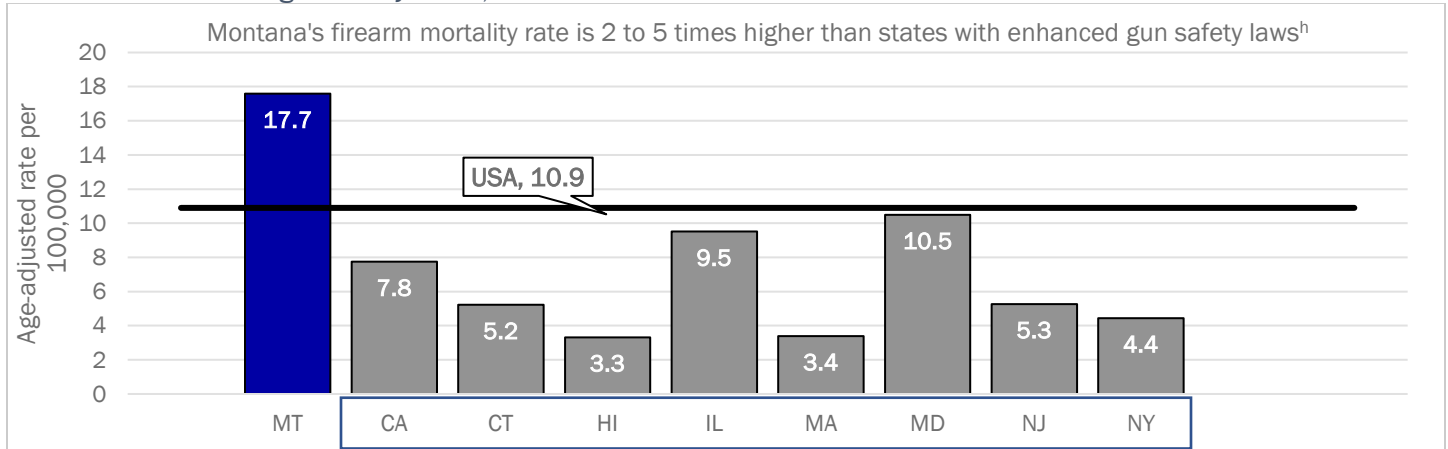


Table 2. Age-adjusted firearm-related mortality rates by sex, race, urban-rural classification, and intent category, Montana, 2010-2019, and United States, 2009-2018

		Montana, 2010-2019		United States, 2009-2018	
		Age-adjusted rate per 100,000	95% Confidence Interval	Age-adjusted rate per 100,000	95% Confidence Interval
<b>Total</b>		<b>17.7</b>	<b>(16.9 - 18.5)</b>	<b>10.9</b>	<b>(10.8 - 10.9)</b>
Sex	Female	6.3	(5.5 - 7.0)	3.1	(3.1 - 3.1)
	Male	29.3	(27.8 - 30.8)	19.0	(19.0 - 19.1)
Race	American Indian or Alaska Native	17.4	(14.1 - 20.8)	8.2	(7.9 - 8.5)
	Asian or Pacific Islander	¥		2.5	(2.5 - 2.6)
	Black or African American	¥		18.7	(18.6 - 18.9)
	White	17.7	(16.8 - 18.6)	9.8	(9.8 - 9.9)
NCHS urban-rural classification <sup>i</sup>	Large Central Metro	None in MT		10.4	(10.4 - 10.5)
	Large Fringe Metro	None in MT		8.6	(8.5 - 8.6)
	Medium Metro	None in MT		11.5	(11.4 - 11.6)
	Small Metro	16.1	(14.8 - 17.4)	12.0	(11.8 - 12.1)
	Micropolitan	16.5	(15.0 - 17.9)	13.0	(12.8 - 13.1)
	Rural (Noncore)	20.6	(19.0 - 22.2)	14.9	(14.7 - 15.1)
Intent category	Unintentional	0.4	(0.2 - 0.5)	0.2	(0.2 - 0.2)
	Self-harm/Suicide	15.0	(14.3 - 15.8)	6.4	(6.4 - 6.5)
	Assault/Homicide	1.7	(1.5 - 2.0)	4.0	(4.0 - 4.0)
	Undetermined	¥		0.1	(0.1 - 0.1)
	Legal Intervention	0.4	(0.3 - 0.6)	0.2	(0.1 - 0.2)

¥=Suppressed rate due to count<20

## SUICIDE

A total of 1,613 firearm suicides occurred among Montana residents from 2010-2019, or approximately 161 suicides per year (Table 1). Eight-six percent of all firearm deaths in Montana were suicides (Figure 2), compared with 61% nationally.<sup>1</sup> Among people older than 65, 95% of all firearm deaths were suicides. Montana's 2010-2019 age-adjusted firearm suicide rate (15.0 per 100,000 population) was over twice as high as the national rate (6.4 per 100,000, from 2010-2018) (Table 3), a pattern which has been consistent annually since 2010 (Figure 3).<sup>15</sup> Over the past two decades, Montana had the second highest gun suicide rate of any state in the US, after Wyoming.<sup>1</sup>

<sup>h</sup> All 7 comparison states have the following enhanced gun safety laws: Universal background checks for all firearm purchases, extreme risk protection orders, domestic violence gun laws, open carry regulations. 6 of the 7 states have: Assault weapon restrictions, "may issue" concealed carry laws

<sup>i</sup> See Appendix 2. 2013 NCHS Urban-Rural Classification Scheme for Counties

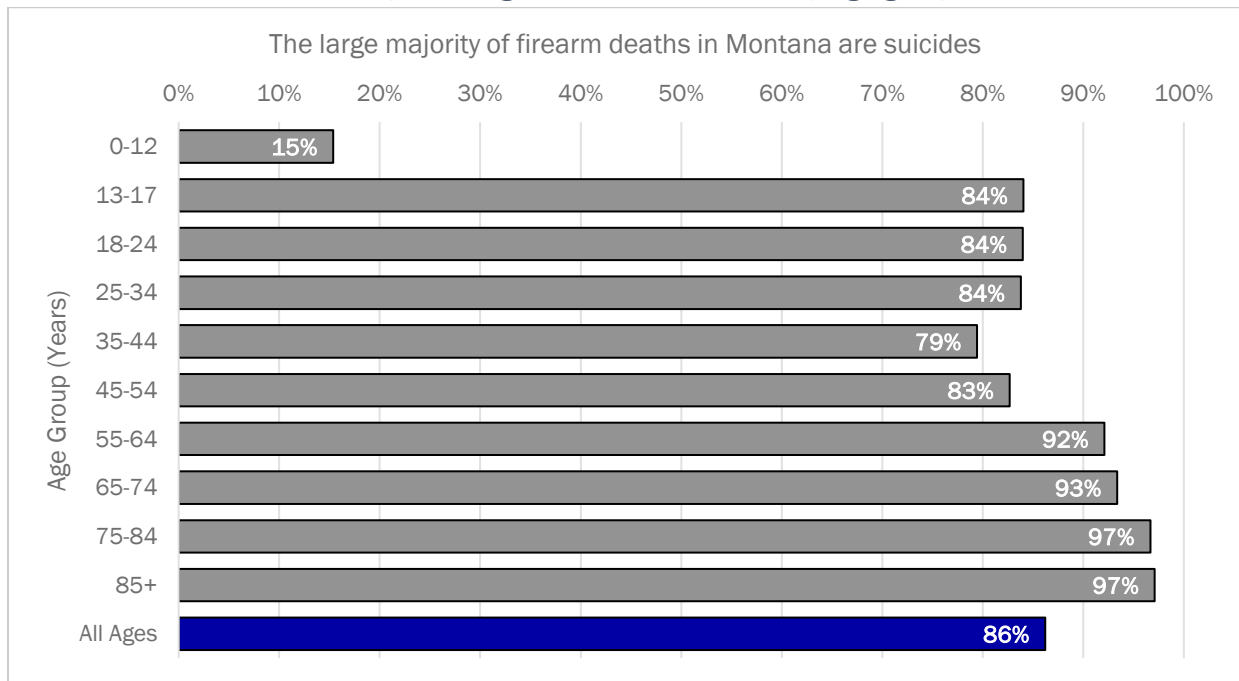
Montana's firearm suicide rate was 5.3 times higher among males than females. Overall, 85% of firearm suicides were males and 15% were females. However, among teens aged 13-17 years, 33% of gun suicides were females. Firearm suicide rates were higher for white people (15.3 per 100,000) than among American Indian/Alaska Native people (11.7 per 100,000). There was insufficient data to compute rates for Black/African American and Asian/Pacific Islander groups. The firearm suicide rate was highest among Montanans residing in rural counties (17.4 per 100,000). Similarly, rural counties had the highest firearm mortality rate in the US overall.

*Table 3. Age-adjusted firearm-related suicide rates by sex, race, and urban-rural classification, Montana, 2010-2019, and United States, 2009-2018*

		Montana, 2010-2019		United States, 2009-2018	
		Age-adjusted rate per 100,000	95% Confidence Interval	Age-adjusted rate per 100,000	95% Confidence Interval
<b>Total</b>		<b>15.0</b>	<b>(14.3 - 15.8)</b>	<b>6.4</b>	<b>(6.4 - 6.5)</b>
Sex	Female	4.8	(4.2 - 5.4)	1.8	(1.7 - 1.8)
	Male	25.4	(24.0 - 26.8)	11.6	(11.6 - 11.7)
Race	American Indian or Alaska Native	11.7	(9.0 - 14.5)	4.7	(4.4 - 4.9)
	Asian or Pacific Islander	¥		1.4	(1.4 - 1.5)
	Black or African American	¥		2.8	(2.8 - 2.9)
	White	15.3	(14.5 - 16.1)	7.4	(7.4 - 7.4)
NCHS urban-rural classification <sup>j</sup>	Large Central Metro	None in MT		4.5	(4.4 - 4.5)
	Large Fringe Metro	None in MT		5.5	(5.5 - 5.6)
	Medium Metro	None in MT		7.2	(7.1 - 7.2)
	Small Metro	13.4	(12.2 - 14.6)	8.5	(8.4 - 8.7)
	Micropolitan	14.3	(13.0 - 15.7)	9.3	(9.2 - 9.5)
	Rural (Noncore)	17.4	(15.9 - 18.8)	10.9	(10.8 - 11.1)

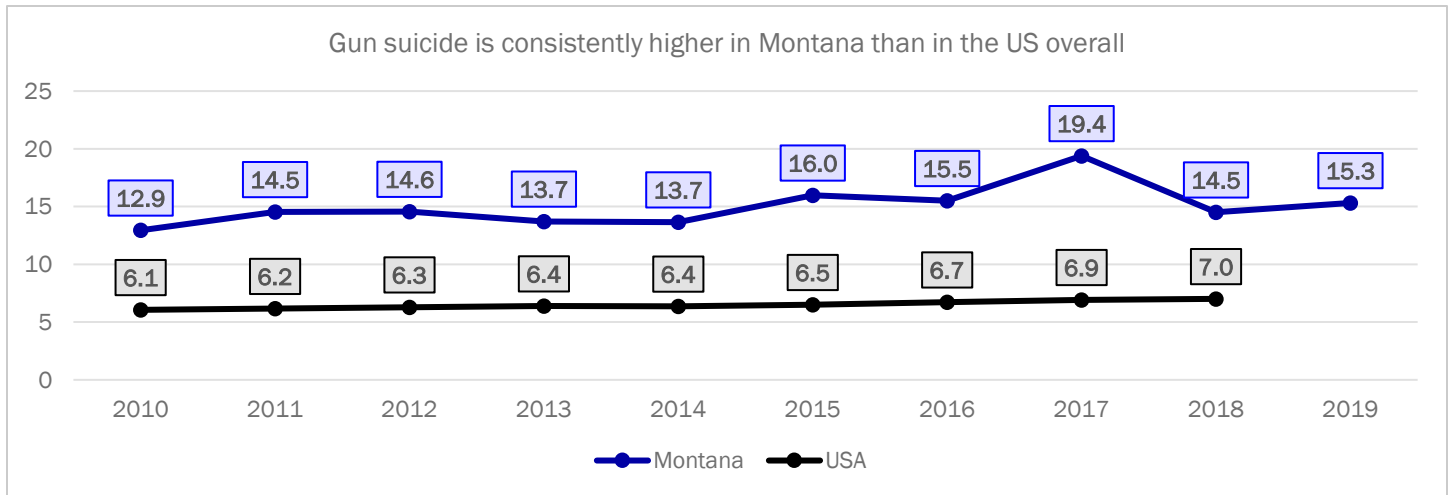
¥=Suppressed rate due to count<20

*Figure 2. Firearm-related suicides as a percentage of all firearm deaths by age group, Montana 2010-2019*



<sup>j</sup> See Appendix 2. 2013 NCHS Urban-Rural Classification Scheme for Counties

Figure 3. Age-adjusted firearm-related suicide rate, Montana compared with US, 2010-2018



## HOMICIDE

A total of 169 firearm homicides occurred among Montana residents from 2010-2019, or approximately 17 homicides per year (Table 1). Gun homicide patterns in Montana differ markedly from those in the US overall. Montana's gun homicide rate (1.7 per 100,000 population) was less than half as high as the national rate (4.0 per 100,000) (Table 4). Nationwide, 35% of all firearm deaths were homicides, and in Montana 9% of all firearm deaths were homicides.<sup>1</sup> The percentage of firearm deaths due to homicide varies by age group, for example, among Montana children age 0-12 the majority of firearm deaths were homicides (N=9, 69%).

The firearm homicide rate among AI/AN people (4.1 per 100,000) was over twice as high as the rate among white people (1.5 per 100,000) in Montana. In the US overall, the highest firearm homicide rate was among Black or African American people (15.4 per 100,000). There was insufficient data to compute rates for Black/African American and Asian/Pacific Islander groups in Montana.

Table 4. Age-adjusted firearm-related homicide rates by sex, race, and urban-rural classification, Montana, 2010-2019, and United States, 2009-2018

		Montana, 2010-2019		United States, 2009-2018	
		Age-adjusted rate per 100,000	95% Confidence Interval	Age-adjusted rate per 100,000	95% Confidence Interval
Total		1.7	(1.5 - 2.0)	4.0	(4.0 - 4.0)
Sex	Female	1.2	(0.9 - 1.6)	1.2	(1.2 - 1.3)
	Male	2.2	(1.8 - 2.7)	6.7	(6.6 - 6.7)
Race	American Indian or Alaska Native	4.1	(2.5 - 5.8)	2.9	(2.8 - 3.1)
	Asian or Pacific Islander	¥		1.0	(1.0 - 1.0)
	Black or African American	¥		15.4	(15.2 - 15.5)
	White	1.5	(1.3 - 1.8)	2.0	(2.0 - 2.1)
NCHS urban-rural classification <sup>k</sup>	Large Central Metro	None in MT		5.7	(5.7 - 5.8)
	Large Fringe Metro	None in MT		2.7	(2.7 - 2.8)
	Medium Metro	None in MT		3.9	(3.9 - 3.9)
	Small Metro	1.6	(1.2 - 2.0)	2.9	(2.9 - 3.0)
	Micropolitan	1.5	(1.0 - 2.0)	3.0	(2.9 - 3.1)
	Rural (Noncore)	2.1	(1.6 - 2.6)	3.2	(3.1 - 3.3)

¥=Suppressed rate due to count<20

<sup>k</sup> See Appendix 2. 2013 NCHS Urban-Rural Classification Scheme for Counties



## CASE FATALITY RATE

Unlike most injury mechanisms, where deaths comprise a fraction of the total burden of injury, deaths due to firearms accounted for nearly 60% of the total burden of firearm injuries in Montana from 2010-2019. This reflects the seriousness and lethality of firearm injuries. The case fatality rate (the proportion of injuries resulting in death), however, varies by intent. Firearm-related self-harm had the highest case fatality rate of 91%, followed by legal intervention (57%), and assault (50%) (Table 5).

Table 5. Firearm-related injury case fatality rate by intent category, Montana, 2010-2019

Intent Category	Fatal	Nonfatal Hospitalizations and ED Visits	Total	Case Fatality Rate
Unintentional	35	951	986	3.5%
Self-harm/suicide	1,613	163	1,776	90.8%
Assault/homicide	169	173	342	49.4%
Undetermined	15	44	59	25.4%
Legal intervention	39	29	68	57.4%
<b>Total</b>	<b>1,871</b>	<b>1,360</b>	<b>3,231</b>	<b>57.9%</b>

## Nonfatal Hospitalizations and ED visits

Nonfatal injuries account for a large portion of gun violence (Figure 4), yet often do not receive as much attention as fatalities. In part, this is due to a lack of reliable data sources. Nationally, there is no centralized system that tracks nonfatal injuries, as there is for fatal injuries (which are tracked in the national vital statistics system). Instead, projections based on samples of hospitals are used to estimate national statistics.

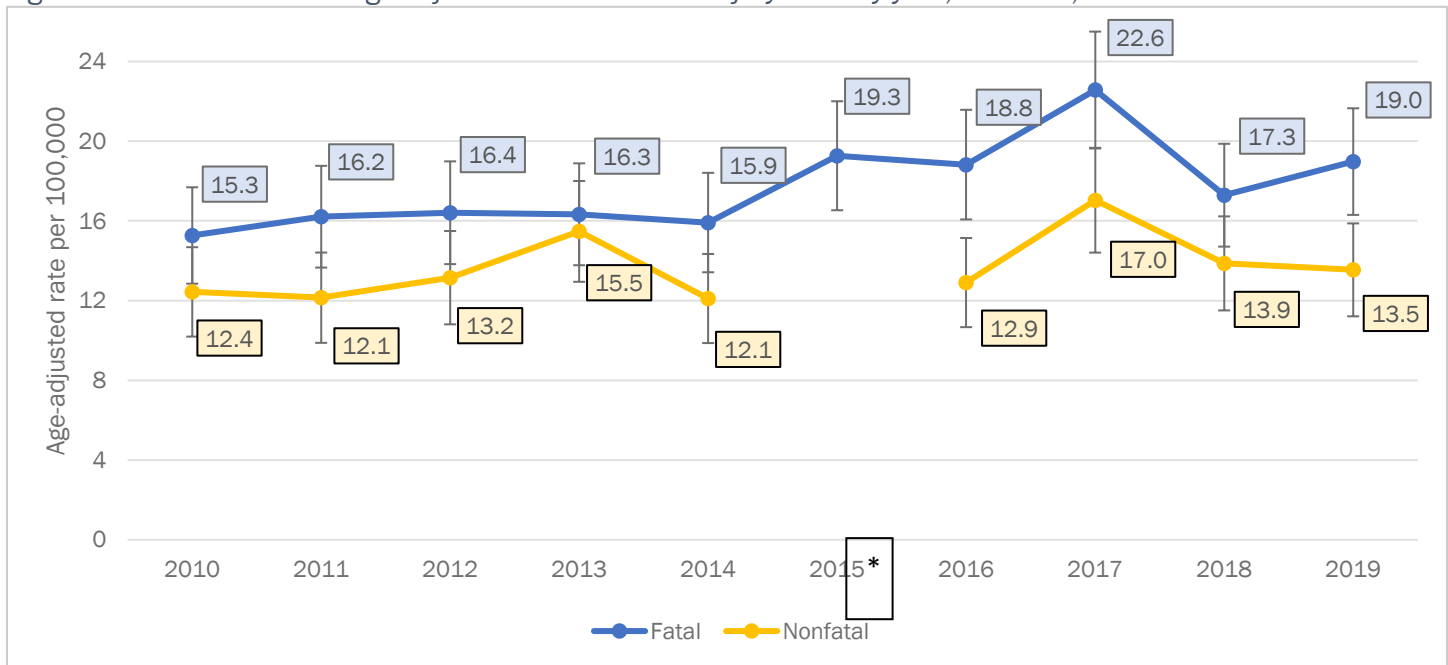
Understanding nonfatal gun injuries is paramount, because surviving these injuries is one of the strongest predictors of future violence. A young person exposed to firearm violence (including a suicide attempt or a family member suicide) has an increased risk for suicide or other violence in the future.<sup>17,18</sup> Data about who is experiencing and surviving gun injuries can illuminate opportunities to disrupt cycles of violence and build safer communities.

This report uses MHDDS ED visit and hospitalization data to describe nonfatal firearm injury in Montana. MHDDS does not include data from Federal, Veterans Affairs, or Indian Health Service facilities, therefore, this report may underestimate the true magnitude of nonfatal firearm injuries.

A total of 1,360 nonfatal firearm injuries among Montana residents were reported in MHDDS from 2010-2019, or approximately 136 per year (Table 6). Of these, 919 were ED visits (68%) and 441 were hospitalizations (32%). The age-adjusted rate of nonfatal firearm injuries was 13.8 per 100,000 population (95% CI: 13.0-14.5) (Table 7). The age-adjusted nonfatal firearm injury rate was 5.9 times higher among males than females. 86% of those injured were male and 14% were female. 60% of nonfatal injuries occurred among people aged 18–44 years. The nonfatal firearm injury rate was highest among Montanans residing in rural counties (19.4 per 100,000). Nonfatal injury rates were comparable among residents of small metro (10.7 per 100,000) and micropolitan counties (11.6 per 100,000).

Race/ethnicity data was available for 2018 and 2019 only. Of the 273 nonfatal firearm injury records in 2018-2019, 59% were white, 14% were AI/AN, 6% were other/multi-racial, and 21% were missing race information. The 2018-2019 age-adjusted nonfatal firearm injury rate was 2.9 times higher among AI/AN people (25.8 per 100,000 population) than white people (8.9 per 100,000 population). However, these rates should be interpreted with caution, due to the large proportion of records with missing race/ethnicity information.

Figure 4 Fatal and nonfatal age-adjusted firearm-related injury rates by year, Montana, 2010-2019



\*On October 1, 2015, healthcare coding for HIPAA covered entities transitioned from ICD-9-CM to ICD-10-CM. As a result, nonfatal injury data coded with ICD-9-CM MAY NOT BE COMPARABLE to data coded with ICD-10-CM. Nonfatal injury data from 2015 is omitted from the trend analysis.

Table 6. Number of nonfatal firearm-related injuries by sex, age group, urban-rural classification, and intent category, Montana, 2010-2019

		Percent of MT Population*	All Nonfatal Firearm Injuries		Unintentional Firearm Injury		Firearm Self-Harm		Firearm Assault	
			N	%	N	%	N	%	N	%
Total		100.0%	1,360	100.0%	951	100.0%	163	100.0%	173	100.0%
Sex	Female	49.7%	188	13.8%	107	11.3%	29	17.8%	39	22.5%
	Male	50.3%	1,172	86.2%	844	88.7%	134	82.2%	134	77.5%
Age group	0-12	15.9%	25	1.8%	23	2.4%	†	†	0	0.0%
	13-17	6.1%	115	8.5%	85	8.9%	7	4.3%	17	9.8%
	18-24	9.6%	268	19.7%	201	21.1%	34	20.9%	19	11.0%
	25-34	12.7%	349	25.7%	222	23.3%	36	22.1%	70	40.5%
	35-44	11.5%	206	15.1%	137	14.4%	19	11.7%	35	20.2%
	45-54	12.8%	141	10.4%	97	10.2%	18	11.0%	18	10.4%
	55-64	14.5%	138	10.1%	104	10.9%	20	12.3%	9	5.2%
	65-74	9.9%	87	6.4%	65	6.8%	17	10.4%	†	†
	75-84	4.9%	23	1.7%	13	1.4%	7	4.3%	†	†
	85+	2.1%	8	0.6%	†	†	†	†	0	0.0%
NCHS urban-rural classification <sup>†</sup>	Small Metro	35.3%	388	28.5%	276	29.0%	36	22.1%	57	32.9%
	Micropolitan	30.1%	351	25.8%	251	26.4%	50	30.7%	30	17.3%
	Rural (Noncore)	34.7%	621	45.7%	424	44.6%	77	47.2%	86	49.7%
Type of Firearm	Handgun	N/A	575	42.3%	396	41.6%	97	59.5%	64	37.0%
	Rifle, shotgun, larger firearms	N/A	271	19.9%	211	22.2%	26	16.0%	29	16.8%
	Other and unspecified firearms	N/A	514	37.8%	344	36.2%	40	24.5%	80	46.2%

†= Suppressed value due to count <5

\* Percent of the total 2010-2019 MT population is listed to assist with interpretation of the results

<sup>†</sup> See Appendix 2. 2013 NCHS Urban-Rural Classification Scheme for Counties



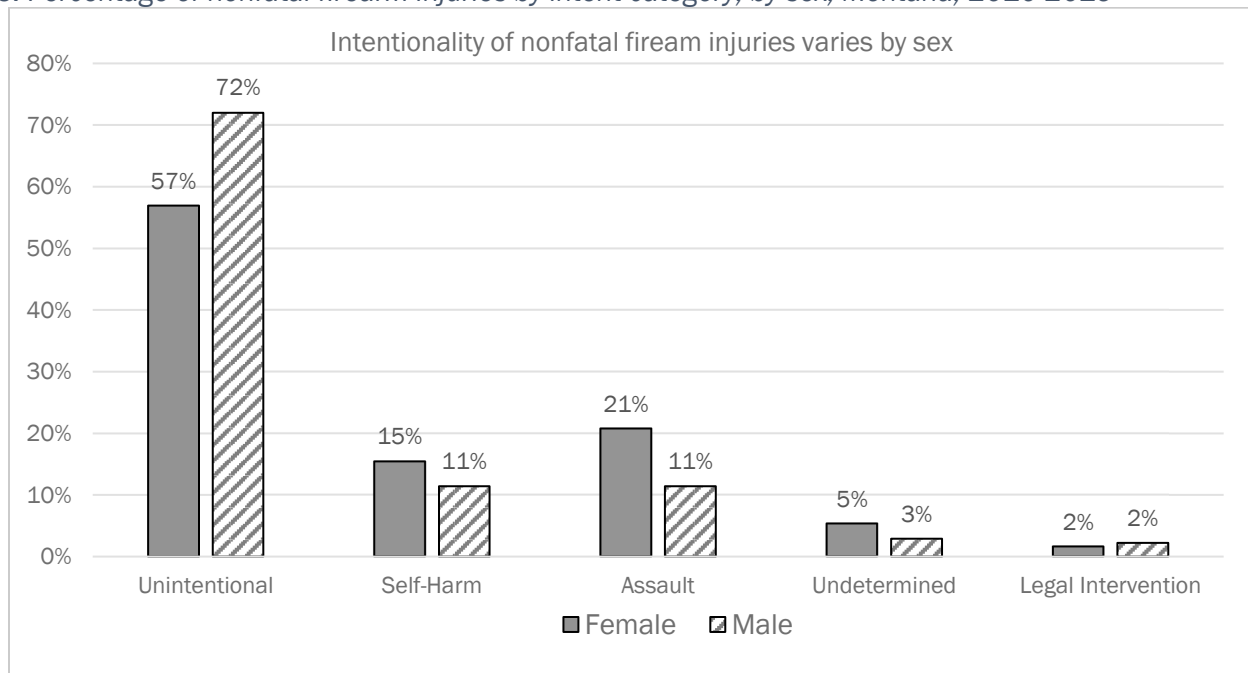
Table 7. Age-adjusted nonfatal firearm-related injury rates by sex, urban-rural classification, and intent category, Montana, 2010-2019

		Montana, 2010-2019	
		Age-adjusted rate per 100,000	95% Confidence Interval
<b>Total</b>		<b>13.8</b>	<b>(13.0 - 14.5)</b>
Sex	Female	3.9	(3.4 - 4.5)
	Male	23.2	(21.8 - 24.5)
NCHS urban-rural classification <sup>m</sup>	Small Metro	10.7	(9.6 - 11.8)
	Micropolitan	11.6	(10.4 - 12.8)
	Rural	19.4	(13.0 - 14.5)
Intent category	Unintentional	9.6	(8.9 - 10.2)
	Self-harm/Suicide	1.6	(1.3 - 1.8)
	Assault/Homicide	1.8	(1.6 - 2.1)
	Undetermined	0.4	(0.3 - 0.6)
	Legal Intervention	0.3	(0.2 - 0.4)

## UNINTENTIONAL INJURIES

Most (70%) nonfatal gun-related injuries reported in MHDDS were unintentional, in contrast with fatal injuries where only 2% were unintentional. Among males, 72% of the nonfatal injuries were unintentional, and among females 57% were unintentional. Among females, a larger percentage of injuries were due to self-harm and assault compared to males (Figure 5).

Figure 5. Percentage of nonfatal firearm injuries by intent category, by sex, Montana, 2010-2019



<sup>m</sup> See Appendix 2. 2013 NCHS Urban-Rural Classification Scheme for Counties



## Prevention Resources

### Gun Safety Resources

- [NRA Gun Safety Rules](#)
- [10 Rules of Safe Gun Handling](#) by the National Shooting Sports Foundation (NSSF) ([Printable document](#))
- Firearms safety in vehicles [brochure](#)
- Secure gun storage and gun lock installation [brochure](#), Gun Storage for your lifestyle: [A range of options](#)
- [Gun Safety Tips](#) by Safe Kids Worldwide
- Project ChildSafe [Resource Library](#)

### Montana Hunters Education

- To purchase or apply for a Montana hunting license, any person born after January 1, 1985, must complete a hunter education course. Information can be found on the [Montana Fish Wildlife and Parks Hunters Safety Page](#)

### Official Montana Firearms Safety Course

- Take [this Montana-approved course](#), available to anyone 18 or older, that meets the training requirement to apply for a Montana concealed carry permit. NOT a replacement for Hunter Education course.

### Get a Safety Kit

- Individuals: Contact a [participating Montana law enforcement agency](#) to obtain a free Project ChildSafe Safety Kit, which includes a cable-style gun lock and safety instructions
- Law Enforcement Partners: To obtain more Safety Kits, please [complete the law enforcement request form](#)

### Suicide Prevention and Mental Health

- Understanding youth mental health and preventing unauthorized access to firearms, [parental guide](#) and [video](#)
- American Foundation for Suicide Prevention – [Firearms and Suicide Prevention](#)
- [Veterans Affairs Mental Health](#) – Suicide Prevention – [Talking to a Veteran about firearm safety](#)
- Crisis [hotlines, warmlines, textlines, and helplines](#)
- [Means Matter Campaign](#) by Harvard Injury Control Research Center
- [CALM: Counseling on Access to Lethal Means](#): An online course for mental health professionals and others who work with people at risk for suicide

## Appendix 1. Firearm Injury ICD-10, ICD-9-CM, and ICD-10-CM Codes

ICD-10 Codes – Used for capturing fatal injuries

	Unintentional	Intentional Self-harm	Assault	Undetermined	Legal intervention	All Intent
Handgun	W32	X72	X93	Y22		W32, X72, X93, Y22
Rifle, shotgun and larger firearm	W33	X73	X94	Y23		W33, X73, X94, Y23
Other and unspecified firearms	W34	X74	X95, U01.4 <sup>n</sup>	Y24	Y35.0	W34, X74, X95, U01.4, Y24, Y35.0
All Firearm Types	W32-W34	X72-X74	X93-X95, U01.4	Y22-Y24	Y35.0	

ICD-9-CM Codes- Used for capturing non-fatal hospitalizations and ED visits with discharge date before 10/1/2015

	Unintentional	Intentional Self-harm	Assault	Undetermined	Legal intervention	All Intent
Handgun	E922.0	E955.0	E965.0	E985.0		E922.0, E955.0, E965.0, E985.0
Rifle, shotgun and larger firearm	E922.1, E922.2, E922.3	E955.1, E955.2, E955.3	E965.1, E965.2, E965.3	E985.1, E985.2, E985.3		E922.1-E922.3, E955.1-E955.3, E965.1-E965.3, E985.1-E985.3
Other and unspecified firearms	E922.8, E922.9	E955.4	E965.4, E979.4 <sup>2</sup>	E985.4	E970	E922.8, E922.9, E955.4, E965.4, E985.4, E970, E979.4
All Firearm Types	E922.0-E922.3, E922.8, E922.9	E955.0-E955.4	E965.0-E965.4, E979.4 <sup>2</sup>	E985.0-E985.4	E970	

ICD-10-CM Codes- Used for capturing non-fatal hospitalizations and ED visits with discharge date on or after 10/1/2015

	Unintentional	Intentional Self-harm	Assault	Undetermined	Legal intervention	All Intent
Handgun	W32 (W32.0=discharge W32.1=malfunction)	X72	X93	Y22	Y35.02	W32, X72, X93, Y22, Y35.02
Rifle, shotgun and larger firearm	W33 (W33.0=discharge W33.1=malfunction)	X73	X94	Y23	Y35.01, Y35.03	W33, X73, X94, Y23, Y35.01, Y35.03
Other and unspecified firearms	W34.00, W34.09-discharge W34.10, W34.19-malfunction	X74.8, X74.9	X95.8, X95.9, Y38.4 <sup>2</sup>	Y24.8, Y24.9	Y35.00, Y35.09	W34.00, W34.09, W34.10, W34.19, X74.8, X74.9, X95.8, X95.9, Y24.8, Y24.9, Y35.00, Y35.09, Y38.4
All Firearm Types	W32, W33, W34.00, W34.09, W34.10, W34.19	X72, X73, X74.8, X74.9	X93, X94, X95.8, X95.9, Y38.4 <sup>2</sup>	Y22, Y23, Y24.8, Y24.9	Y35.00-Y35.03, Y35.09	

<sup>n</sup> Terrorism

## Appendix 2. 2013 NCHS Urban-Rural Classification Scheme for Counties

The 2013 National Center for Health Statistics (NCHS) 6-level urban-rural classification scheme for US counties is often used to study the associations between urbanization level of residence and health. All counties in the United States are assigned to one of the six levels based on their status under the 2010 OMB delineation of metropolitan statistical areas (MSAs). MSA is defined as “a core area containing a large population nucleus together with adjacent communities having a high degree of economic and social integration with that core”. Counties not within a MSA are considered nonmetropolitan. The six levels are listed below in order from most urban to most rural:

1. **Large Central Metro:** Counties of large metropolitan areas with 1 million or more population, that contain all or part of the area's principal city (akin to inner cities)
2. **Large Fringe Metro:** Counties of large metropolitan areas with 1 million or more population, that do not qualify as “central” (akin to suburbs)
3. **Medium Metro:** Counties of medium metropolitan areas with 250,000-999,999 population
4. **Small metro:** Counties of small metropolitan areas with less than 250,000 population
5. **Micropolitan:** Nonmetropolitan counties with 10,000-49,999 population
6. **Rural (Noncore):** Nonmetropolitan counties that did not qualify as micropolitan

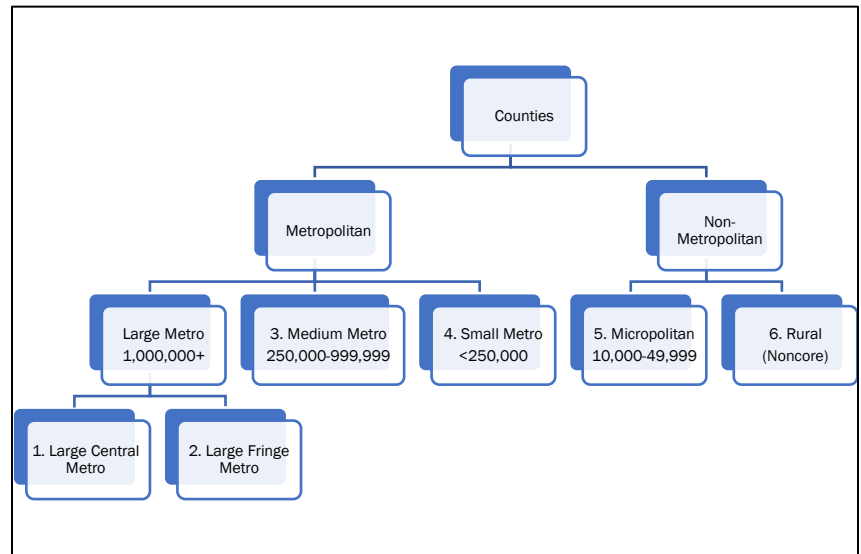
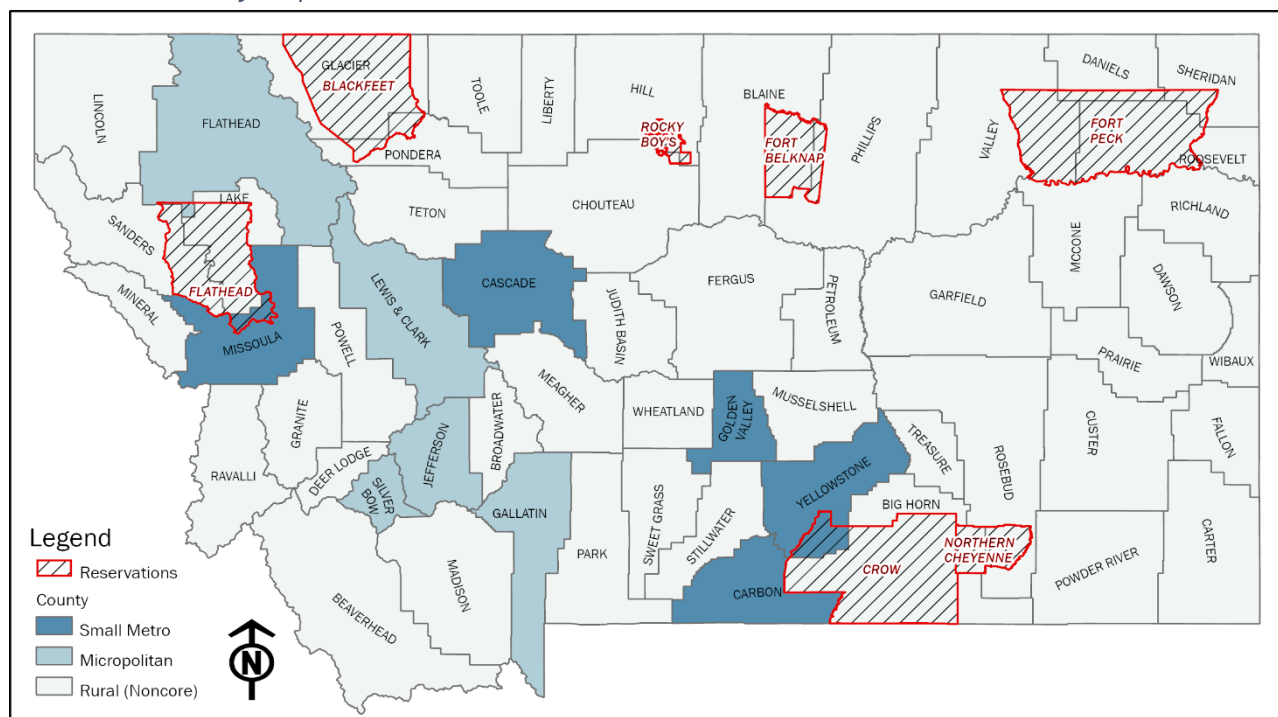


Figure 6. Montana County Map with 2013 NCHS Urban-Rural Classification



### Appendix 3. Supplemental Data Tables

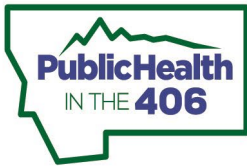
Table 8. Number of fatal and nonfatal firearm-related injuries by intent category, Montana, 2010-2019

Intent Category	Fatal Injuries		All Nonfatal Injuries		Nonfatal Hospitalizations		Nonfatal ED Visits	
	N	%	N	%	N	%	N	%
Unintentional	35	1.9%	951	69.9%	237	53.7%	714	77.7%
Suicide/Self-Harm	1,613	86.2%	163	12.0%	106	24.0%	57	6.2%
Homicide/Assault	169	9.0%	173	12.7%	77	17.5%	96	10.4%
Undetermined	15	0.8%	44	3.2%	8	1.8%	36	3.9%
Legal Intervention	39	2.1%	29	2.1%	13	2.9%	16	1.7%
<b>Total</b>	<b>1,871</b>	<b>100.0%</b>	<b>1,360</b>	<b>100.0%</b>	<b>441</b>	<b>100.0%</b>	<b>919</b>	<b>100.0%</b>

Table 9. Number of firearm-related suicide deaths by age group and year, Montana, 2010-2019

Year	Age Group (Years)										Total
	0-12	13-17	18-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	
2010	†	†	14	25	10	22	34	14	11	7	141
2011	†	5	16	28	21	25	28	13	10	†	150
2012	†	†	15	25	27	22	31	15	7	†	150
2013	†	8	19	19	21	21	28	14	11	†	144
2014	†	6	14	14	22	26	32	14	8	12	148
2015	†	8	17	26	22	27	34	21	10	8	174
2016	†	7	19	29	26	27	26	14	11	†	161
2017	†	5	22	32	29	32	40	20	20	14	214
2018	†	†	16	28	24	24	25	22	13	†	159
2019	†	8	21	27	22	22	25	22	15	10	172
<b>Total</b>	<b>†</b>	<b>58</b>	<b>173</b>	<b>253</b>	<b>224</b>	<b>248</b>	<b>303</b>	<b>169</b>	<b>116</b>	<b>67</b>	<b>1,613</b>

†= Suppressed value due to count <5. Zeroes are suppressed to prevent backwards calculation.



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