

Firearm Suicides and Suicide Attempts in Oregon, 2018-2021

Data Sources: Oregon Violent Death Reporting System (ORVDRS) and Emergency Department & Hospital Discharge Data (ED/HDD), 2018-2021

Oregon AVERT Project
**Advancing Violence
Epidemiology in ReaL Time**



**SCHOOL OF
PUBLIC HEALTH**

Data Listening Sessions

- The Oregon AVERT (Advancing Violence Epidemiology in Real Time) Project is a collaborative project of the OHSU Gun Violence Prevention Research Center and the Oregon Health Authority Public Health Division, funded by the Centers for Disease Control and Prevention. The Oregon AVERT Project uses an existing state database of injury and illness emergency department visits (Oregon ESSENCE - Electronic Surveillance System for the Early Notification of Community-Based Epidemics) to monitor firearm and other violence-related injuries. The primary goals of Oregon AVERT are to **increase the timely reporting of violent injuries** and **share data with community partners** working to prevent or respond to violent injuries.
- The following posters were created for use in data listening sessions. During data listening sessions, community partners learn more about the data that are available, provide feedback on the presentation of the data, ask questions, and explore ways in which they may use the data in their work. These listening sessions consisted of a mini poster session, with the following posters covering topics related to firearm suicide simultaneously on display, followed by group discussions during which community members provided feedback and discussed their data needs and interests. **If your organization is interested in holding a data listening session, either virtually or in-person, please contact [gunviolenceprevention at ohsu.edu](mailto:gunviolenceprevention@ohsu.edu).**

Technical Notes

- The following posters display linked data on firearm suicide and suicide attempts using Oregon's Emergency Department and Hospital Discharge Data (ED/HDD) and Oregon Violent Death Reporting System (ORVDRS) data. As the "Different Data Sources for Different Uses" poster describes, ED/HDD and ORVDRS were used for these posters because they provide more detailed information about injury intent.
- The term "firearm suicides and suicide attempts" is used in these posters to describe firearm injuries and deaths that are intentional and self-directed. This may include a small number of firearm self-harm injuries that were not intended to result in death. This does not include unintentional firearm injuries or firearm homicides and assaults.
- These data are unique because the ED/HDD and ORVDRS data were linked, allowing us to determine whether firearm suicide attempts in the ED/HDD had a fatal or nonfatal outcome. The use of this technique allows the total number of firearm suicides and suicide attempts to be reported without including some duplicate records where patients in the ED/HDD went on to die from their injuries.
- In the following posters, the counts and rates presented primarily represent both fatal firearm suicides and nonfatal firearm suicide attempts. The terms "count" and "number" are used interchangeably. Due to low counts, especially for nonfatal firearm suicide attempts, we cannot separate the fatal from the nonfatal counts for many of the demographic variables presented. Counts less than 5, and rates calculated using counts less than 5, are not reported to help maintain patient privacy.

Different Data Sources for Different Uses

	Health Care Visit Data		Death Data	
	Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE)	ED & Hospital Administrative Discharge Data (ED/HDD)	Center for Health Statistics (CHS) Death Certificate Data	Oregon Violent Death Reporting System (ORVDRS)
Data Source(s):	EDs and participating urgent care centers	Professional medical coders at hospitals and EDs	Medical professionals or medical examiners	Death certificates, medical examiner reports, law enforcement reports, and lab (toxicology) reports
Updated:	Daily	Quarterly	Monthly (preliminary data)	Yearly
Delay in Data Availability:	Near real-time	~4-6 months after end of quarter	Finalized data available ~10-11 months after calendar year	~16 months after calendar year
Public Availability Through Data Dashboards:	The Oregon Firearm Injury Data Dashboard ; Suicide-Related Public Health Update Dashboard	Oregon Injury Prevention Dashboard	CHS Data Dashboards	OHA's ORVDRS Data Dashboard

Why does the number of ED visits in discharge data differ from the number in ESSENCE data?

Different methods are used to collect and report data.

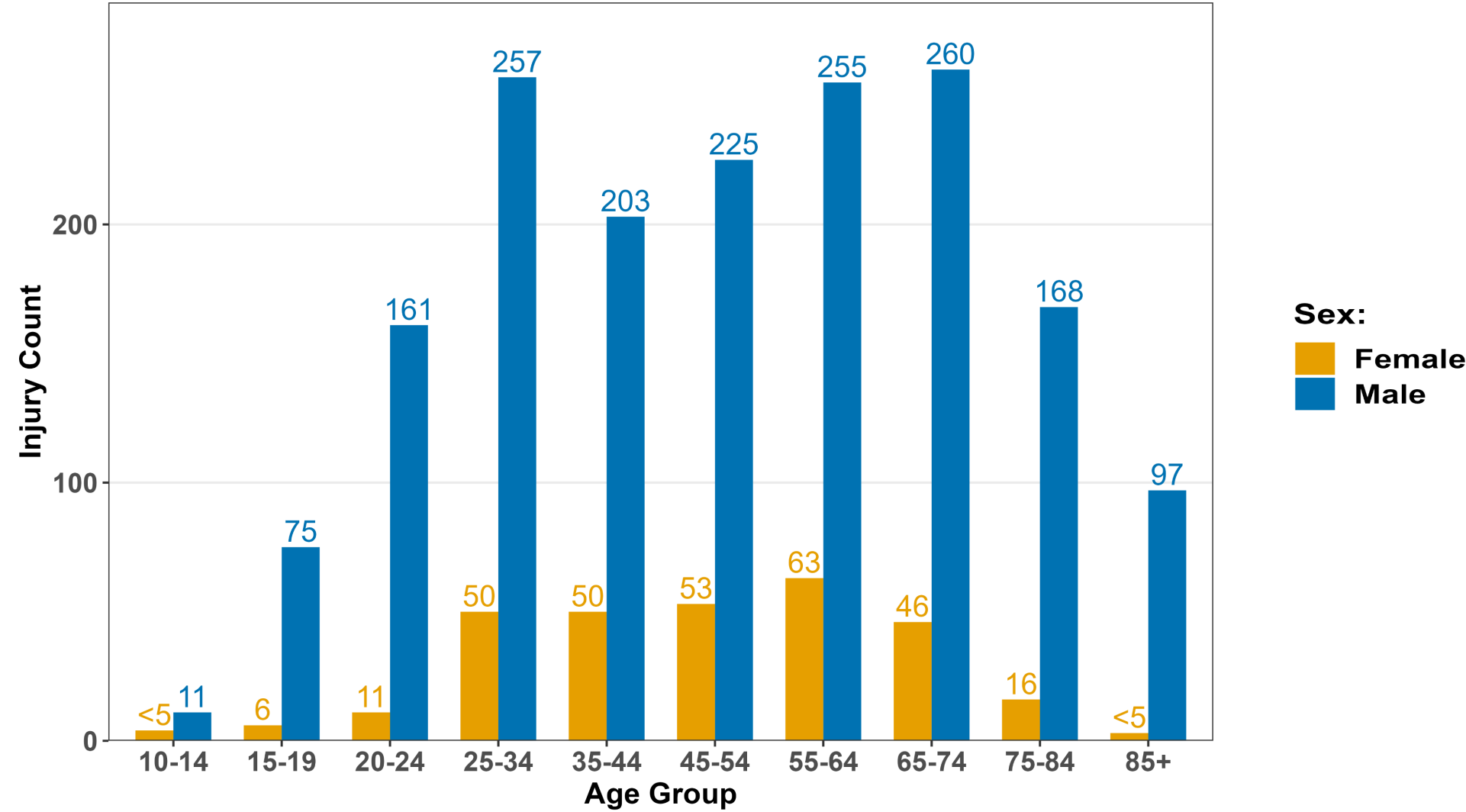
- ESSENCE data include visits to all EDs and participating urgent care centers and may include duplicate counts for patients transferred between EDs or with multiple visits for the same injury.
- ED discharge data only include visits with charges for services and do not include visits to urgent care centers.

Best Uses:

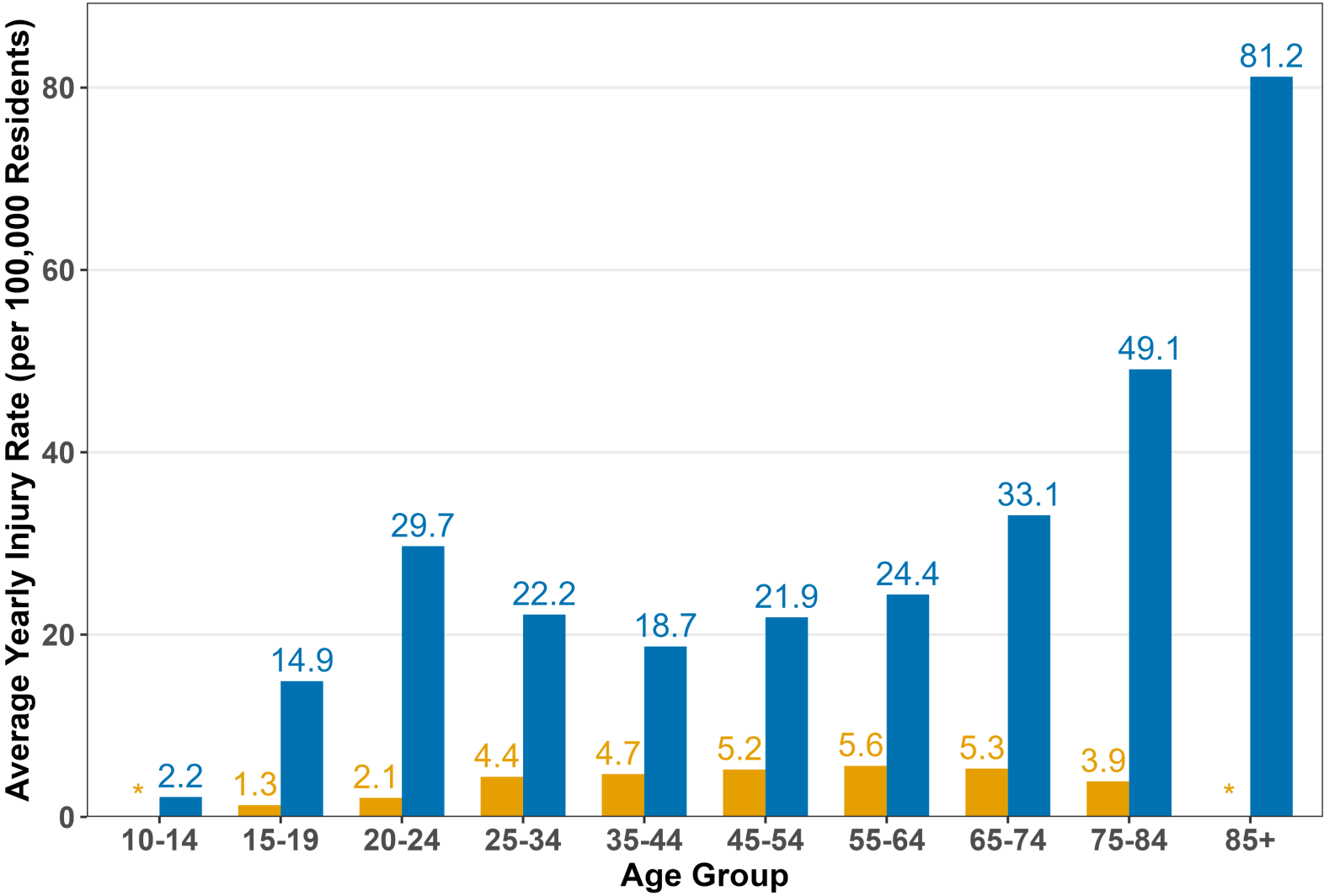
- Use ESSENCE and preliminary CHS data for more timely information.
- Use ED/HDD and ORVDRS for verified and more detailed information about injuries or deaths (e.g., firearm injury intent).

Rates of Firearm Suicides and Suicide Attempts are Highest Among Oregonians who are White, Male, and Ages 85+

Total Number of Firearm Suicides and Suicide Attempts in Oregon, by Age and Sex, 2018-2021
Data Source: ORVDRS and ED/HDD



Average Yearly Rate (per 100,000 residents) of Firearm Suicides and Suicide Attempts in Oregon, by Age and Sex, 2018-2021
Data Source: ORVDRS and ED/HDD



* Indicates rates that are not reported due to counts <5.

Firearm Suicides and Suicide Attempts in Oregon, by Race and Ethnicity, 2018-2021
Data Source: ORVDRS and ED/HDD

Race & Ethnicity	Number of Nonfatal Injuries	Number of Fatal Injuries	Median Age at Time of Injury/Death	Average Yearly Injury Rate
American Indian or Alaska Native	<5	28	34.0	4.8
Another Race	5	<5	27.0	3.0
Asian	<5	29	34.0	3.0
Black or African American	<5	21	32.0	4.8
Hispanic or Latino/a/x	14	82	28.5	4.6
Native Hawaiian or Other Pacific Islander	<5	7	35.0	5.5
Unknown	6	<5	32.0	-
White	113	1696	54.0	14.9

- Males in Oregon experienced nearly 6 times the number of firearm suicides and suicide attempts compared to females.
- Male Oregonians aged 85+ experienced the highest average yearly rate of firearm suicides and suicide attempts.
- White Oregonians experienced the highest average yearly rate of firearm suicides and suicide attempts and tended to be older at the time of injury or death compared to other race and ethnicity groups.

Rates of Firearm Suicides and Suicide Attempts in Oregon are Highest in Frontier and Rural Areas

How are Frontier, Rural, and Urban areas defined in Oregon?

Classifications are based on Zip Codes and come from the Oregon Office of Rural Health.

Frontier: Any county with 6 or fewer residents per square mile.

Rural: Geographic areas in Oregon greater than 10 miles from a city of 40,000 or more residents.

Urban: Geographic areas in Oregon within 10 miles of a city with 40,000 or more residents.

In Oregon, the 2018-2021 average yearly *rate* of firearm suicides and suicide attempts per 100,000 residents was 2.0 and 1.8 times higher for Frontier and Rural areas, respectively, when compared to Urban areas.

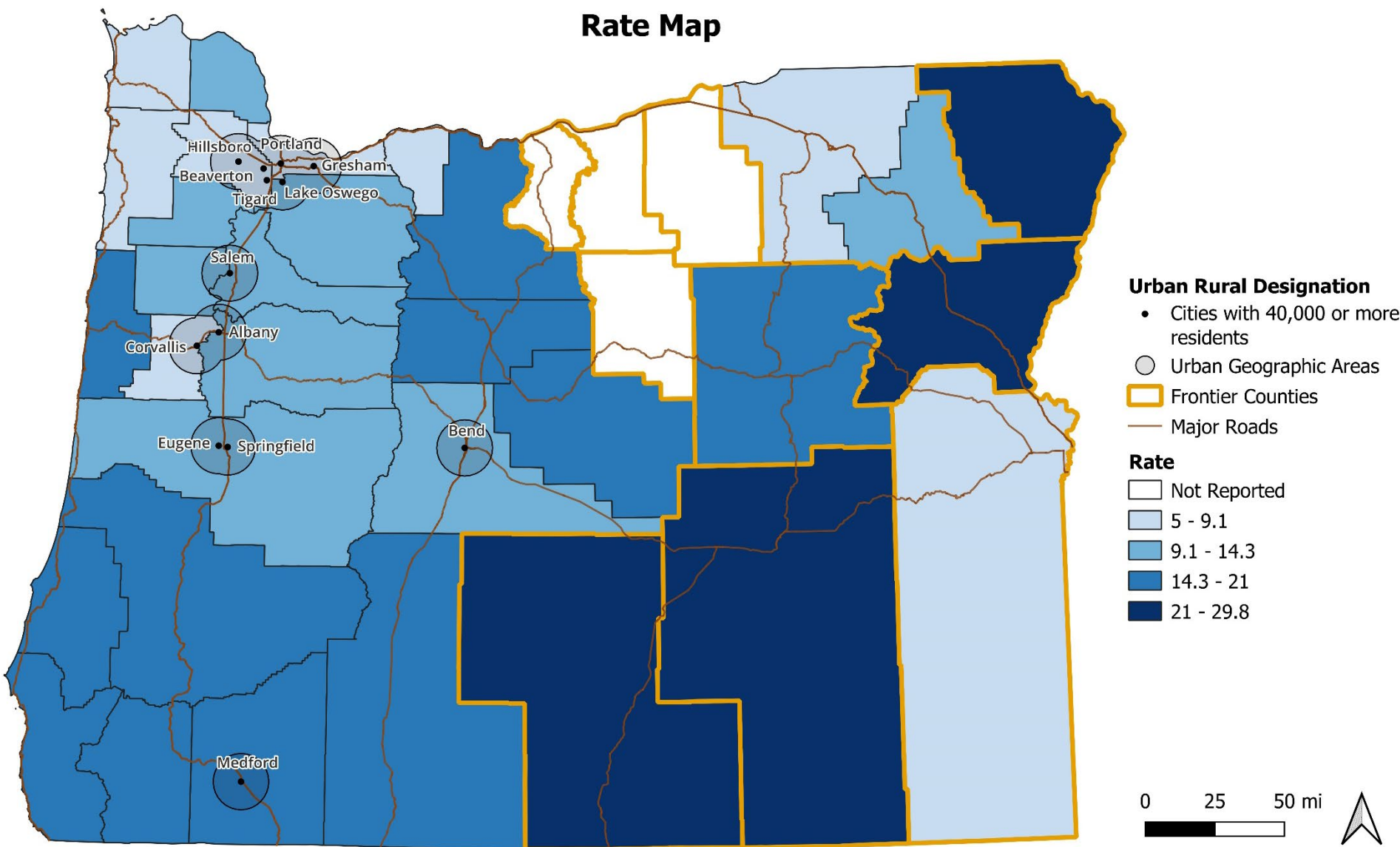
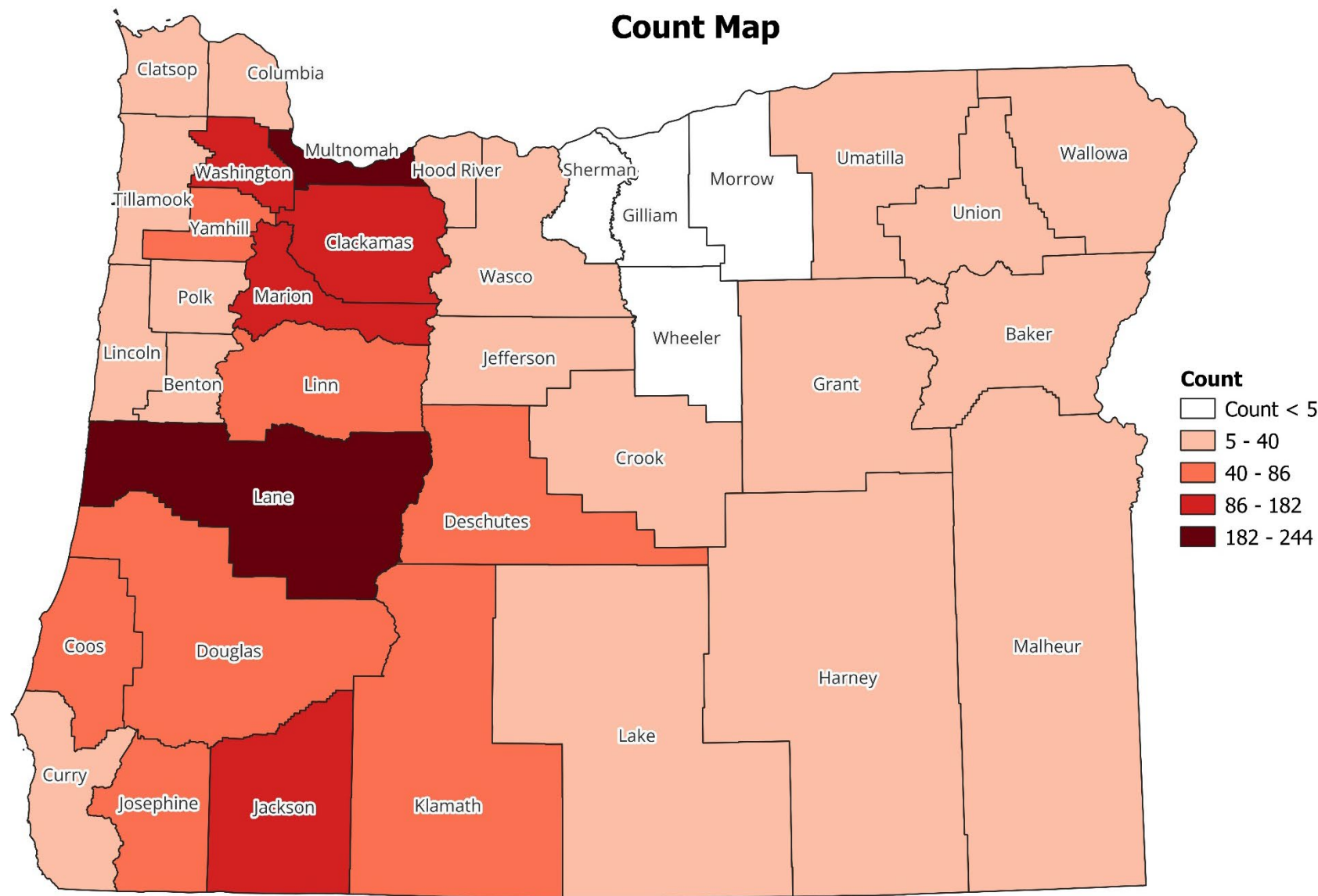
Firearm Suicides and Suicide Attempts in Frontier, Rural, and Urban Geographic Areas

Data Source: ORVDRS and ED/HDD, 2018-2021

Designation	Nonfatal Count	Fatal Count	Total Count	Population	Average Yearly Rate	Rate Ratio
Frontier	5	61	66	93,887	17.6	2.0
Rural	65	807	872	1,390,536	15.7	1.8
Urban	68	928	996	2,780,180	9.0	-

Firearm Suicides and Suicide Attempts, By County, 2018–2021

Data Source: ORVDRS and ED/HDD



The Oregon counties with larger populations have the highest total counts of firearm suicides and suicide attempts, with the largest numbers observed in Multnomah, Lane, Washington, Clackamas, Marion, and Jackson counties.

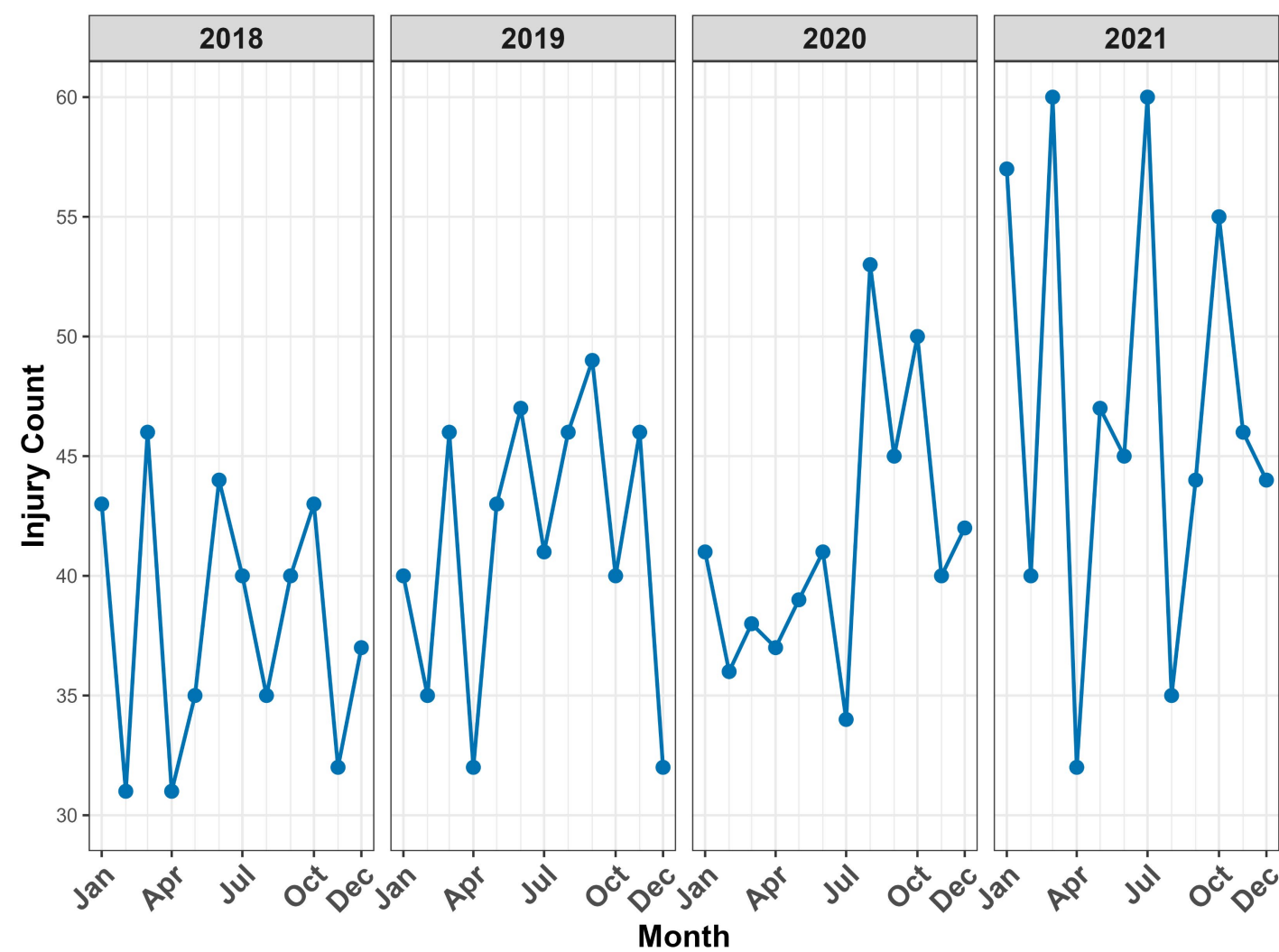
When accounting for population size, the picture changes quite a bit. Frontier counties such as Baker, Harney, Lake, and Wallowa experience the highest rates of firearm suicides and suicide attempts per 100,000 residents.

Trends in Firearm Suicides and Suicide Attempts in Oregon

Total Number of Firearm Suicides and Suicide Attempts in Oregon, by Month and Year

Attempts in Oregon, by Month and Year

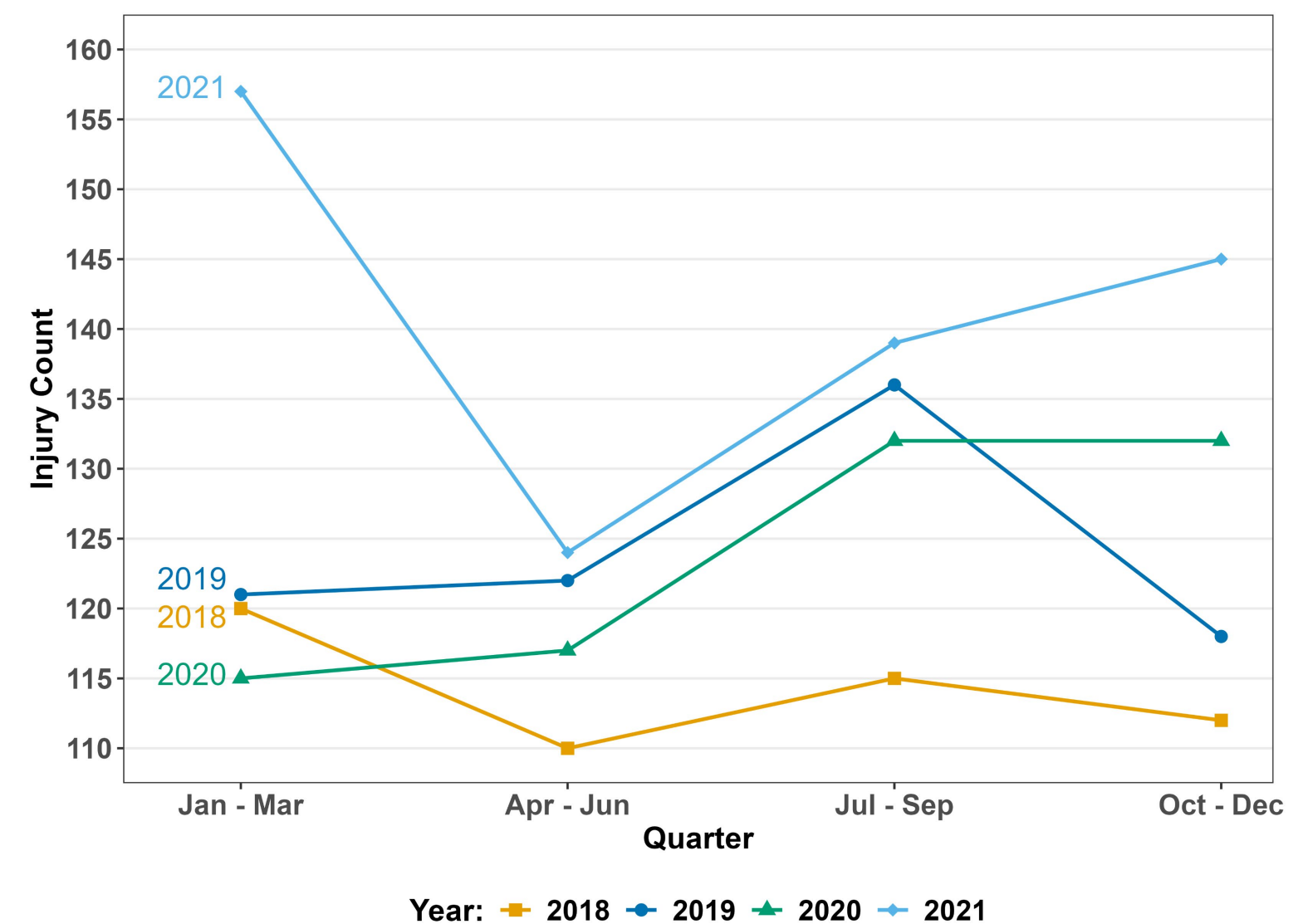
Data Source: ORVDRS and ED/HDD, 2018-2021



Total Number of Firearm Suicides and Suicide Attempts in Oregon, by Quarter and Year

Attempts in Oregon, by Quarter and Year

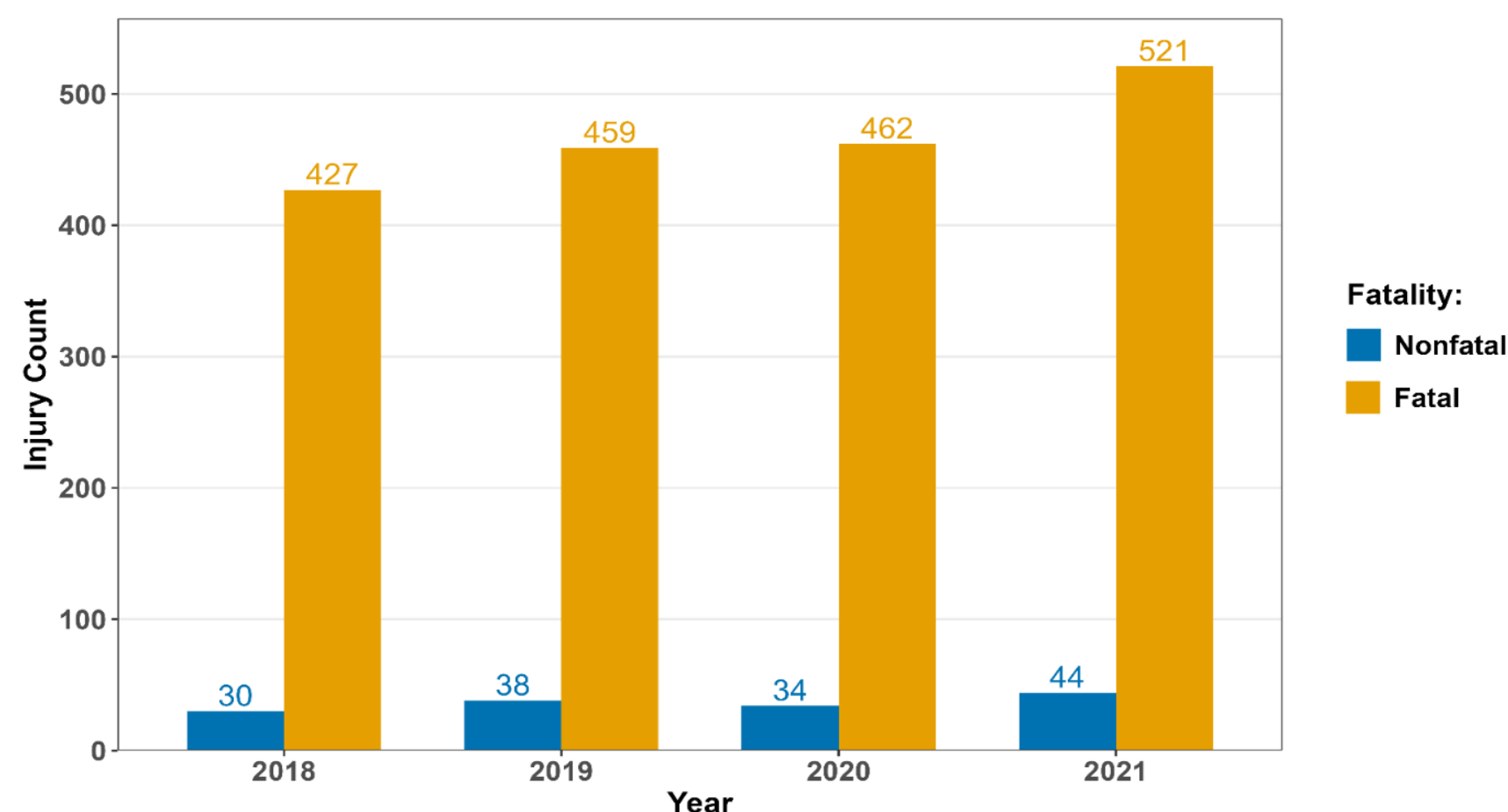
Data Source: ORVDRS and ED/HDD, 2018-2021



Total Number of Fatal Firearm Suicides and Suicide Attempts in Oregon, by Year and Fatality

Attempts in Oregon, by Year and Fatality

Data Source: ORVDRS and ED/HDD, 2018-2021



- Firearm suicides and suicide attempts were highest in 2021 compared to previous years, but all years saw high variability in monthly trends.
- From 2018 to 2021, Oregon saw a 22% increase in fatal firearm suicides and a 47% increase in nonfatal firearm suicide attempts, though the number of nonfatal attempts remained relatively small.
- Between 2018 to 2021, 93% of all firearm suicides and suicide attempts were fatal, with similar proportions of fatal injuries each year.