2020

Annual Trauma Registry Report

NEVADA

BUREAU OF HEALTH PROTECTION AND PREPARDENESS

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July 2021
Edition 1.0
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Helping People. It's Who We Are and What We Do.

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ACKNOWLEDGEMENTS

Thank you to Tabatha Hart, Heather Mitchell, and Mavis Quansah Amissah for their contributions to this publication.

PURPOSE OF REPORT

The purpose of this report is to provide a picture of trauma within the state of Nevada based upon data submitted by hospitals to the Nevada Trauma Registry (NTR). This report presents data in a usable form for local health authorities, healthcare providers, and the public. The Nevada Division of Public and Behavioral Health (DPBH) shall prepare an Annual Trauma Report in accordance with Nevada Administrative Code (NAC) 450B.768. The data contained within this annual report is based upon calendar year and summarizes the data submitted by hospitals regarding the reported traumas handled by each facility.

It should be noted that data depicted in this report reflects only data entered and reported to the NTR. If, for some reason access to or recording of data was not feasible, data may not have been captured in a facility's Electronic Medical Record (EMR), thus would not be recorded in the NTR and not be seen in this report. The year 2020 was consumed by the COVID-19 global pandemic. The extensive medical needs during the COVID-19 State of Emergency led to exposed gaps in the medical community, particularly surrounding healthcare provider staffing needs. These circumstances resulted in staffing shortcomings for multiple facilities, therefore hindering reporting capabilities for the trauma registry. The information included in this report is accurate to the best knowledge of all reporting facilities and the State of Nevada Trauma Registry.

INTRODUCTION

WHAT IS THE NEVADA TRAUMA REGISTRY (NTR)?

Per Nevada Revised Statutes (NRS) 450B.238, and Nevada Administrative Code (NAC) 450B.768, the NTR was established in 1987, to collect data on persons who sustain a physical (blunt or penetrating) injury caused by an accident or by violence. The NTR data is collected from all licensed acute care hospitals and trauma centers in Nevada.

For the 2020 Annual Trauma Report, ICD-10 codes were utilized. Per *National Trauma Data Bank* criteria, for an injury to be reported as a trauma, it must have at least one ICD-10 code from the following ranges: S00 -S99 (7^{th} Character Modifier A, B, or C), T07, T14, T20-T28 (7^{th} Character modifier A), T30-32, and T79.A1-T79.A9 (7^{th} character modifier A) and the patient must have either:

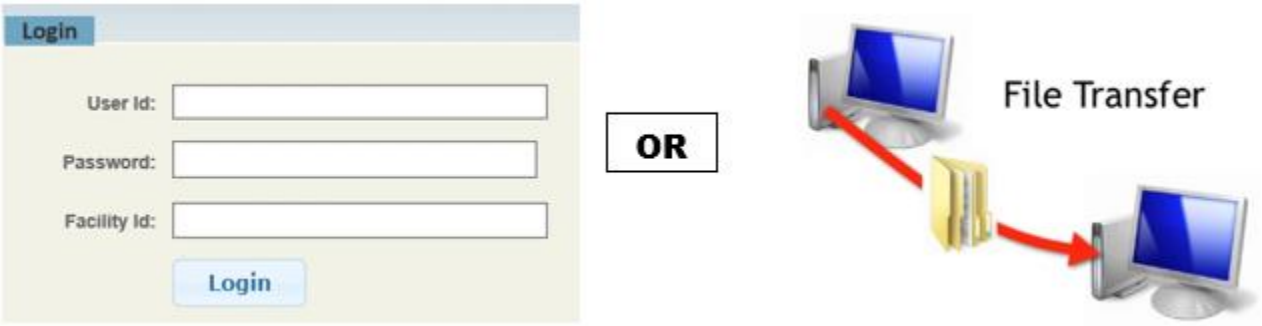
- been admitted to a facility for at least 24 hours;
- died following treatment or evaluation; **or**
- been transferred into or out of a facility.

The NTR currently collects the required data points from both the National Trauma Data Bank (NTDB) established by the *American College of Surgeons* and data points identified in NAC 450B.766 and 450B.768. Included (but not limited to) are data on the event causing the injury, severity of the injury, place of the injury, length of hospital stays, diagnosis(es) of the patient, discharge destination of the patient and payer source.

The NTR can provide information on the incidence, prevalence, morbidity, and mortality of injuries reported in Nevada. The data can be broken down to a specific county, specific hospital, specific race, or specific age group. These data are available for state, private or federal entities and can be used for grant applicants to measure the impact of trauma in Nevada; as well as initiate health education programs that address traumatic injuries. Additionally, these data are provided to the Local Health Authorities for data analysis, surveillance, and to assist in the improvement of public health outcomes.

The 2020 Annual Trauma Report is based upon data submitted to the NTR by Nevada's four designated trauma centers and 37 non-trauma center hospitals, for a total of 41 facilities that operated during the calendar year. To be considered compliant with NAC 450B.768, a hospital must enter all trauma records into the NTR, or notify the State NTR Manager that no records met the criteria to be submitted, by the quarterly due date.

Non-trauma centers submit trauma data by logging into the NTR via a username and password. Trauma centers utilize their in-house version of the NTR software and electronically transfer the data from their software to the state NTR.



Per NAC 450B.768 – all trauma data (non-trauma centers & trauma centers) must be submitted to the Nevada Trauma Registry no later than 60 days after the calendar year quarter.

- Quarter 1 = January 1 – March 31 (due on June 1)
- Quarter 2 = April 1 – June 30 (due on Sept. 1)
- Quarter 3 = July 1 – September 30 (due on Dec. 1)
- Quarter 4 = October 1 – December 31 (due on March 1)

Below is a summary table that outlines per year the percentage of facilities that were compliant with submitting data to the NTR.

YEAR	% of Non-Trauma Centers Compliant	% of Trauma Centers Compliant
2016	100%	75%
2017	100%	100%
2018	98%	100%
2019	89%	75%
2020	88%	94%

* In 2020, three of the four trauma centers submitted all required trauma data to the NTR. There were a total of six instances of non-compliance over the 12-month period. There were two instances of repeated noncompliance from one trauma facility.

State NTR staff continue to work hard to train all personnel at non-trauma center hospitals to improve data entry accuracy; multiple staff turnover at facility has dictated the need for ongoing training.

Due to multiple progressive changes throughout the years, it is advised to not compare the year over year data. The 2017 year required facilities to transition from the use of ICD-9 to ICD-10 diagnosis coding. There are significant changes in the diagnosis detail within the ICD-10 coding, making a comparison between 2017 and previous years inaccurate. An additional facility was added in 2018 making this report not 100% comparable to previous years. Finally, the hospitals submitted their 2020 trauma data amid a global pandemic during which large parts of the population were not participating in the previously typical daily activities.

In addition to continual training of non-trauma center hospital personnel on the NTR software, the NTR Manager utilized quarterly facility report cards for each hospital to educate data entry staff. These report cards are tailored for each facility and include information about the facility's compliance and accuracy of data entry against the general accuracy reports of their peer facilities. Additionally, these quarterly report cards provide tips, hints, and notes for each facility about how to improve data entry. The quality and accuracy of data entered in the NTR has a direct impact on what can be analyzed for the Annual Trauma Registry Report.

Finally, collaborative relationships have continued to be built with trauma personnel from various disciplines throughout the state. Some of the methods being utilized in these efforts include:

- Hosting quarterly conference calls with trauma center staff;
- When possible, meeting in person with hospital personnel responsible for NTR data entry;
- Participating in local healthcare coalitions; and
- Quarterly NTR user group meetings.

Overall, through regular communication, offering NTR user trainings, delivering reminders about quarterly trauma data due dates, and revitalization and development of relationships across the state, hospital data entry compliance has dramatically increased from the 2016 submissions of data to 2020 years' submissions. Additionally, as compliance from the state's hospitals continue to improve on the adequacy of their data submissions; the amount and quality of the data available for analyses within the NTR for subsequent annual reports will continue to improve. This will result in strengthened detail and depth of future annual trauma reports.

NEVADA TRAUMA REGISTRY BACKGROUND

The definition of a trauma incident and the requirements for trauma reporting are outlined in both the Nevada Revised Statutes and Nevada Administrative Code. These statutes and regulations are outlined below.

NEVADA REVISED STATUTE (NRS)

NRS 450B.105 **"Trauma" defined.** "Trauma" means any acute injury which, per standardized criteria for triage in the field, involves a significant risk of death or the precipitation of complications or disabilities.

NRS 450B.238 **Regulations requiring hospital to record and maintain information.** The State Board of Health shall adopt regulations which require each hospital to record and maintain information concerning the treatment of trauma in the hospital. The Board shall consider the guidelines adopted by the American College of Surgeons which concern the information which must be recorded.

NEVADA ADMINISTRATIVE CODE (NAC)

The NAC regarding the treatment of trauma in Nevada and the corresponding Trauma Registry reporting requirements, guidelines, and procedures can be found at NAC 450B.760 through NAC 450B.774, inclusive.

In summary, the regulations state that the Division of Public and Behavioral Health Division shall develop a standardized system for the collection of information concerning the treatment of trauma and carry out a system for the management of that information. The system must provide for the recording of information concerning treatment received before and after admission to a hospital. This system is called the NTR.

Each hospital shall submit to the Division trauma data on a quarterly basis which complies with the criteria prescribed by the Division and contains at least the minimum data set required by the National Trauma Data Bank (NTDB) established by the American College of Surgeons and any other information required by the Division or the State Board of Health.

The Division shall prepare an annual report for the preceding calendar year summarizing the data submitted by hospitals on patients with traumas.

METHODOLOGY

*Please note that although there were no additions or loss of facilities in the 2020 year of reporting, the COVID-19 global pandemic resulted in varying levels of facility reporting capabilities throughout the reporting year. The data included in this report for 2020 is not directly comparable from previous years. The NTR is a depository of trauma incident data from across the state. All hospitals within Nevada are required to submit data quarterly to the NTR. To be classified as a trauma, a series of criteria identified by the American College of Surgeons must be met. For an incident to be classified as a trauma, the patient must have:

- At least one diagnostic code for injury:
    - ICD-10 code from the following ranges: S00 -S99 (7th Character Modifier A, B, or C), T07, T14, T20-T28 (7th Character modifier A), T30-32, and T79.A1-T79.A9 (7th character modifier A) **and** the patient must have either:
- At least one of the following criteria:
    - Patient was in the hospital for at least 24 hours due to injuries;
    - Injury resulted in death; **or**
    - Patient was transferred between hospitals using ground or air ambulance.

Each year the data within the NTR will be statistically analyzed to evaluate incident traumas in Nevada. This evaluation is presented in the Annual Trauma Report, written by the state, in accordance with NAC 450B.768.

In 2020, the NTR captured **11,325** trauma cases. This report includes cases for patients with an Emergency Department/Hospital Arrival Date between January 1, 2020 and December 31, 2020. All data was analyzed using Statistical Analysis System (SAS) Version 9.4 (SAS Institute, Cary, NC).

All trauma rates were calculated per 100,000 Nevada residents using the *Nevada State Demographer*, Age, Sex, Race, and Hispanic Origin (ASRHO) estimates and projections, vintage 2020 population data. The vintage year refers to the final year of the time series. The results for the previous year are released after July 1 of the following year. When appropriate, a 95% Confidence Interval (CI) was calculated for comparing rate estimates. CIs provide a range of values that describe the uncertainty surrounding an estimate and may be used to assess statistical significance. When comparing trauma rates within a table, if the range of the CIs for two rates do not overlap, the rates can be considered significantly different. If the CI ranges overlap, then the difference is not significant.

Example:

Group	Count [Confidence Interval]
A	392 [385, 398]
B	390 [380, 399]
C	826 [796, 857]

In the example table above, the CIs for groups A and B share a range of values (385-398), thus there is no statistically significant difference in these rates. However, there is a statistically significant difference between group A and group C and between group B and group C as the ranges for their CIs do not overlap.

It should be noted that data depicted in this report is a reflection based solely on data points recorded within the NTR. It does not include patient history, or examination.

RESULTS

From January 1, 2020 through December 31, 2020, a total of 11,325 traumas were recorded in the NTR by the 41 facilities in Nevada. In 2019, 11,256 traumas were recorded from 41 facilities in Nevada.

The following pages includes data analysis of:

- Trauma cases
- Demographics
- Place and mechanism of injury
- Injury characteristics
- Patient transportation
- Patient discharge and transfer
- Risk factors
- Safety equipment, and
- The breakdown of falls data.

Technical Notes

There are 3 ways in which the Nevada Trauma Registry presents traumas. Each category found in the report are explained below.

- Total trauma cases include all cases reported to the Nevada Trauma Registry, including transfers between facilities. Therefore, if a trauma patient presents at one facility and is transferred to another facility, that case is represented twice.
- Unique trauma cases are calculated by matching trauma records based on birth date, injury date, patient zip code, and discharge/arrival date. Unique trauma cases include only the first presentation to a facility, and not transfers between facilities; except in Tables 3, 8, 10, 15, 16, 17 and Figure 11 where traumas are assigned to the last transfer facility. This logic to include the last transfer facility was used to account for the following situations:
    - When considering traumas that resulted in deaths, it is important to analyze based on the facility at time of death. Therefore, throughout this report, when a table lists Mortality Proportion and 11,256 in Unique Traumas, the table is based upon last facility.
    - There were some instances where the mechanism of injury differed between facility of first presentation and facility at time of death. In this case the mechanism was assigned based on facility at time of death.

- Please note, the state of Nevada does not attempt to change/correct patient records at the first facility if it does not match information at the last facility.

- Patient Transfer trauma cases are determined by the following question reported by the facilities, "If transferred, facility?" This question is self-report by hospital staff and does not always align with the results of the Division's match to calculate unique trauma cases.

TRAUMA CASES BY FACILITY

11,325
Traumas in 2020
(up 69 from 2019)

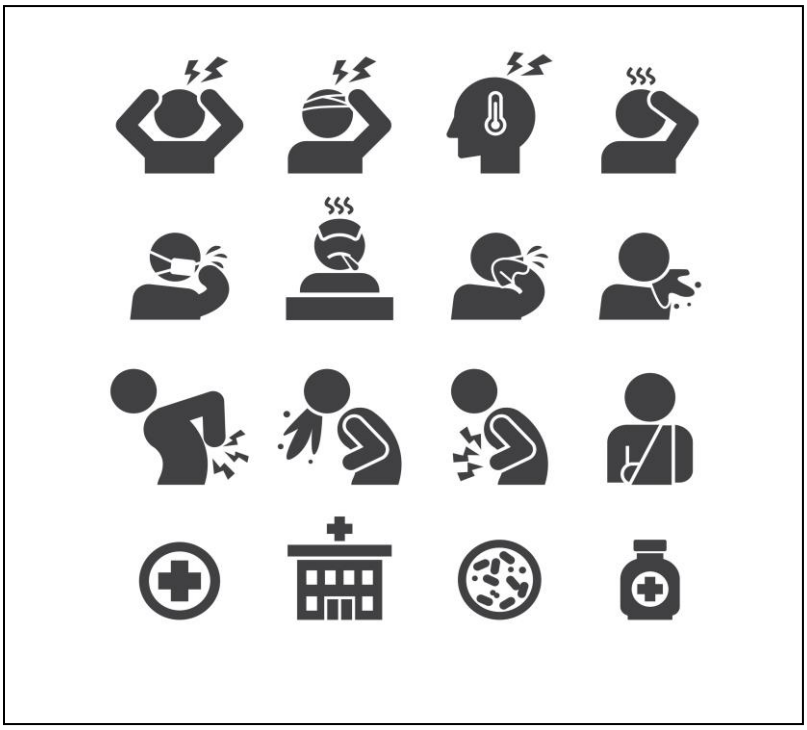


Table 1: Trauma Cases by Facility, 2020 (includes Nevada Residents and Non-Residents)

County	Facility	Unique Traumas	Trauma Patient^	Total Trauma Cases*	
Clark County	Boulder City Hospital	54	0.5%	54	0.4%
	Centennial Hills Hospital	214	1.9%	216	1.8%
	Desert Springs Hospital Center	25	0.2%	25	0.2%
	Henderson ER at Green Valley Ranch	93	0.8%	93	0.8%
	Henderson Hospital	343	3.0%	343	2.8%
	Mesa View Regional Hospital	39	0.3%	39	0.3%
	Mike O'Callaghan Federal Medical Center	13	0.1%	13	0.1%
	Mountain View ER at Aliante	24	0.2%	24	0.2%
	Mountain View Hospital	666	5.9%	681	5.5%
	North Vista Hospital	169	1.5%	169	1.4%
	Southern Hills ER at the Lakes	16	0.1%	16	0.1%
	Southern Hills Hospital Medical Center	169	1.5%	173	1.4%
	Spring Valley ER at Blue Diamond	22	0.2%	22	0.2%
	Spring Valley Hospital Medical Center	541	4.8%	598	4.9%
	St. Rose Dominican Hospital Blue Diamond	20	0.2%	20	0.2%
	St. Rose Dominican Hospital De Lima Campus	107	0.9%	107	0.9%
	St. Rose Dominican Hospital North Las Vegas	24	0.2%	24	0.2%
	St. Rose Dominican Hospital San Martin Campus	91	0.8%	96	0.8%
	St. Rose Dominican Hospital Siena Campus	432	3.8%	439	3.6%
	St. Rose Dominican Hospital West Flamingo	6	0.1%	6	0.0%
	St. Rose Dominican Hospital West Sahara	12	0.1%	12	0.1%
	Summerlin Hospital Medical Center	260	2.3%	272	2.2%
	Sunrise Hospital Medical Center	2281	20.1%	2535	20.6%
	University Medical Center	2986	26.4%	3428	27.9%
	Valley Hospital Medical Center	29	0.3%	29	0.2%
Washoe County	Incline Village Community Hospital	2	0.0%	2	0.0%
	Northern Nevada Medical Center	127	1.1%	127	1.0%
	Renown Regional Medical Center	773	6.8%	909	7.4%
	Renown South Meadows Medical Center	169	1.5%	170	1.4%
	St. Mary's Regional Medical Center	245	2.2%	261	2.1%
All Other Counties	Banner Churchill Community Hospital	117	1.0%	118	1.0%
	Battle Mountain General Hospital	30	0.3%	30	0.2%
	Carson Tahoe Regional Medical Center	349	3.1%	349	2.8%
	Carson Valley Medical Center	133	1.2%	133	1.1%
	Desert View Hospital	344	3.0%	344	2.8%
	Grover C. Dils Medical Center	18	0.2%	18	0.1%
	Humboldt General Hospital	83	0.7%	83	0.7%
	Mt. Grant General Hospital	9	0.1%	9	0.1%
	Northeastern Nevada Regional Hospital	174	1.5%	174	1.4%
	Pershing General Hospital	27	0.2%	27	0.2%
	South Lyon Medical Center	26	0.2%	26	0.2%
	Williams Bee Ririe Hospital	63	0.6%	63	0.5%
Nevada (Total)		**11,325**	**100.0%**	**12,277**	**100.0%**

Out of all the facilities listed in Table 1, the designated trauma centers had the highest number of trauma cases. University Medical Center had the highest number of unique trauma cases at 2,986 (26.4%), followed by Sunrise Hospital Medical Center 2,281 cases (20.1%), and finally, Renown Medical Center at 740 cases (6.6%).

Of the non-trauma centers, the facility with the highest number of trauma cases was Mountain View Medical Center at 666 cases (5.9%), followed by Spring Valley Hospital Medical Center at 541 cases (4.8%), and finally, Carson Tahoe Regional Medical Center at 349 cases (3.1%).

Table 2: Trauma Incidence and Mortality Proportion by Trauma Center Designation for Trauma Levels 1-3

Trauma Center designation	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Trauma Center level 1	3441	47.9%	191	5.6%
Trauma Center level 2	3427	47.7%	195	5.7%
Trauma Center Level 3	317	4.4%	3	0.9%
Total	**7185**	**100.0%**	**389**	**5.4%**

DEMOGRAPHICS

Of 11,325 unique traumas recorded in the NTR between January 1, 2020 and December 31, 2020, 57.7% of them were in male patients, 42.3% were in female patients. (*Table 3*)

Table 3: Nevada Trauma Cases by Sex (Unique Traumas)

Sex	Count	Percent	Rate per 100,000 (95% CI)
Male	6,529	57.7%	420.4 (410.2-430.6)
Female	4,786	42.3%	309.1 (300.3-317.8)
Sex Not Reported	10	0.1%	-
Total	**11,325**	**100%**	**365.2 (358.4-371.9)**

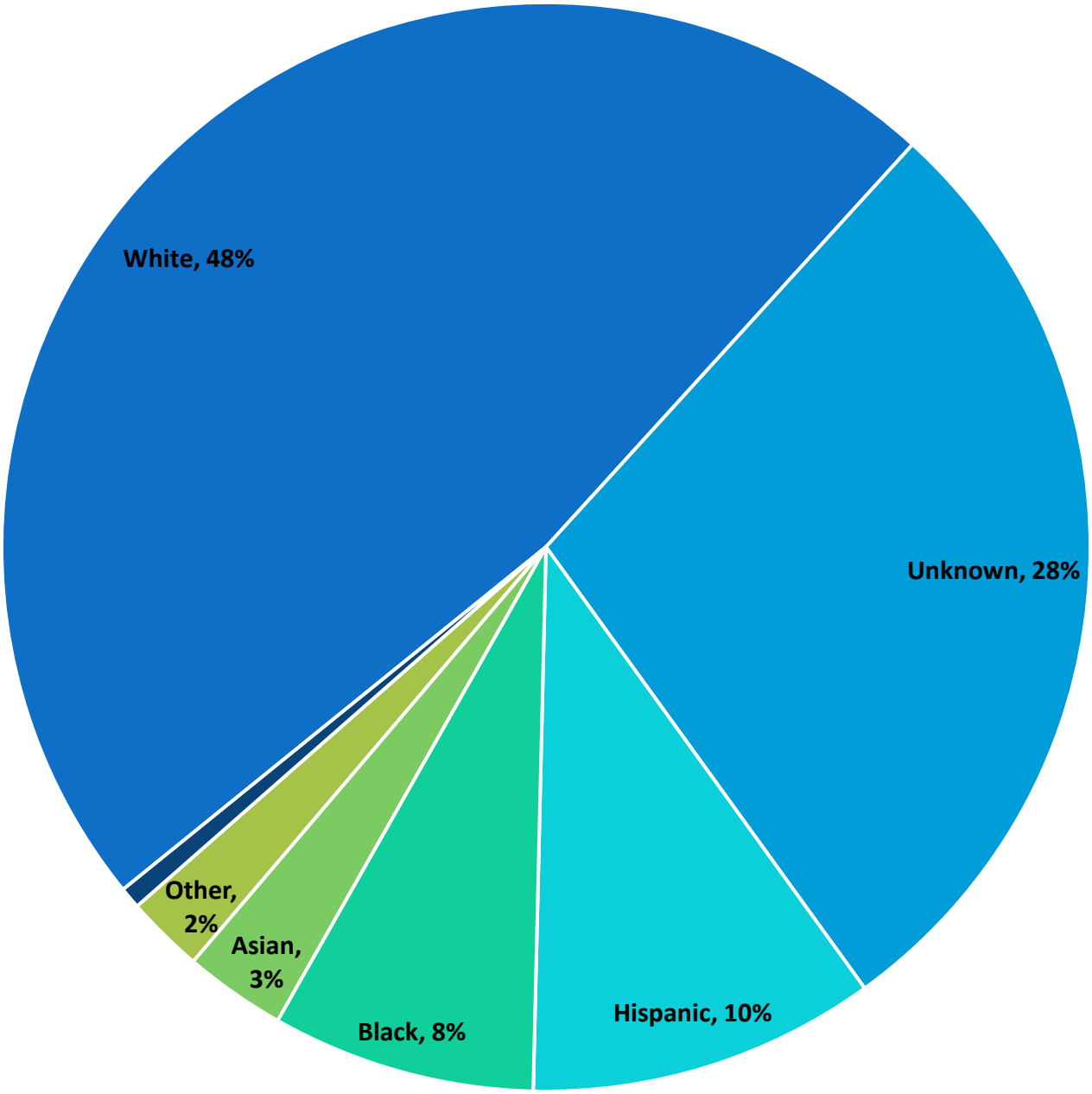
Table 4: Nevada Trauma Cases by Race/Ethnicity (Unique Traumas)

Race/Ethnicity	Count	Percent	Rate per 100,000 (95% CI)
White	5,390	47.6%	345.2 (336.0-354.4)
Black	887	7.8%	323.2 (301.9-344.5)
American Indian, Alaskan Native	72	0.6%	202.7 (155.9-249.5)
Asian	342	3.0%	112.6 (100.7-124.6)
Hispanic	1,170	10.3%	126.3 (119.1-133.5)
Other	261	2.3%	. (.-.)
Unknown	3,203	28.3%	. (.-.)
Total	**11,325**	**100.0%**	**365.2 (358.4-371.9)**

Nevada statistics show that individuals of white ethnic background produce significantly more traumas than any other race or ethnicity in the state due to the high concentration of white residents. (**Figure 1**)

Figure 1: 2020 Nevada Census Race/Ethnicity

Per the 2020 Nevada Census, the state's largest races and ethnicities were White (47.6%), Hispanics (10.3%), and Blacks (7.8%). Due to a large percentage of Nevadans declining to provide information regarding household race, 28.3% of Nevadans are classified as unknown. Approximately 1% of Nevada's population is American Indian, Alaskan Native. This minority group has the lowest trauma rate in the state at (0.6%) due to their small population size.



Due to Nevada having higher percentages of White, Hispanic, and Black populations over other races/ethnicities, the data reflects that higher percentages of trauma cases also occur to White, Hispanic, and Black ethnicities. This should not imply that these populations are more prone to traumas than others. The chart is based off the population for the state of Nevada only.

Table 5: Age-Specific Trauma Cases by Race/Ethnicity (Unique Traumas)

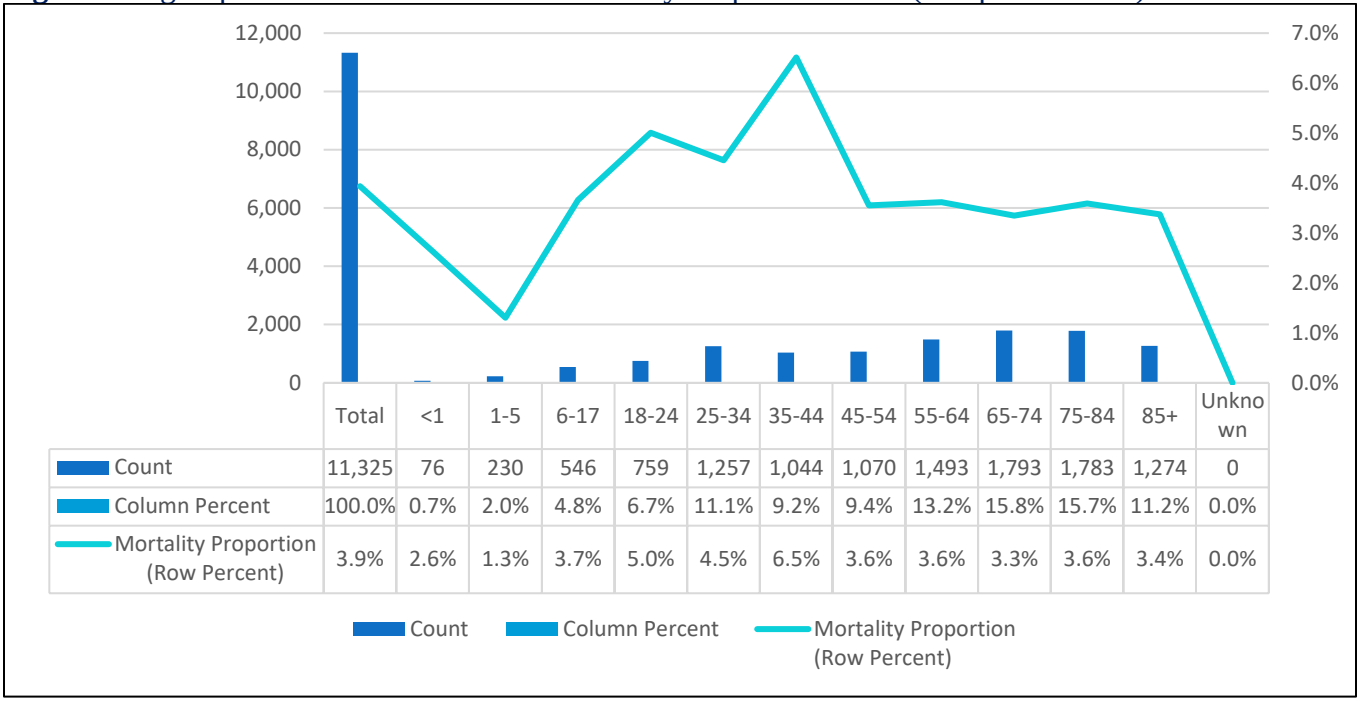
Age Groups	White	Black	American Indian, Alaskan Native	Asian	Hispanic	Other	Unknown	Total
<1	23	11	0	5	10	7	20	76
1-5	108	22	2	4	35	8	51	230
6-17	182	57	4	9	111	8	175	546
18-24	254	109	11	13	172	23	177	759
25-34	442	226	17	22	227	46	277	1,257
35-44	388	120	10	26	176	31	293	1,044
45-54	472	92	7	39	137	28	295	1,070
55-64	730	121	5	33	129	36	439	1,493
65-74	1,006	68	8	68	83	30	530	1,793
75-84	1,009	52	3	76	77	25	541	1,783
85+	793	29	4	40	62	19	327	1,274
Total	**5,407**	**907**	**71**	**335**	**1,219**	**261**	**3,125**	**11,325**

Table 6: Age-Specific Trauma Cases and Mortality Proportion (Unique Traumas)

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
<1	76	0.7%	2	2.6%
1-5	230	2.0%	3	1.3%
6-17	546	4.8%	20	3.7%
18-24	759	6.7%	38	5.0%
25-34	1,257	11.1%	56	4.5%
35-44	1,044	9.2%	68	6.5%
45-54	1,070	9.4%	38	3.6%
55-64	1,493	13.2%	54	3.6%
65-74	1,793	15.8%	60	3.3%
75-84	1,783	15.7%	64	3.6%
85+	1,274	11.2%	43	3.4%
Total	**11,325**	**100.0%**	**446**	**3.9%**

In tables 4 and 5, the number of trauma cases is presented according to age, death rate, and ethnic background. Among the 11,325 unique trauma cases in Nevada for 2020, 1,793 of them were in the 65-74 age group, 1,783 in the 75-84 age group, and 1,493 in the 55-64 age group. **Figure 2** illustrates that the age group of 35 to 44 is the one with the highest percentage of deaths from trauma, with 6.5%, followed by 18 to 24 at 5.0%, 25 to 34 at 4.5%, and 6-17 at 3.7%.

Figure 2: Age-Specific Trauma Cases and Mortality Proportion Chart (Unique Traumas)



	Total	<1	1-5	6-17	18-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Unknown
Count	11,325	76	230	546	759	1,257	1,044	1,070	1,493	1,793	1,783	1,274	0
Column Percent	100.0%	0.7%	2.0%	4.8%	6.7%	11.1%	9.2%	9.4%	13.2%	15.8%	15.7%	11.2%	0.0%
Mortality Proportion (Row Percent)	3.9%	2.6%	1.3%	3.7%	5.0%	4.5%	6.5%	3.6%	3.6%	3.3%	3.6%	3.4%	0.0%

Table 7: Age and Sex-Specific Trauma Rate per 100,000 Nevada Residents (Unique Traumas)

Age Group	Male		Female		Total	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	483	129.5 (118.0-141.1)	243	68.4 (59.8-77.0)	726	99.7 (92.4-106.9)
Adult 18-64	3,134	322.4 (311.1-333.7)	1,411	149.0 (141.3-156.8)	4,547	237.0 (230.1-243.9)
Geriatric >64	1,812	871.8 (831.7-912.0)	2,499	1014.3 (974.5-1054.0)	4,312	949.3 (921.0-977.7)
Total	**5,429**	**349.6 (340.3-358.9)**	**4,153**	**268.2 (260.0-276.4)**	**9,585**	**309.1 (302.9-315.2)**

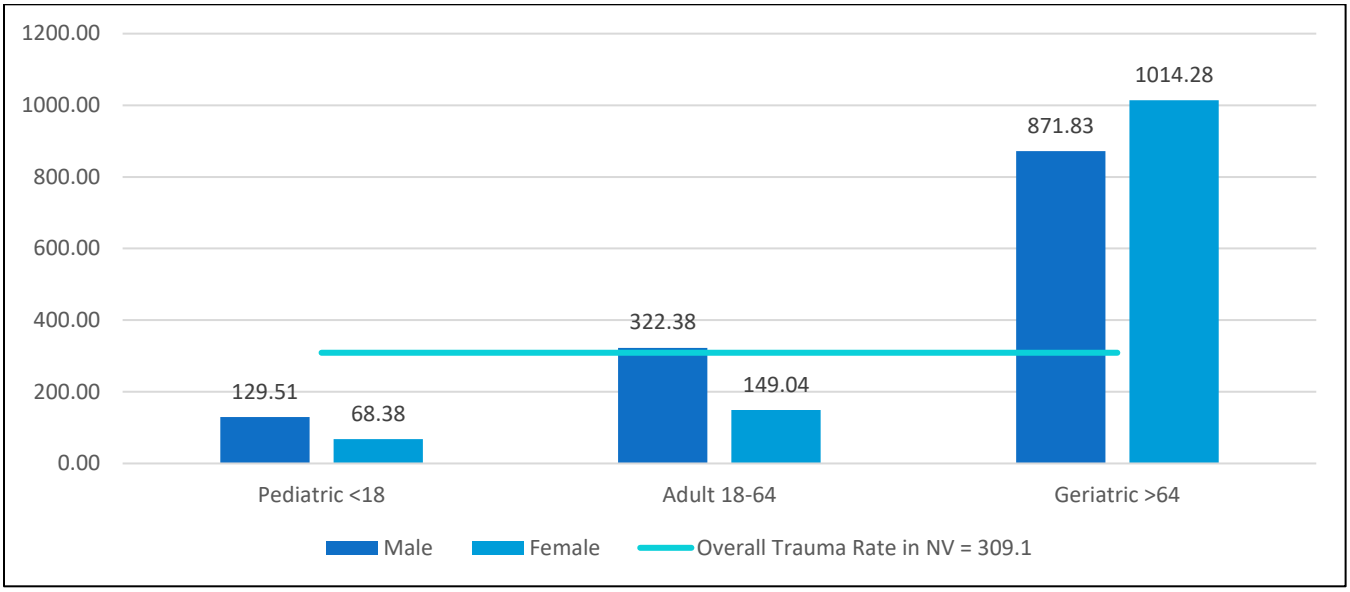
Note: There were 5 cases where sex was unknown.

The overall number of trauma cases in Nevada residents is 55% male compared to 45% female based on the demographic breakdown. The highest percentage of trauma cases were in people 18-64 years old at 48%.

Traumas per age and sex per 100,000 NV Residents

#1 - **SENIORS** are more likely to have a trauma with senior females even more likely than senior males.

Figure 3: Age and Sex-Specific Trauma Rates per 100,000 Nevada Residents



Highest Trauma Rate

When comparing the number of cases per 100,000 in each county, **rural counties had a higher rate of traumas than urban counties.**

#1 Nye County **#2** White Pine County **#3** Pershing

See also Table 8

Table 8: Nevada Trauma Cases by County of Injury (non-duplicated)

County	Count	Rate per 100,000 (95% CI)
Carson City	205	364.0 (314.2-413.8)
Churchill	128	496.1 (410.1-582.0)
Clark	7,669	336.0 (328.5-343.6)
Douglas	178	360.2 (307.3-413.1)
Elko	161	294.5 (249.0-340.0)
Esmeralda	3	308.3 (0.0-657.2)
Eureka	5	256.0 (31.6-480.4)
Humboldt	83	486.8 (382.1-591.6)
Lander	31	514.2 (333.2-695.2)
Lincoln	23	440.2 (260.3-620.1)
Lyon	136	239.3 (199.1-279.5)
Mineral	18	390.0 (209.8-570.2)
Nye	447	923.8 (838.2-1,009.5)
Pershing	37	535.0 (362.6-707.4)
Storey	9	207.1 (71.8-342.4)
Washoe	786	167.2 (155.6-178.9)
White Pine	61	573.3 (429.4-717.1)
Out of State	929	351.7 (345.1-358.3)
Unknown	416	0.0 (0.0-0.0)

In cases of trauma per Federal Information Processing Standard (FIPS) code, Trauma Rates per county are based on ICD-10 diagnosis coding recorded by treating facilities and do not take into account backgrounds, patient histories, or examinations.

Highest Trauma Cases (Figure 4)
Utilizing FIPS codes of where an injury occurred:
#**1)** Clark County recorded the highest number of trauma cases at 7,669 cases.
#**2)** Washoe with 786 trauma cases.
#**3)** Nye County with 447 trauma cases.
However, there were 929 trauma cases that occurred out-of-state, and 416 were unknown.

Figure 4: NV Trauma Cases by County of Injury (Unique Traumas)

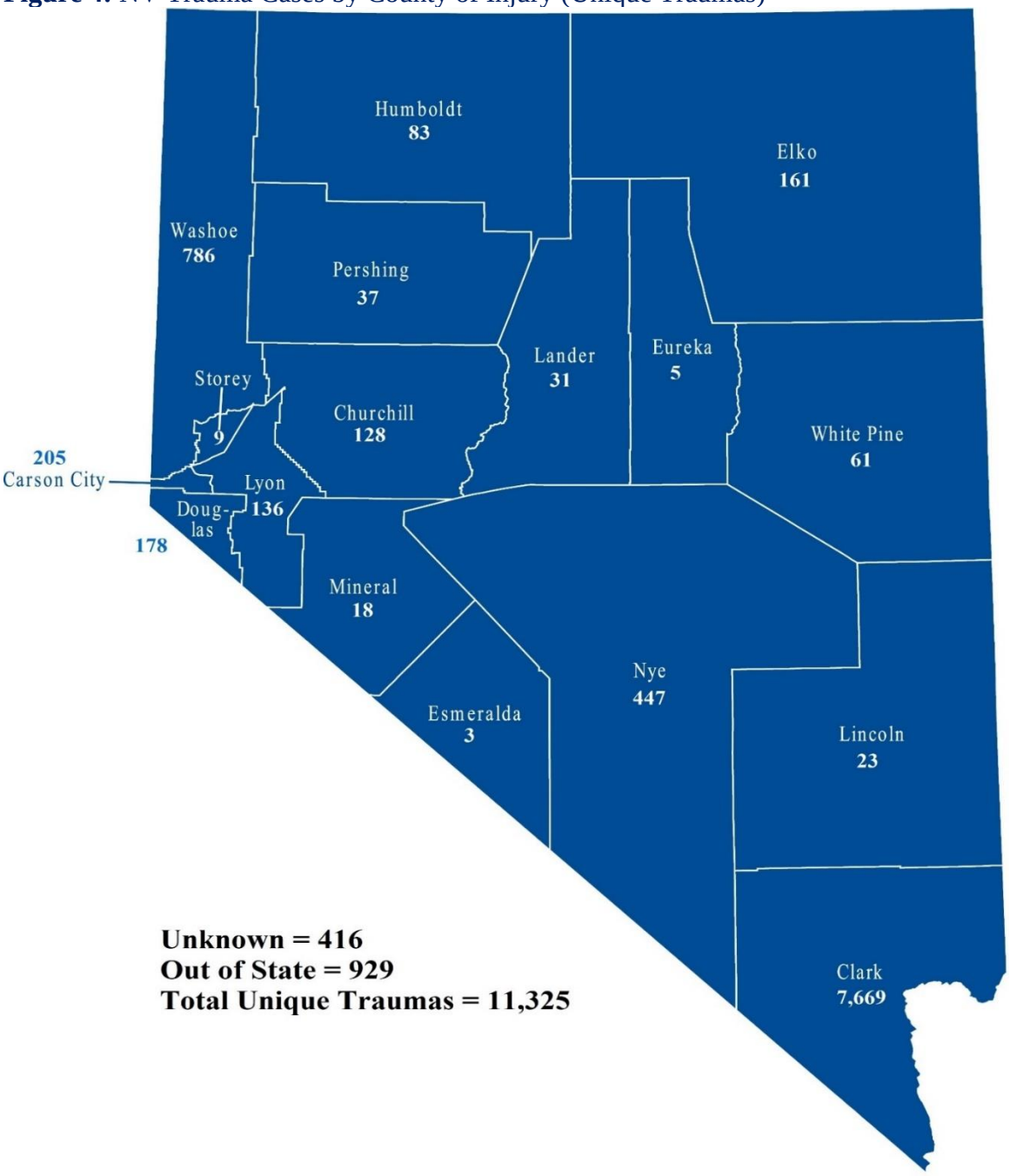
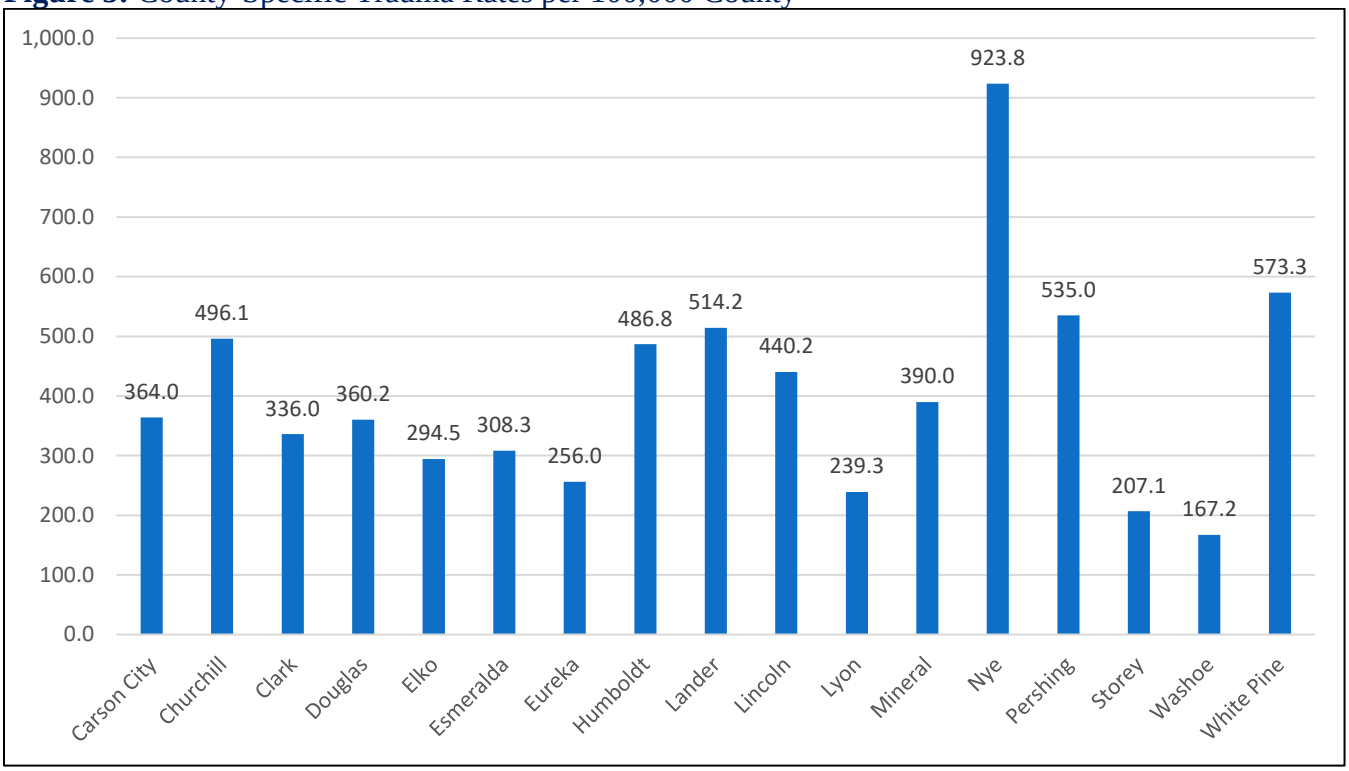


Figure 5: County-Specific Trauma Rates per 100,000 County



According to this analysis, Nye County had the highest rate of trauma cases per 100,000 people with 923.8. This was followed by White Pine with 573.3 and Pershing with 535.0.

Table 9: Age-Specific Traumatic Brain Injury and Mortality Proportion (Unique Traumas)

Age Group	Count	Percent	Deaths	Mortality Proportion (Row Percent)
Pediatric <18	227	10.4%	14	6.2%
Adult 18-64	1,076	49.1%	112	10.4%
Geriatric >64	890	40.6%	82	9.2%
Total	**2,193**	**100.0%**	**208**	**9.5%**

*Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility. **3 Unknown dead/alive status***

Mortality Proportions Post Traumatic Brain Injury by Age Group

When comparing the number of cases per age group, geriatric populations between the ages of 75-84 had the highest number of Traumatic Brain Injuries. Adults ages 45-54 had the highest number of mortalities after a brain injury.

#1 Geriatric

#2 Adult

#3 Pediatric

Table 10: Age-Specific Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas)

Age Groups	Count	Percent	Deaths	Mortality Proportion (Row Percent)
Total	2,193	100.0%	208	9.5%
<1	43	2.0%	1	2.3%
1-5	60	2.7%	2	3.3%
6-17	124	5.7%	11	8.9%
18-24	157	7.2%	16	10.2%
25-34	218	9.9%	17	7.8%
35-44	191	8.7%	29	15.2%
45-54	205	9.3%	22	10.7%
55-64	305	13.9%	28	9.2%
65-74	350	16.0%	34	9.7%
75-84	360	16.4%	31	8.6%
85+	180	8.2%	17	9.4%

Of the 11,325 total traumas reported in Nevada in 2020, the majority were paid for through Medicare, followed by Medicaid, private health insurance, and then Self-Pay.
The payment source order changed from 2019 in that Medicaid was utilized more than Private insurance during 2020.
Table 11 displays the difference in Primary Source of Payment between 2018, 2019, and 2020 in a column chart.

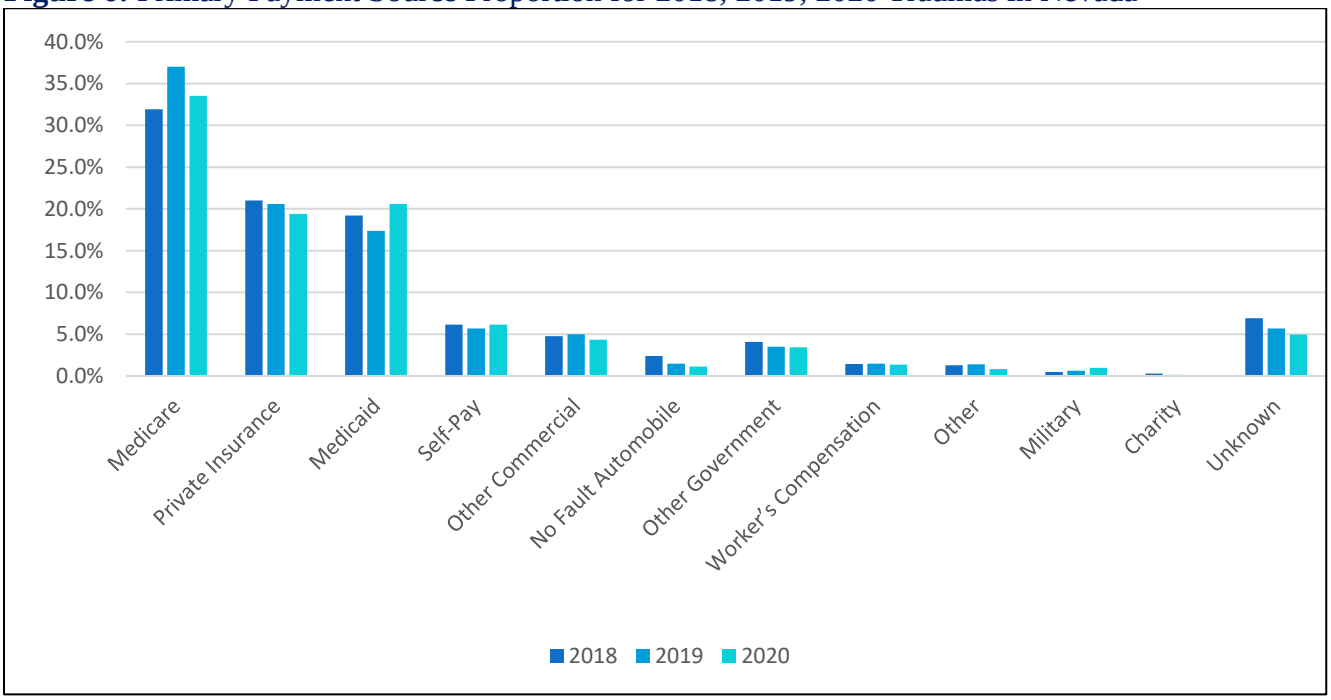
Table 11: Primary Payment Source Proportion for 2018, 2019, 2020 Traumas in Nevada

Primary Source of Payment	2018	2019	2020
Medicare	31.9%	37.0%	33.5%
Private Insurance	21.0%	20.6%	19.4%
Medicaid	19.2%	17.4%	20.6%
Self-Pay	6.2%	5.7%	6.2%
Other Commercial	4.8%	5.0%	4.3%
No Fault Automobile	2.4%	1.5%	1.1%
Other Government	4.1%	3.5%	3.4%
Worker's Compensation	1.4%	1.5%	1.4%
Other	1.3%	1.4%	0.8%
Military	0.5%	0.6%	1.0%
Charity	0.3%	0.1%	0.1%
Unknown	6.9%	5.7%	5.0%

***395 combined payment*

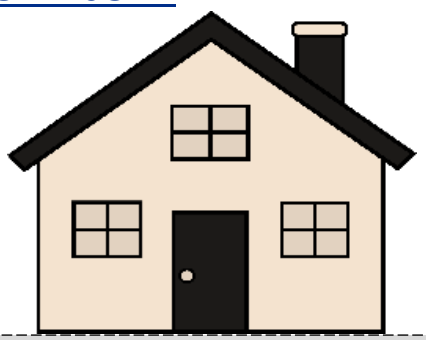
* It is recommended not to compare year-over-year data in the Introduction section of this report, but prior years' data in Figure 6 was included because it was derived from proportional data.

Figure 6: Primary Payment Source Proportion for 2018, 2019, 2020 Traumas in Nevada*



**Please note that the data is not always directly comparable.*

PLACE AND MECHANISM OF INJURY



#1 place of injury was in the **HOME**

Table 12: Trauma Incidence by Place of Injury (Unique Traumas)

Place of Injury	Trauma Count	Percent
Residential	5,296	47%
Street	2,992	26%
Trade and Service Area	546	5%
Recreation area	275	2%
Sports Area	105	1%
Wilderness	271	2%
Other Specified	183	2%
School or Public Area	111	1%
Industrial and Construction	88	1%
Farm	15	0%
Transport Vehicle as Place	50	0%
Military Training Ground	3	0%
Railroad Track	8	0%
Unknown/Unspecified	1,382	12%
Total	**11,325**	**100%**

Table 13: Trauma Incidence and Mortality by Mechanism of Injury (Unique Traumas)

Mechanism	Count	Percent	Deaths	Mortality Proportion (Row Percent)
Falls	6,127	54.1%	159	2.6%
Motor Vehicle Traffic	1,971	17.4%	140	7.1%
Struck by/Against	717	6.3%	5	0.7%
Firearm	484	4.3%	98	20.2%
Cut/Pierce	472	4.2%	10	2.1%
Motor Vehicle Non-Traffic	157	1.4%	3	1.9%
Other Transport (Land, Sea, Sky)	129	1.1%	4	3.1%
Other Specified	249	2.2%	7	2.8%
Pedal Cyclist, Other	190	1.7%	1	0.5%
Natural/Environmental	180	1.6%	1	0.6%
Pedestrian, Other	84	0.7%	9	10.7%
Unspecified	52	0.5%	0	0.0%
Fire/Burn	71	0.6%	0	0.0%
Unknown	79	0.7%	1	1.3%
Machinery	49	0.4%	0	0.0%
Overexertion	56	0.5%	0	0.0%
Drowning	5	0.0%	4	80.0%
Suffocation	253	2.2%	4	1.6%
Total	**11,325**	**100.0%**	**446**	**3.9%**

The top three causes of traumatic injury in the state of Nevada by 2020 were Falls (54.1%), Traffic-Related Accidents (17.4%), and Being Struck by/Against (6.3%). The highest proportions of deaths in total trauma cases originated from Drowning (80%), Firearm incidents (20.2%), Pedestrian incidents (10.7%), and Motor Vehicle Traffic (7.1%).

Currently the NTR collects trauma data via ICD-10 codes. The ICD-10 code system does not offer some trauma mechanisms as codes. Pedestrian, Other, Other Specified, Unspecified, and Unknown are all available as ICD-10 codes, if the cause of trauma cannot be classified as an ICD-10 code.

Table 14: Trauma Rates for Top Three Mechanisms of Injury by Age (Unique Traumas)

Age Group	Falls		Struck by/Against		Motor Vehicle Traffic	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	296	40.6 (36.0-45.3)	49	6.7 (4.8-8.6)	129	17.7 (14.7-20.8)
Adult 18-64	1,756	91.5 (87.2-95.8)	533	27.8 (25.4-30.1)	1,447	75.4 (71.5-79.3)
Geriatric >64	4,075	897.1 (869.6-924.7)	126	27.7 (22.9-32.6)	363	79.9 (71.7-88.1)
Total	**6,127**	**197.6 (192.6-202.5)**	**708**	**22.8 (21.1-24.5)**	**1,939**	**62.5 (59.7-65.3)**

Table 14 outlines the top three mechanism for injury by age. The number one trauma injury per all age groups in 2020 were Falls.

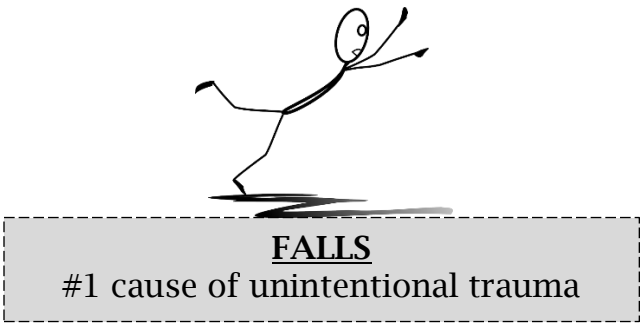
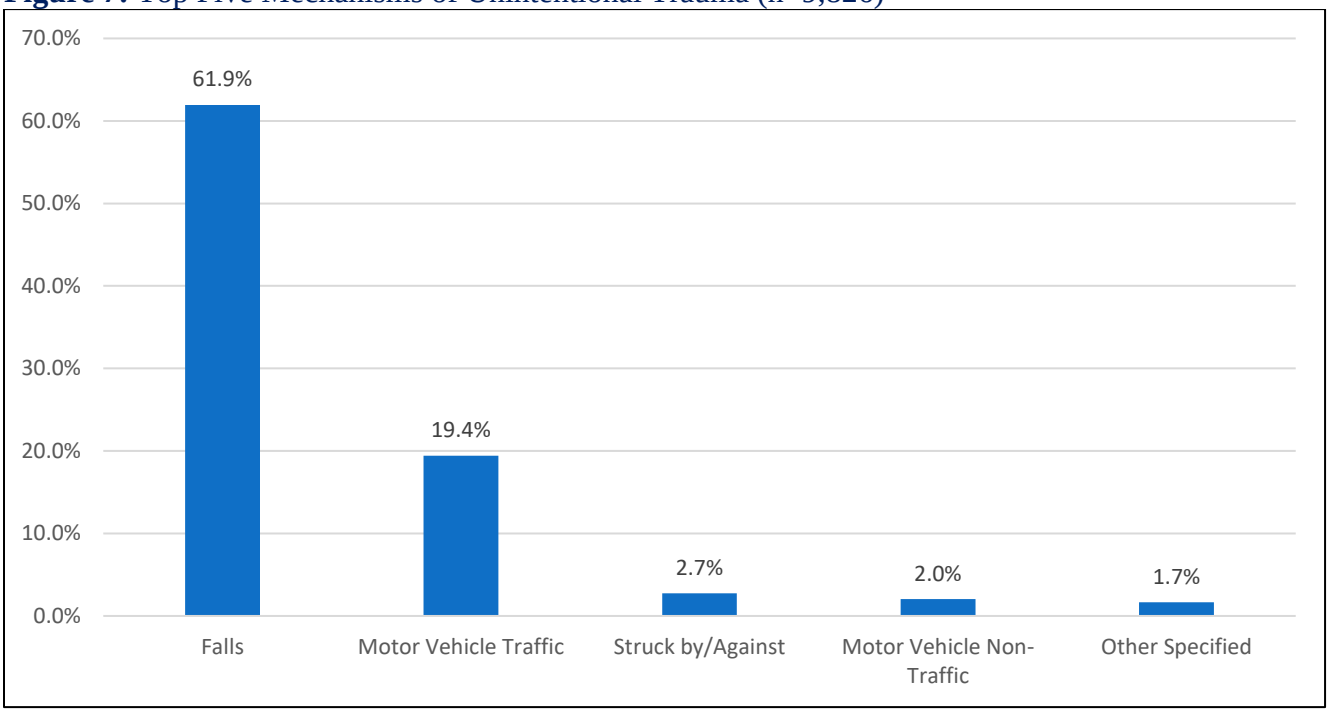


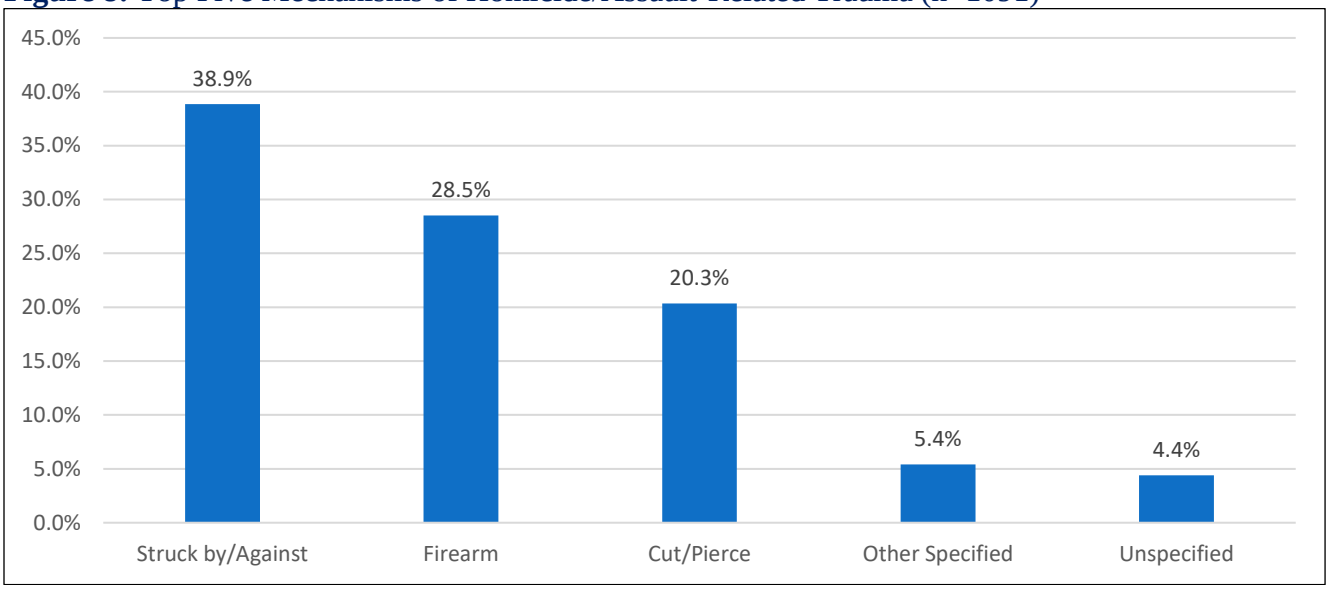
Figure 7: Top Five Mechanisms of Unintentional Trauma (n=9,826)



Homicide/Assault

#1 Struck by/Against
#2 Firearm
#3 Cut/Pierce

Figure 8: Top Five Mechanisms of Homicide/Assault-Related Trauma (n=1091)



Suicide/Self- Inflicted

#1 Cut/Pierce
#2 Firearm
#3 Falls

Figure 9: Top Five Mechanisms of Suicide/Self-Inflicted Trauma (n=201)

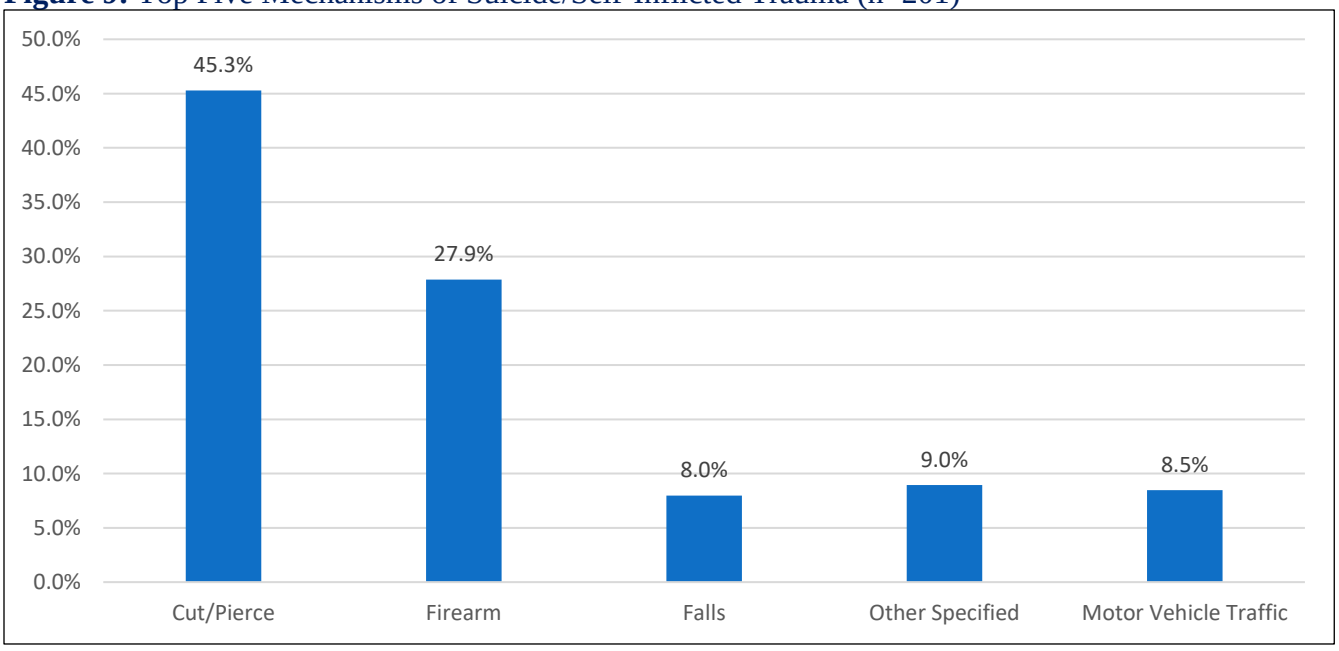


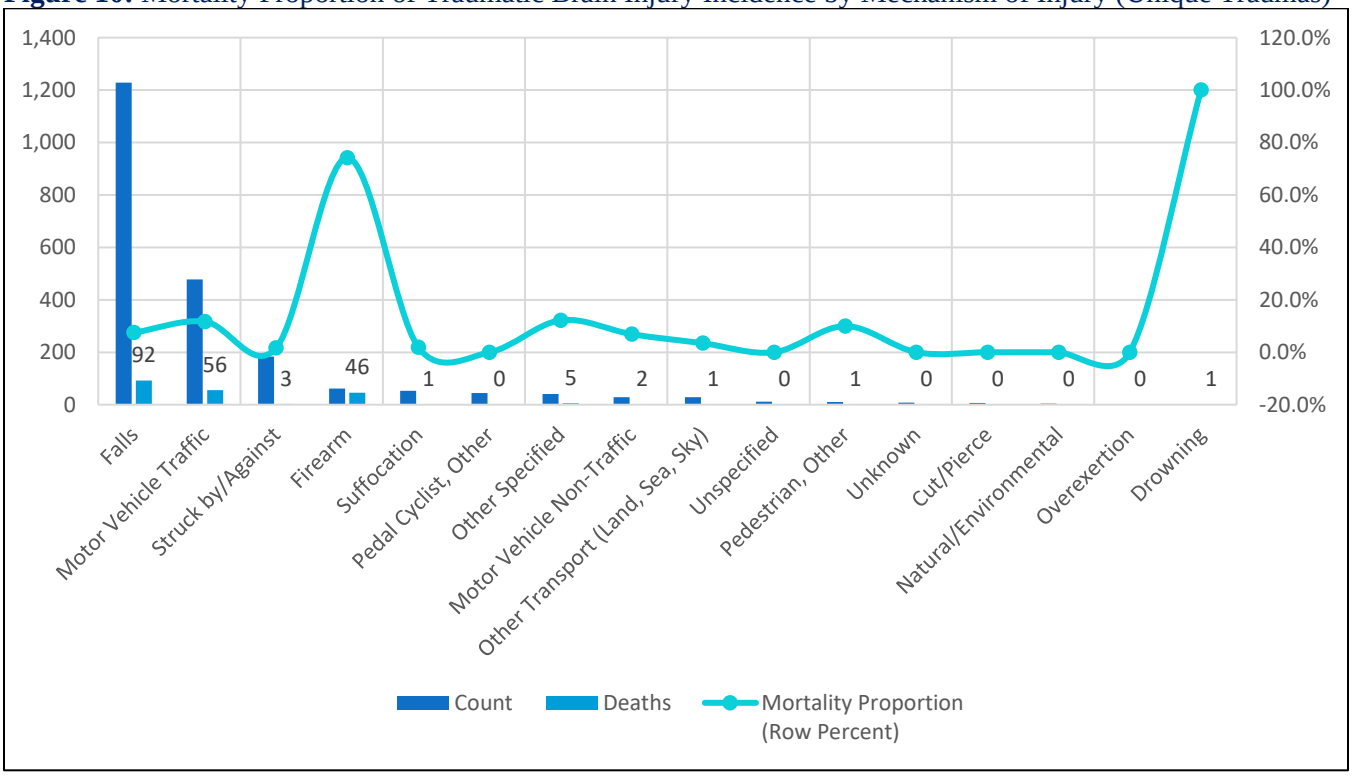
Table 15: Traumatic Brain Injury Incidence and Mortality by Mechanism of Injury

Mechanism	Count	Percent	Deaths	Mortality Proportion (Row Percent)
Falls	1,229	56.0%	92	7.5%
Motor Vehicle Traffic	478	21.8%	56	11.7%
Struck by/Against	184	8.4%	3	1.6%
Firearm	62	2.8%	46	74.2%
Other Specified	53	2.4%	1	1.9%
Pedal Cyclist, Other	44	2.0%	0	0.0%
Motor Vehicle Non-Traffic	41	1.9%	5	12.2%
Other Transport (Land, Sea, Sky)	29	1.3%	2	6.9%
Suffocation	29	1.3%	1	3.4%
Unspecified	12	0.5%	0	0.0%
Cut/Pierce	10	0.5%	1	10.0%
Pedestrian, Other	8	0.4%	0	0.0%
Unknown	7	0.3%	0	0.0%
Natural/Environmental	4	0.2%	0	0.0%
Fire/Burn	2	0.1%	0	0.0%
Overexertion	1	0.0%	1	100.0%
Total	**2,193**	**100.0%**	**208**	**9.5%**

Top Mortalities from Traumatic Brain Injury by Mechanism of Injury

#1 Overexertion #2 Firearm #3 Motor Vehicle Non-Traffic

Figure 10: Mortality Proportion of Traumatic Brain Injury Incidence by Mechanism of Injury (Unique Traumas)



INJURY CHARACTERISTICS: INJURY SEVERITY SCORE (ISS)

Injury Severity Score (ISS) is an anatomical scoring system that provides an overall score for patients with multiple injuries. The ISS has values from 1 to 75:

ISS score of 1-8 = Minor
ISS score of 9-15 = Moderate
ISS score of 16-24 = Serious
ISS score 25-75 = Severe

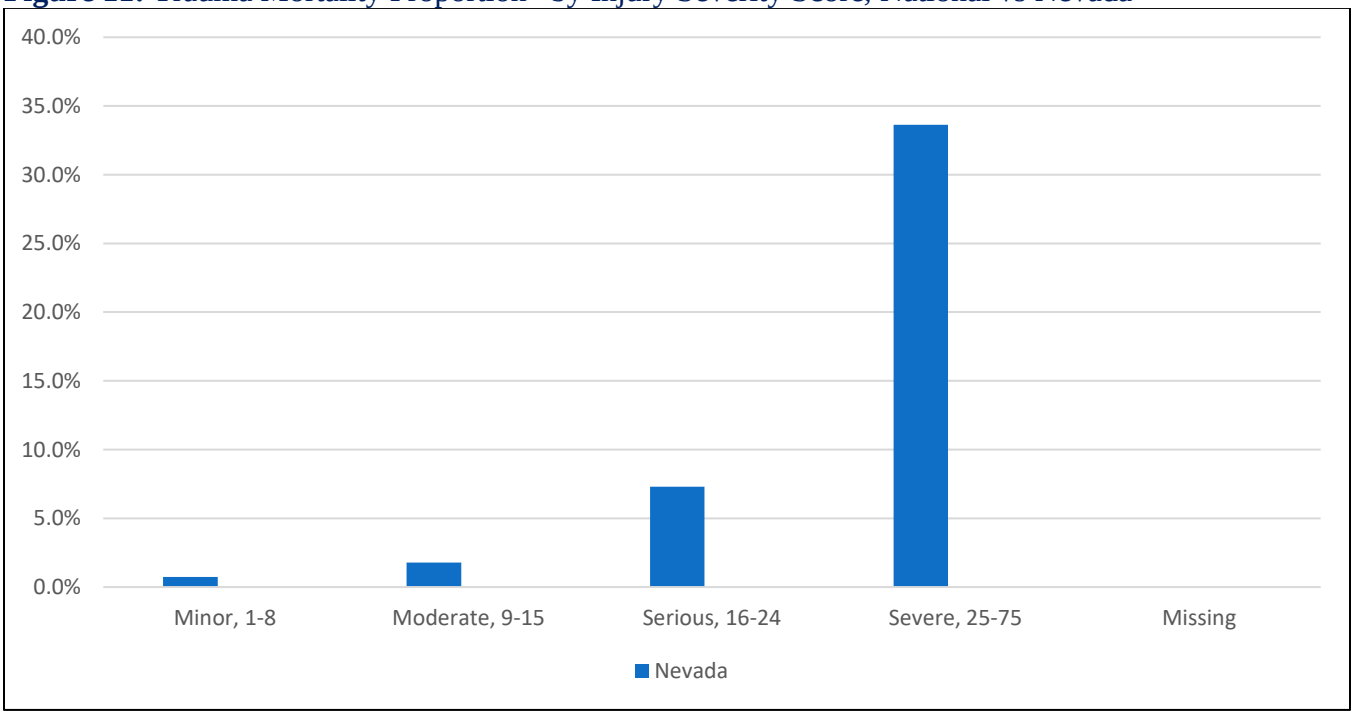
Table 16: Trauma Incidence and Mortality Proportion by Injury Severity Score (ISS) (Unique Traumas)

Injury Severity Score	Count	Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	5,185	45.8%	38	0.7%
Moderate, 9-15	4,358	38.5%	78	1.8%
Serious, 16-24	1,000	8.8%	73	7.3%
Severe, 25-75	764	6.7%	257	33.6%
Missing/NA/ND	18	0.2%	0	0.0%

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Most patients had a Minor Injury Severity Score (ISS) between 1 and 8 in 2020, which is the lowest mortality percentage. Accordingly, patients with a Severe ISS between 25 and 75 had the highest mortality rate. Therefore, the lower the ISS, the lower the risk of a patient dying from their trauma. An increasing score indicates a greater likelihood of death.

Figure 11: Trauma Mortality Proportion* by Injury Severity Score, National vs Nevada



**By last transfer facility.* Data sources: Nevada Trauma Registry, 2020

Table 17: Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas) by Injury Severity

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	449	20.5%	7	1.6%
Moderate, 9-15	894	40.8%	21	2.3%
Serious, 16-24	401	18.3%	26	6.5%
Severe, 25-75	447	20.4%	154	34.5%
Unknown	2	0.1%	0	0.0%
Total	**2,193**	**100.0%**	**208**	**9.5%**

Table 18: Injury to ED arrival time for patient with an injury severity score >15 by Injury Location; Rural, Urban, Statewide

County	<1 hour	1-3 hours	3-6 hours	6-9 hours	9-12 hours	>12 hours
Carson City	4	4	0	0	0	1
Churchill	4	3	2	0	0	0
Clark	1,014	91	24	7	6	44
Douglas	4	5	0	2	0	0
Elko	8	1	0	0	0	0
Esmeralda	0	0	0	1	0	0
Eureka	0	1	0	0	0	0
Humboldt	4	2	2	0	0	0
Lander	0	1	0	0	0	0
Lincoln	2	2	0	0	0	0
Lyon	5	10	1	0	0	0
Mineral	1	1	0	0	0	0
Nye	27	1	1	1	0	1
Pershing	6	3	0	0	0	0
Storey	1	0	0	0	0	0
Unknown	39	5	15	2	3	2
Washoe	115	23	1	1	1	0
White Pine	14	0	0	0	0	0
Out of State	171	34	33	17	5	4
Total	**1,419**	**187**	**79**	**31**	**15**	**52**

PATIENT TRANSPORTATION

There are many ways for patients to reach a hospital. Among the trauma patients in Nevada in 2020, ground ambulances predominated over private vehicles and walk-ins. (Table 19)

Multi-Level ISS Most Utilized Transport= Ground Ambulance
Then 2nd - Private Vehicle or Walk-In

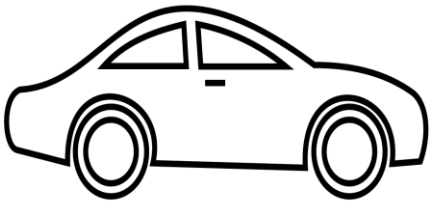


Table 19: Trauma Incidence by Mode of Arrival (Unique Traumas)

Mode of Arrival	Trauma Count	Percent
Ground Ambulance	7,763	69%
Private Vehicle or Walk-in	2,672	24%
Helicopter Ambulance	791	7%
Fixed-Wing Ambulance	50	0%
Unknown	13	0%
Police	29	0%
Other	4	0%
Public Safety	3	0%
Total	**11,325**	**100%**

It may be of value to community stakeholders, in addition to reviewing the data per mode of patient arrival, to examine patient modes of arrival based on Injury Severity Score (ISS) ranges (Table 20). According to Table 20, those with the highest ISS were primarily transported to hospitals by ground ambulance.

Table 20: Mode of arrival by Injury Severity Score

Mode of Arrival	Injury Severity Score Range				
	Minor 1-8	Moderate 9-15	Serious 16-24	Severe 25-75	Missing/NA ISS Scores
Ground Ambulance	3,276	3,258	697	528	4
Private Vehicle or Walk-in	1,748	716	146	52	10
Helicopter Ambulance	160	296	172	162	1
Fixed-Wing Ambulance	16	15	9	10	0
Unknown	6	2	0	1	4
Police	18	6	5	0	0
Other	2	1	0	0	1
Public Safety	1	1	1	0	0
Total	**5,227**	**4,295**	**1,030**	**753**	**20**

PATIENT DISCHARGE AND TRANSFER

A total of 1,392 of the 11,325 trauma cases in Nevada during 2020 were transferred to trauma centers. Patients from other facilities were transferred to University Medical Center the most frequently. Among the trauma centers, St. Rose Dominican Hospital Siena Campus had the lowest average ISS. See **Table 21**.

Table 21: Patient Transfer to Nevada Trauma Centers by Injury Severity Score

Facility Patient Transferred To	Injury Severity Score Range			
	Trauma Cases	Mean ISS	Standard Deviation	ISS Range
Renown Regional Medical Center	422	7.0	4.4	1 - 43
St. Rose Dominican Hospital Siena Campus	40	5.1	3.1	1 - 10
Sunrise Hospital Medical Center	357	8.1	8.1	1 - 66
University Medical Center	573	8.6	9.0	1 - 75

"Patient Transfer to" is determined by the question, "Was Patient Transferred to Facility?" and not through the matching process that creates the Unique Traumas.

RISK FACTORS: DRUG/ALCOHOL USE

Drug/Alcohol Use was involved in 1,770 (16%) of the 11,325 unique traumas recorded in the NTR for 2020. Drug or alcohol use was present in 13% of unintentional trauma injuries, and in 31% of homicides and assaults.

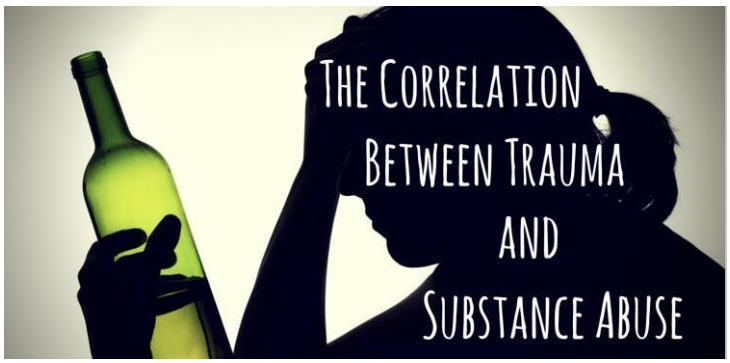
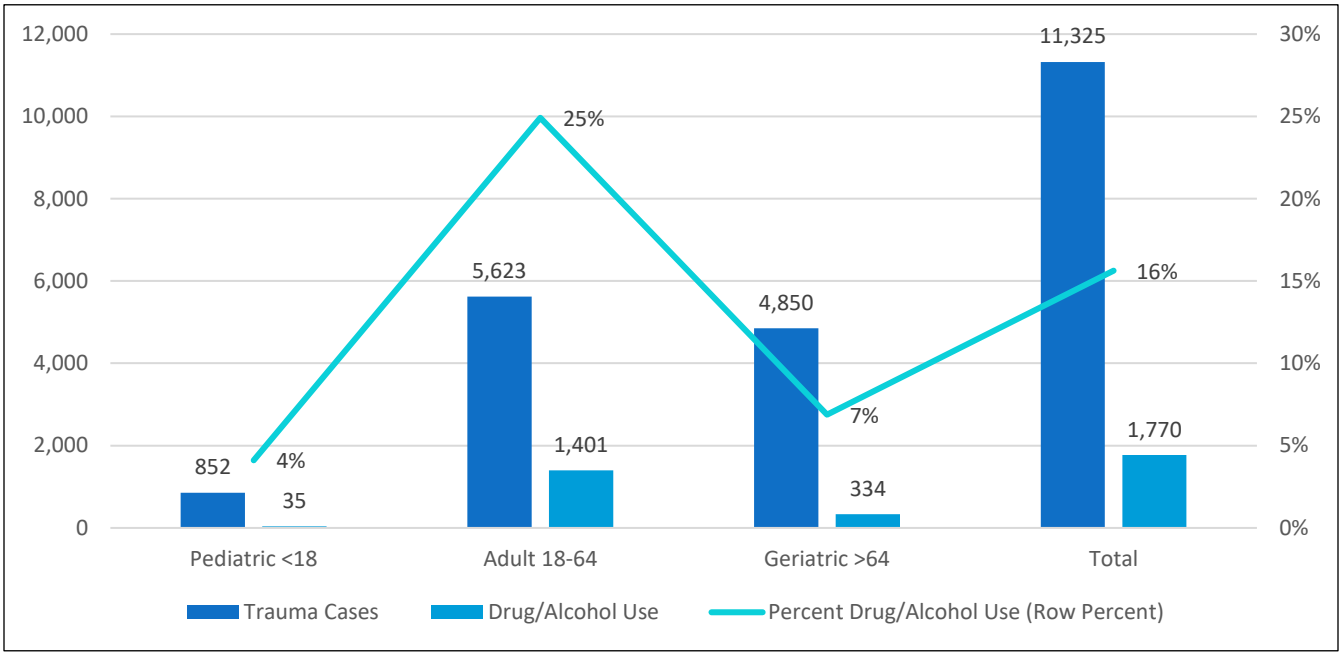


Table 22: Injury Intent and Drug/Alcohol Use (Unique Traumas)

Injury Intent	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Unintentional	9,826	1,305	13%
Suicide	201	87	43%
Homicide/Assault	1,091	333	31%
Legal Intervention	24	8	33%
Undetermined (accidental/intentional)	90	22	24%
Missing	91	14	15%
Unknown	2	1	50%
Total	**11,325**	**1,770**	**16%**

Figure 12: Age-Specific Trauma and Drug/Alcohol Use (Unique Traumas)



The Blood Alcohol Content (BAC) of 1.772 cases (16%) of the 11,325 unique trauma cases was positive in adults between 18 and 64. For traumas in this age range, there were 5,623 unique cases of trauma, resulting in the highest reported drug/alcohol use of 25%.

Table 23: Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants (Positive Blood Alcohol Count [BAC])

Protective Device Restraint	Pediatric <18	Adult 18-64	Geriatric >64	Total
None	10	428	91	529
Seatbelt – Lap & Shoulder	1	80	10	91
Seatbelt – Lap Only	0	7	0	7
Seatbelt – Shoulder Only	0	2	0	2
Seatbelt – NFS	0	9	1	10
Unknown	4	380	97	481
Total	**15**	**906**	**199**	**1120**

Table 24: Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants (Drug/Alcohol Use)

Protective Device Restraint	Pediatric <18	Adult 18-64	Geriatric >64	Total
None	23	741	141	905
Seatbelt – Lap & Shoulder	2	127	20	149
Seatbelt – Lap Only	1	7	1	9
Seatbelt – Shoulder Only	0	3	0	3
Seatbelt – NFS	0	17	1	18
Unknown	9	506	171	686
Total	**35**	**1,401**	**334**	**1,770**

In 905 of the 1,770 unique trauma cases with reports of drug/alcohol use, no protection device/restraint was used.

Table 25: Trauma Incidence by Mechanism of Injury (Unique Traumas) and Drug/Alcohol Use

Mechanism	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Falls	6,127	610	10%
Motor Vehicle Traffic	1,939	533	27%
Struck by/Against	708	150	21%
Cut/Pierce	480	142	30%
Firearm	480	121	25%
Other Specified	246	29	12%
Suffocation	234	37	16%
Motor Vehicle Non-Traffic	200	36	18%
Pedal Cyclist, Other	187	21	11%
Natural/Environmental	184	9	5%
Other Transport (Land, Sea, Sky)	129	16	12%
Unknown	95	15	16%
Pedestrian, Other	86	18	21%
Fire/Burn	71	3	4%
Unspecified	56	23	41%
Overexertion	54	4	7%
Machinery	44	2	5%
Drowning	5	1	20%
Total	**11,325**	**1,770**	**16%**

Drug/alcohol use was reported in the highest numbers in the following unique traumas: Cut Pierce (30%), Motor Vehicle Traffic (27%), and Firearm (25%). In 41% of incidents, no mechanism of injury was identified.

Table 26: Trauma Incidence by Mechanism of Injury (Unique Traumas) and BAC (Interval)

Mechanism	<0.08	0.08 to 1	2 to 20	21 to 50	51 to 100	101 to 200	more than 200	Unknown	Total
Falls	11	19	42	29	43	106	156	5,721	6,127
Motor Vehicle Traffic	1	7	20	26	47	114	123	1,601	1,939
Struck by/Against	2	2	4	11	11	17	46	615	708
Cut/Pierce	0	2	6	8	11	28	27	398	480
Firearm	0	1	9	3	6	35	16	410	480
Other Specified	0	0	1	0	3	3	5	234	246
Natural/Environmental	0	0	2	4	4	10	6	208	234
Motor Vehicle Non-Traffic	5	1	5	2	2	9	5	171	200
Unknown	0	0	3	0	2	0	4	178	187
Pedal Cyclist, Other	0	0	1	0	0	0	1	182	184
Suffocation	0	1	1	1	4	3	1	118	129
Other Transport (Land, Sea, Sky)	0	2	1	0	0	1	7	84	95
Unspecified	0	0	1	1	2	4	3	75	86
Fire/Burn	0	1	0	0	0	0	0	70	71
Overexertion	0	1	0	0	2	5	8	40	56
Pedestrian, Other	0	0	0	0	1	1	0	52	54
Machinery	0	0	0	0	0	0	0	44	44
Drowning	0	0	0	1	0	0	0	4	5
Total	**19**	**37**	**96**	**86**	**138**	**336**	**408**	**10,205**	**11,325**

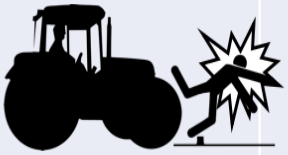
The legal BAC for driving in the United States is 0.08, and any amount above that is very unsafe. BAC concentrations above 0.40 are potentially fatal.

Table 27: Trauma Incidence by County and BAC (Unique Traumas)

County	<0.08	0.08 to 1	2 to 20	21 to 50	51 to 100	101 to 200	more than 200	Unknown	Total
Out of State	0	1	11	15	25	36	23	818	929
Carson City	2	5	0	0	1	1	2	194	205
Churchill	0	0	0	1	2	6	5	114	128
Clark	4	9	65	52	81	219	281	6958	7669
Douglas	5	7	2	1	1	1	6	155	178
Elko	0	0	1	0	1	8	13	138	161
Esmeralda	0	0	0	0	0	0	0	3	3
Eureka	0	1	0	0	0	0	0	4	5
Humboldt	0	0	0	0	1	3	1	78	83
Lander	0	1	0	0	0	1	1	28	31
Lincoln	0	0	2	0	0	1	1	19	23
Lyon	2	5	0	1	1	4	6	117	136
Mineral	0	0	1	0	0	0	0	17	18
Nye	0	0	1	2	1	4	6	433	447
Pershing	0	0	1	0	0	0	3	33	37
Storey	0	1	0	0	0	0	2	6	9
Washoe	4	5	6	7	9	32	42	681	786
White Pine	0	0	0	0	1	1	4	55	61
Unknown	2	2	6	7	14	19	12	354	416
Total	**19**	**37**	**96**	**86**	**138**	**336**	**408**	**10,205**	**11,325**

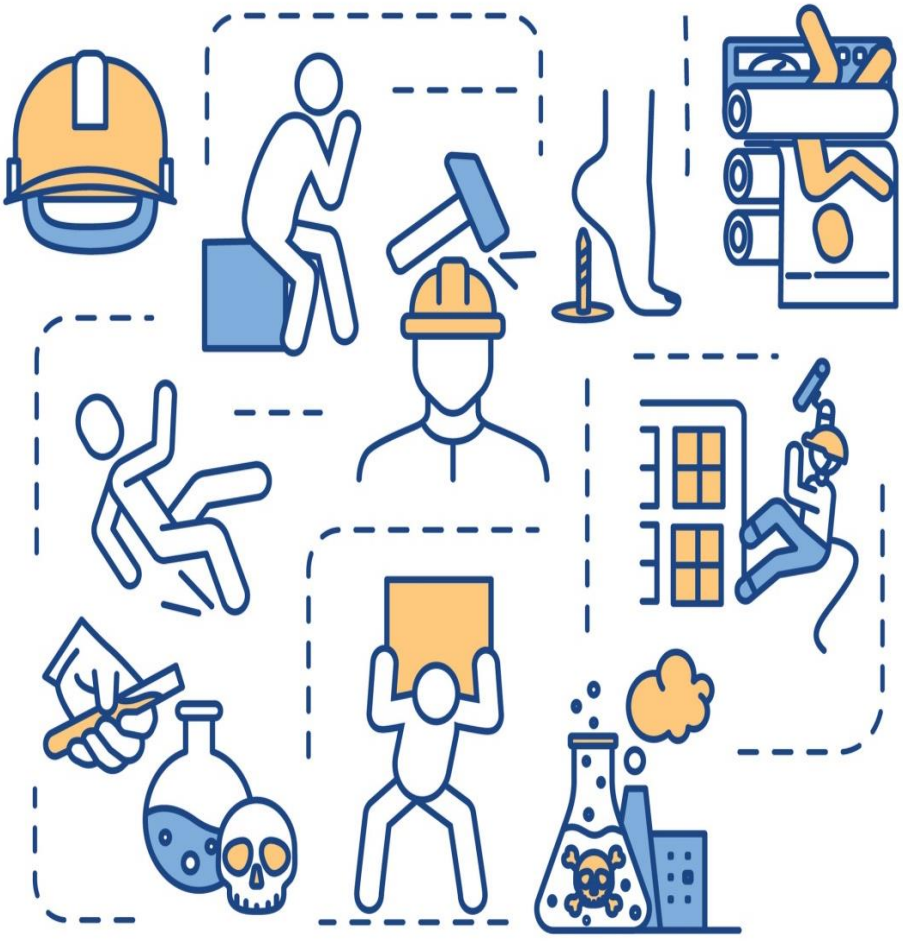
Table 28: Trauma Incidence by County and Drug/Alcohol Use (Unique Trauma)

County	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Out of State	929	189	20%
Carson City	205	13	6%
Churchill	128	14	11%
Clark	7,669	1,231	16%
Douglas	178	24	13%
Elko	161	25	16%
Esmeralda	3	0	0%
Eureka	5	1	20%
Humboldt	83	5	6%
Lander	31	5	16%
Lincoln	23	5	22%
Lyon	136	19	14%
Mineral	18	2	11%
Nye	447	30	7%
Pershing	37	6	16%
Storey	9	3	33%
Washoe	786	119	15%
White Pine	61	7	11%
Unknown	416	72	17%
Total	**11,325**	**1,770**	**16%**

	Direct	Acceleration/ Deceleration/ Shearing Force	Compression	Blast
Mechanism				
Injuries	• Cardiac and Pulmonary Contusion • Rib Fractures with or without Flail	• Aortic Disruption • Airway Injury • Diaphragmatic Rupture	• Cardiac and Pulmonary Contusion • Rib Fractures with or without Flail	• Pulmonary Contusion • Disruption of any intrathoracic Organ

SAFETY EQUIPMENT

Helmet use is essential for safety, especially when riding a bike, motorcycle, or off-road vehicle. Unfortunately, not every person who engages in these activities wears a helmet even with laws that require that they do so. In total, 35% of trauma victims on a bicycle wore a helmet, 21% on a motorcycle, and 14% while driving an off-road vehicle. Figure 13



Among people with traumas, **SENIORS** are more likely to have worn a helmet on a bicycle, but adults between the ages of 18-64 were more consistent in Helmet use amongst all 3 activities.

Figure 13: Proportion of Helmet Use Among Pedal Cyclists, Motor Cyclists, and Off-Road Users (Unique Traumas)

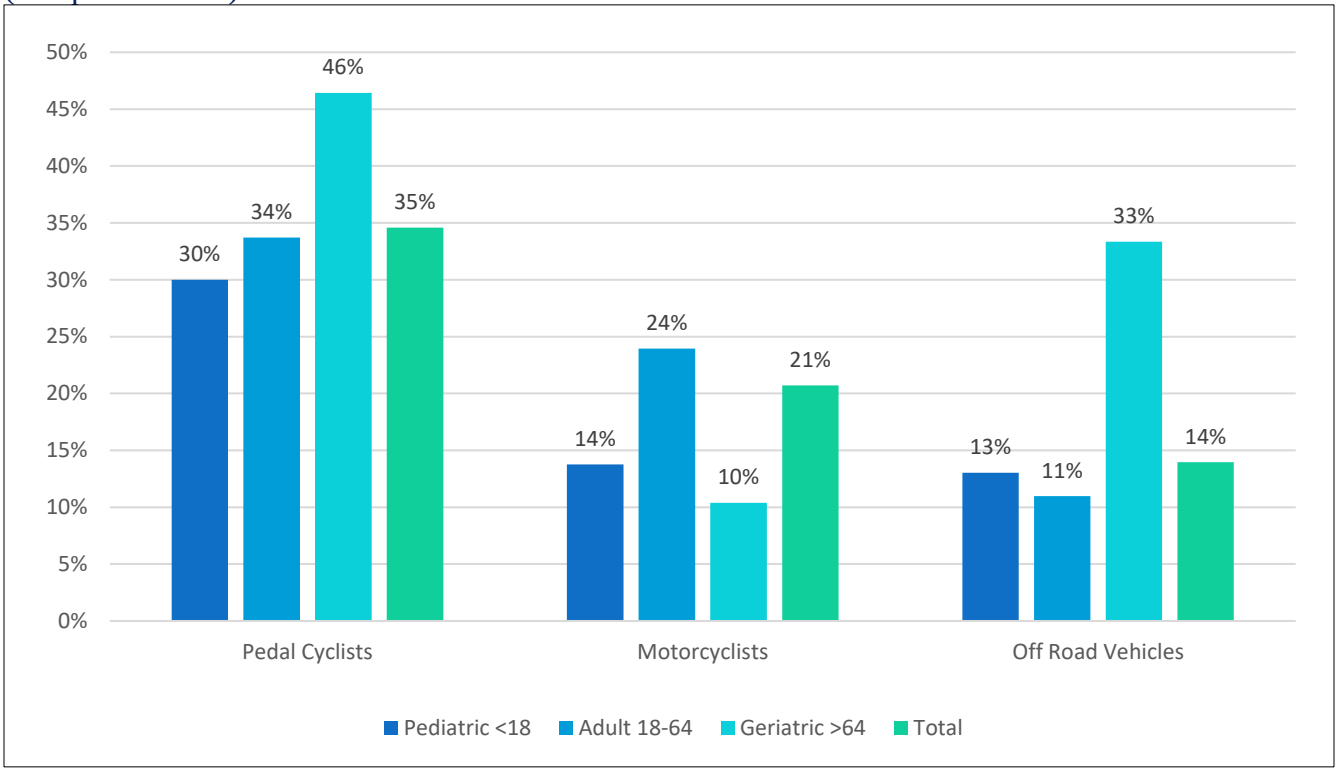


Table 29: Age-Specific Restraint Use Among Motor-Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total
Seatbelt	37	506	217	760
Child booster/car seat	10	0	0	10
None	35	262	41	338
Unknown	7	76	21	104
Total	**89**	**844**	**279**	**1212**

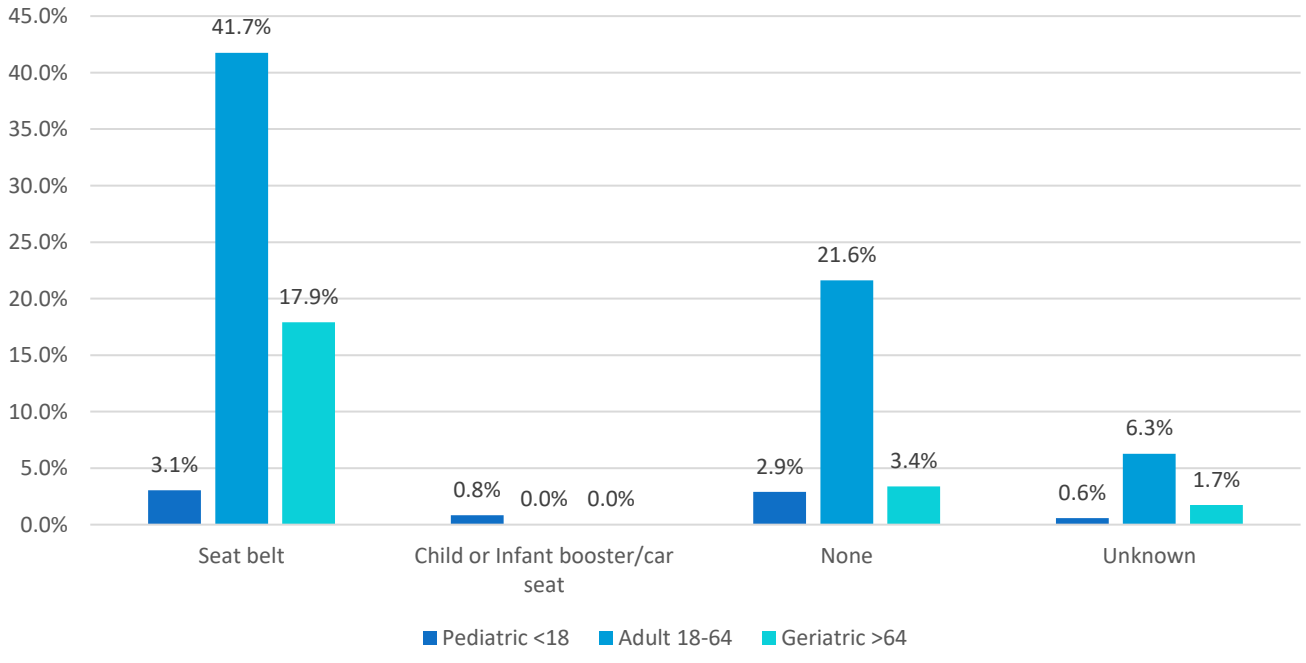
Of the 1,212 motor vehicle incidents, 770 persons who suffered trauma in Nevada reported having been wearing age-specific restraints at the time of the incident. It is estimated by (National Highway Traffic Safety Administration (NHTSA), n.d.) that 90.3% of Americans used a seat belt in 2020 indicating that they are aware of its life-saving value. 47% of the 22,215 occupants of passenger vehicles who were killed in 2019 did not wear a seatbelt. In 2019, 55% of those killed at night were unrestrained. In a report on the reduction of injury, the NHTSA discusses the benefits of buckling up. According to the NHTSA, wearing a seatbelt in a passenger automobile can reduce your risk of a fatal injury by 45% and a moderate to critical injury by 50%. There was a 54% fatality rate among 13-to-15-year-old occupants of unrestrained passenger vehicles in 2017. The NHTSA emphasizes the importance of using the right type of restraint. Injuries to children are significantly higher when their seat belts are loose or improperly positioned. Through 2017, seat belts have been estimated to have saved 374,196 lives. The National Highway Traffic Safety Administration reports 14,955 lives were saved by using the proper restraints in 2017.The use of seat belts could have saved an additional 2,549 lives.

Table 30: Age-Specific Proportion of Restraint Use Among Motor-Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total (column percent)
Seatbelt	3.1%	41.7%	17.9%	62.7%
Child booster/car seat	0.8%	0.0%	0.0%	0.8%
None	2.9%	21.6%	3.4%	27.9%
Unknown	0.6%	6.3%	1.7%	8.6%
Total	**7.3%**	**69.6%**	**23.0%**	**100.0%**

- *Among Motor vehicle occupants: 7.3% are <18, 69.6% are 18-64 and 23.0% are >64years.*
- *Among Motor vehicle occupants 62.7% use seatbelt, 0.8% used Child booster/car seat, 27.9% used no restraint. 8.6% of motor vehicle occupants have unknown restraint information.*
- *Among motor vehicle traffic occupants 3.1% used seatbelt and are < 18 years etc.*

Figure 14: Age-Specific Proportion of Restraint Use Among Motor-Vehicle Traffic Occupants



From Table 30 and Figure 14, we see that only 3.1% of pediatric occupants were properly restrained by a seat belt. Geriatric Population over the age of 64 reported 17.9% wearing a seatbelt, while 41.7% of adult drivers reported wearing a seatbelt. Not all those who were involved in a Motor Vehicle Accident resulting in a Trauma were willing to provide information regarding restraint use at the time of the accident. Additionally, it is essential to note that Figure 14 above refers to the populations in that age group that were reported to be properly restrained using the right type of safety restraint.

FALLS – BY LAST TRANSFER FACILITY

During 2020, falls were Nevada's leading cause of trauma. In line with this, the majority of traumas take place at home (Table 12). In analyzing the falls by sex, females experienced more trauma than males by 423 cases. (Table 31).

More fall traumas occur to females than males.

A breakdown of the types of falls is provided in Table 32. At 65%, Same Level, Slipping/Tripping/Stumbling was the leading cause of trauma injuries. Despite this, the most common type of fall that caused death was a suicide related fall (such as a fall from height).

Table 31: Trauma Rate for Falls by Sex (Unique Traumas)

Sex	n	Rate per 100,000 (95% CI)
Female	3,364	217.2 (209.9-224.6)
Male	2,941	189.4 (182.5-196.2)
Total	**6,305**	**203.3 (198.3-208.3)**

Table 32: Incidence and Mortality Proportion by Type of Fall (Unique Traumas)

Type of Falls	Count	Percent of Falls (Column Percent)	Deaths	Mortality Proportion (Row Percent)
Same Level (Slipping, Tripping, Stumbling)	4,100	65.0%	103	2.5%
Unspecified	548	8.7%	18	3.3%
From Furniture	432	6.9%	10	2.3%
Steps	327	5.2%	7	2.1%
Multi-Level: Cliff, Tree, Water, etc.	261	4.1%	4	1.5%
On or From Ladder/Scaffolding	196	3.1%	6	3.1%
Pedestrian Conveyance Accident	183	2.9%	4	2.2%
Out of Building or Structure	86	1.4%	2	2.3%
Collision, Push or Shove By, or Other Person	52	0.8%	2	3.8%
Playground Equipment	42	0.7%	0	0.0%
Suicide Related	29	0.5%	7	24.1%
Fall Due to Environmental Factors	27	0.4%	0	0.0%
Undetermined Fall from High Place	16	0.3%	2	12.5%
Assault Related	6	0.1%	0	0.0%
Total	**6,305**	**100.0%**	**165**	**2.6%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 33: Trauma Rate by Age and Type of Fall (Unique Traumas)

Age Group	Type of Fall					
	Unspecified		From Same Level (tripping, slipping, stumbling)		From Furniture (bed, chair, etc.)	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	8	1.1 (0.3-1.9)	78	10.7 (8.3-13.1)	55	7.6 (5.6-9.5)
Adult 18-64	148	7.7 (6.5-9.0)	960	50.0 (46.9-53.2)	79	4.1 (3.2-5.0)
Geriatric >64	392	86.3 (77.8-94.8)	3,062	674.1 (650.2-698.0)	298	65.6 (58.2-73.1)
Total	**548**	**17.7 (16.2-19.1)**	**4,100**	**132.2 (128.2-136.2)**	**432**	**13.9 (12.6-15.2)**

FINAL NOTE

With vast improvements in data entry compliance and accuracy, the quality of the data available in the Nevada Trauma Registry (NTR) has been enhanced. The NTR Manager and Coordinator thank all NTR users, at the various trauma and non-trauma centers in Nevada, for their patience and diligence in learning to accurately enter data into the NTR. Your dedication and efforts are recognized and valued.

As collaboration amongst the facilities and the Nevada Trauma Registry continues to grow, we are working towards compiling and maintaining a complete historical data for the four trauma centers. Through ongoing partnerships to improve the amount and quality of information in the NTR, these data and subsequent reports become more valuable to the various NTR community stakeholders.

CITATIONS

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ADDITIONAL INFORMATION

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FUNDING SOURCE

This report was produced by the Division of Public and Behavioral Health and supported by the Grant Numbers, 5NU90TP922047-03-00 and 6U3REP190613, funded by the Centers for Disease Control and Prevention and the Assistant Secretary for Preparedness and Response. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention, Office of the Assistant Secretary for Preparedness and Response, or the Department of Health and Human Services.

RECOMMENDED CITATION

Division of Public and Behavioral Health. *2020 Annual Trauma Registry Report*. Carson City, Nevada. e 1.0, June 2021. (Division of Public and Behavioral Health, 2020)

APPENDIX A: DOUGLAS COUNTY RESULTS

APPENDIX A: TRAUMA CASES BY FACILITY

Table 34: Trauma Cases by Facility (includes Nevada Residents and Non-Residents)

County	Facility	Unique Traumas Trauma Patients^		Total Trauma Cases*	
Clark County	Boulder City Hospital		0.0%		0.0%
	Centennial Hills Hospital		0.0%		0.0%
	Desert Springs Hospital Center		0.0%		0.0%
	Henderson Hospital		0.0%		0.0%
	Mesa View Regional Hospital		0.0%		0.0%
	Mike O'Callaghan Federal Medical Center		0.0%		0.0%
	Mountain View ER at Aliante		0.0%		0.0%
	Mountain View Hospital		0.0%		0.0%
	North Vista Hospital		0.0%		0.0%
	Southern Hills ER at the Lakes		0.0%		0.0%
	Southern Hills Hospital Medical Center		0.0%		0.0%
	Spring Valley Hospital Medical Center		0.0%		0.0%
	St. Rose Dominican Hospital Blue Diamond		0.0%		0.0%
	St. Rose Dominican Hospital De Lima Campus		0.0%		0.0%
	St. Rose Dominican Hospital North Las Vegas		0.0%		0.0%
	St. Rose Dominican Hospital San Martin Campus		0.0%		0.0%
	St. Rose Dominican Hospital Siena Campus		0.0%		0.0%
	St. Rose Dominican Hospital West Flamingo		0.0%		0.0%
	St. Rose Dominican Hospital West Sahara		0.0%		0.0%
	Summerlin Hospital Medical Center		0.0%		0.0%
	Sunrise Hospital Medical Center		0.0%		0.0%
	University Medical Center		0.0%		0.0%
	Valley Hospital Medical Center		0.0%		0.0%
Washoe County	Incline Village Community Hospital		0.0%		0.0%
	Northern Nevada Medical Center		0.0%		0.0%
	Renown Regional Medical Center	26	14.1%	45	22.0%
	Renown South Meadows Medical Center	2	1.1%	3	1.5%
	St. Mary's Regional Medical Center	1	0.5%	1	0.5%
All Other Counties	Banner Churchill Community Hospital		0.0%		0.0%
	Battle Mountain General Hospital		0.0%		0.0%
	Carson Tahoe Regional Medical Center	71	38.4%	71	34.6%
	Carson Valley Medical Center	85	45.9%	85	41.5%
	Desert View Hospital		0.0%		0.0%
	Grover C. Dils Medical Center		0.0%		0.0%
	Humboldt General Hospital		0.0%		0.0%
	Mt. Grant General Hospital		0.0%		0.0%
	Northeastern Nevada Regional Hospital		0.0%		0.0%
	Pershing General Hospital		0.0%		0.0%
	South Lyon Medical Center		0.0%		0.0%
	Williams Bee Ririe Hospital		0.0%		0.0%
Nevada (Total)		**185**	**100.0%**	**205**	**100.0%**

Table 35: Trauma Incidence and Mortality Proportion by Trauma Center Designation for Trauma Center Levels 1-4

Trauma Center designation	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Trauma Center level 1	0	0.0%	0	0.0%
Trauma Center level 2	45	100.0%	2	4.4%
Trauma Center Level 3	0	0.0%	0	0.0%
Trauma Center Level 4	0	0.0%	0	0.0%
Total	**45**	**100.0%**	**2**	**4.4%**

APPENDIX A: DEMOGRAPHICS

Table 36: Nevada Trauma Cases by Sex (Unique Traumas)

Sex	Count	Column Percent	Rate per 100,000 (95% CI)
Male	97	52.4%	6.2 (5.0-7.5)
Female	88	47.6%	5.7 (4.5-6.9)
Total	**185**	**100%**	**6.0 (5.1-6.8)**

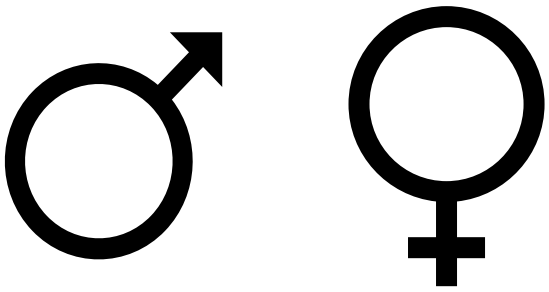


Table 37: Nevada Trauma Cases by Race/Ethnicity (Unique Traumas)

Race/Ethnicity	Count	Column Percent	Rate per 100,000 (95% CI)
White	173	93.5%	11.1 (9.4-12.7)
Black	.	0.0%	. (.-.)
American Indian/ Alaskan Native	2	1.1%	5.6 (-2.2-13.4)
Asian	5	2.7%	1.6 (0.2-3.1)
Hispanic	4	2.2%	0.4 (0.0-0.9)
Other	.	0.0%	. (.-.)
Unknown	1	0.5%	. (.-.)
Total	**185**	**100.0%**	**6.0 (5.1-6.8)**

Figure 15: Number and Percentage of Unique Trauma Cases by Race/Ethnicity (Unique Traumas)

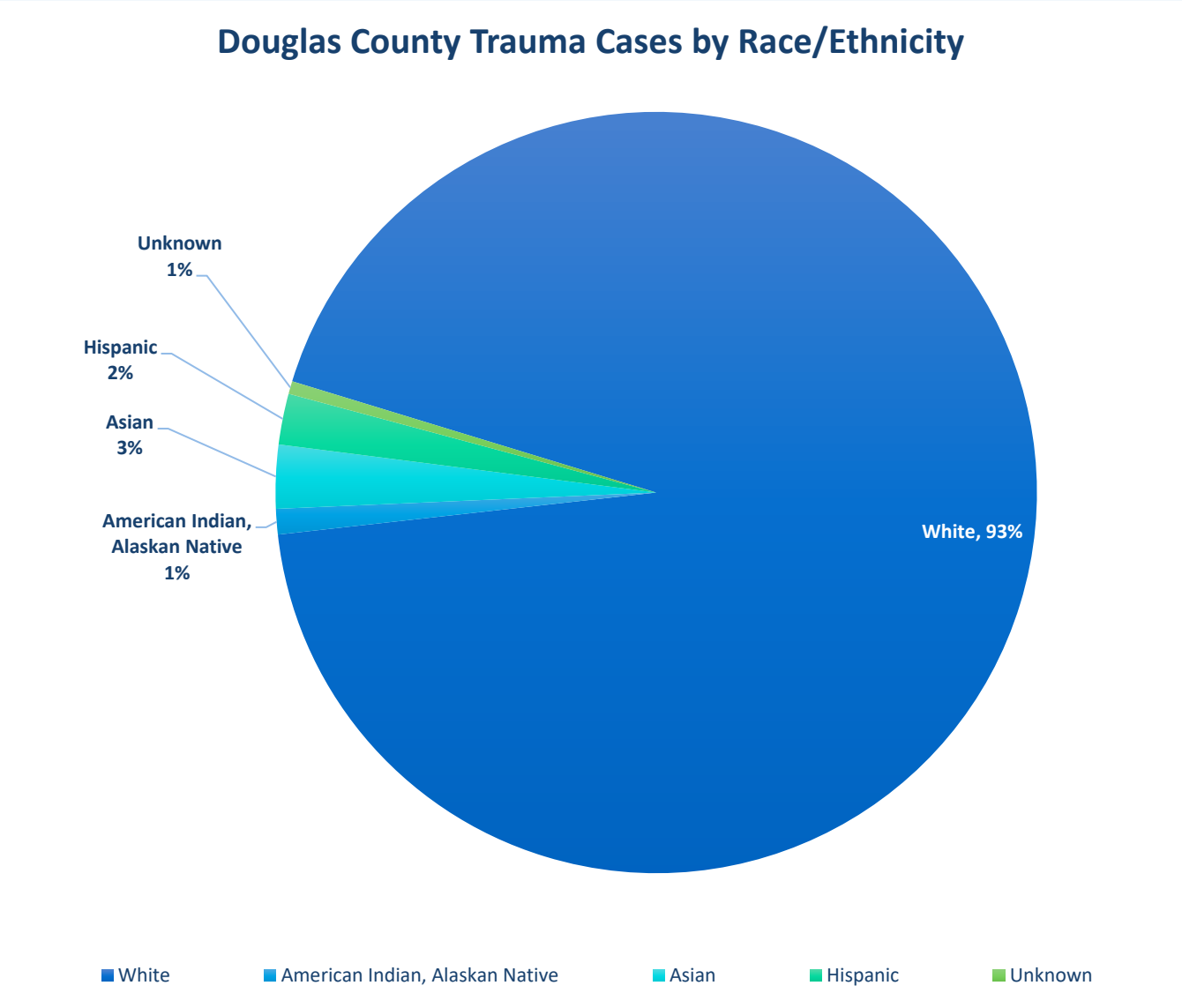


Table 38: Age-Specific Trauma Cases by Race/Ethnicity (Unique Traumas)

Age Groups	White	Black	American Indian, Alaskan Native	Asian	Hispanic	Other	Unknown	Total
1-5	1	0	0	0	0	0	0	1
6-17	2	0	0	0	0	0	0	2
18-24	5	0	1	0	0	0	0	6
25-34	5	0	0	0	1	0	0	6
35-44	5	0	0	0	0	0	0	5
45-54	6	0	1	1	1	0	0	9
55-64	20	0	0	1	0	0	0	21
65-74	37	0	0	0	1	0	0	38
75-84	43	0	0	3	1	0	0	47
85+	49	0	0	0	0	0	1	50
Total	**173**	**0**	**2**	**5**	**4**	**0**	**1**	**185**

Table 39: Age-Specific Trauma Cases and Mortality Proportion (Unique Traumas)

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Total	188	100.0%	5	2.7%
1-5	1	0.5%	0	0.0%
6-17	2	1.1%	0	0.0%
18-24	6	3.2%	0	0.0%
25-34	8	4.3%	0	0.0%
35-44	5	2.7%	0	0.0%
45-54	10	5.3%	0	0.0%
55-64	21	11.2%	2	9.5%
65-74	38	20.2%	1	2.6%
75-84	47	25.0%	2	4.3%
85+	50	26.6%	0	0.0%

Table 40: Age and Sex-Specific Trauma Rate per 100,000 Nevada Residents (Unique Traumas)

Age Group	Male		Female		Total	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	3	0.8 (-0.1-1.7)	.	. (.-.)	3	0.4 (-0.1-0.9)
Adult 18-64	34	3.5 (2.3-4.7)	13	1.4 (0.6-2.1)	47	2.4 (1.7-3.1)
Geriatric >64	60	28.9 (21.6-36.2)	75	30.4 (23.6-37.3)	135	29.7 (24.7-34.7)
Total	**97**	**6.2 (5.0-7.5)**	**88**	**5.7 (4.5-6.9)**	**185**	**6.0 (5.1-6.8)**

Figure 16: Age and Sex-Specific Trauma Rates per 100,000 Nevada Residents

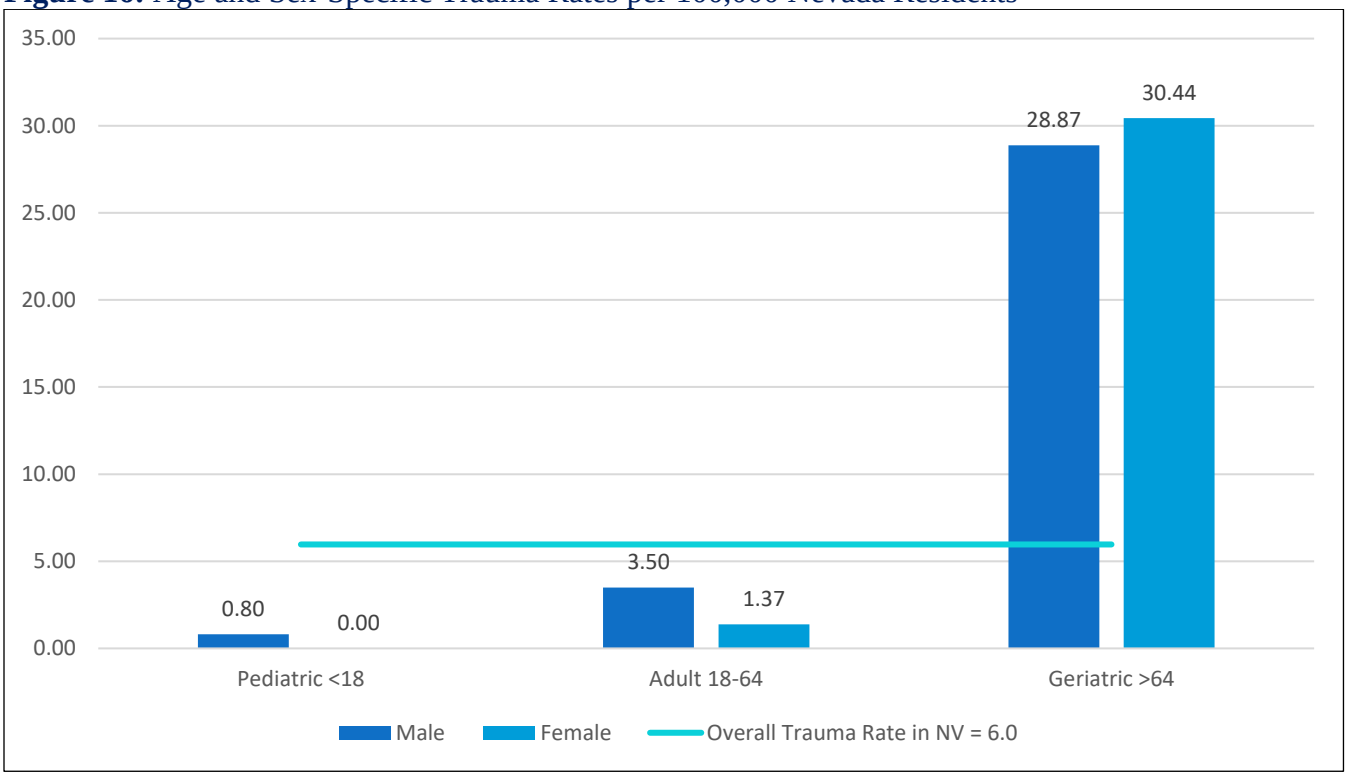


Table 41: Nevada Trauma Cases by County of Injury (Non-Duplicated)

County	Count	Rate per 100,000 (95% CI)
Carson City	5	8.9 (1.1-16.7)
Churchill	.	. (.-.)
Clark	.	. (.-.)
Douglas	151	305.6 (256.8-354.3)
Elko	.	. (.-.)
Esmeralda	.	. (.-.)
Eureka	.	. (.-.)
Humboldt	.	. (.-.)
Lander	.	. (.-.)
Lincoln	.	. (.-.)
Lyon	1	1.8 (-1.7-5.2)
Mineral	.	. (.-.)
Nye	.	. (.-.)
Pershing	.	. (.-.)
Storey	.	. (.-.)
Washoe	5	1.1 (0.1-2.0)
White Pine	.	. (.-.)
Out of State	3	5.3 (4.5-6.1)
Unknown	0	0.0 (0.0-0.0)

Figure 17: County-Specific Trauma Rates per 100,000 County Residents

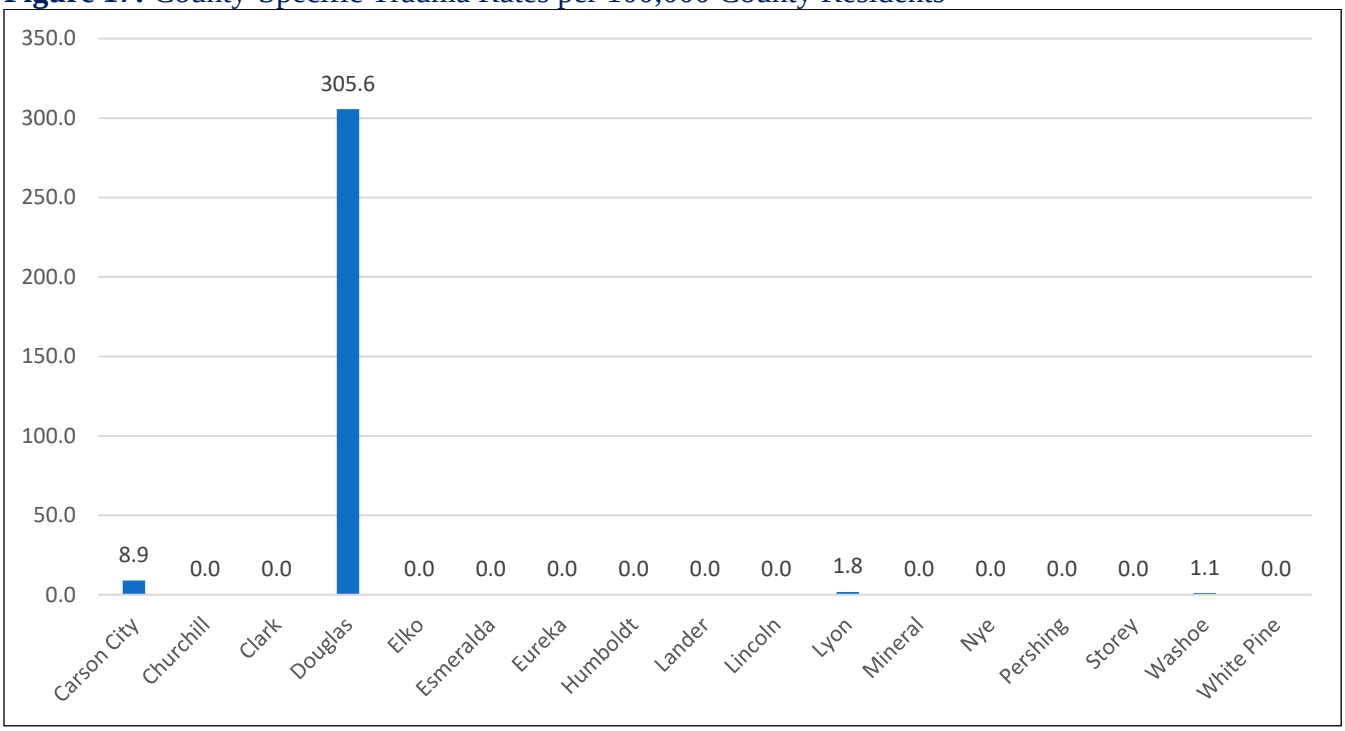


Table 42: Age-Specific Traumatic Brain Injury and Mortality Proportion (Unique Traumas)

Age Group	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Pediatric <18	1	2.9%	0	0.0%
Adult 18-64	16	45.7%	1	6.3%
Geriatric >64	18	51.4%	0	0.0%
Total	**35**	**100.0%**	**1**	**2.9%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 43: Age-Specific Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas)

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Total	35	100.0%	1	2.9%
6-17	1	2.9%	0	0.0%
18-24	3	8.6%	0	0.0%
25-34	1	2.9%	0	0.0%
35-44	2	5.7%	0	0.0%
45-54	4	11.4%	0	0.0%
55-64	6	17.1%	1	16.7%
65-74	5	14.3%	0	0.0%
75-84	7	20.0%	0	0.0%
85+	6	17.1%	0	0.0%

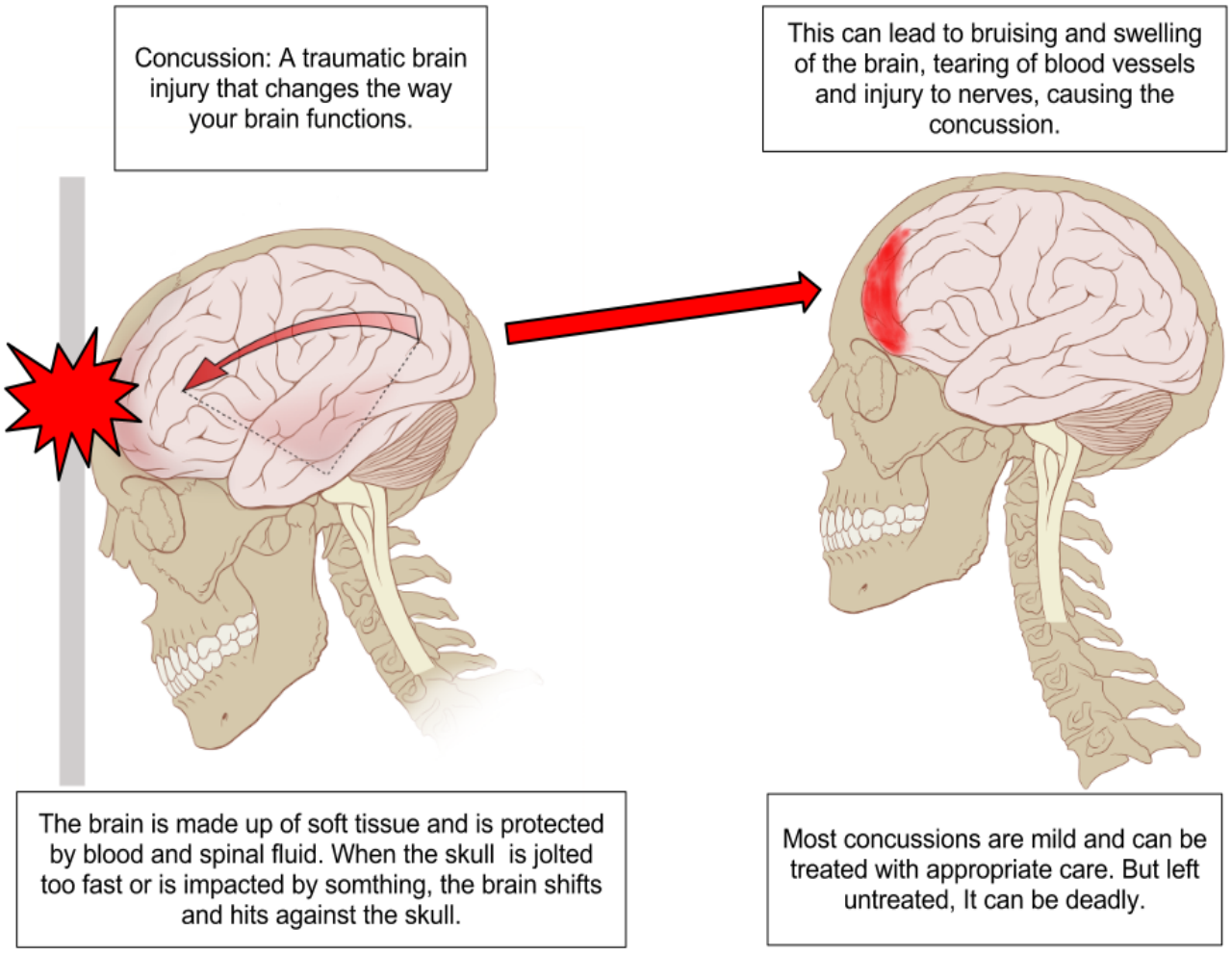
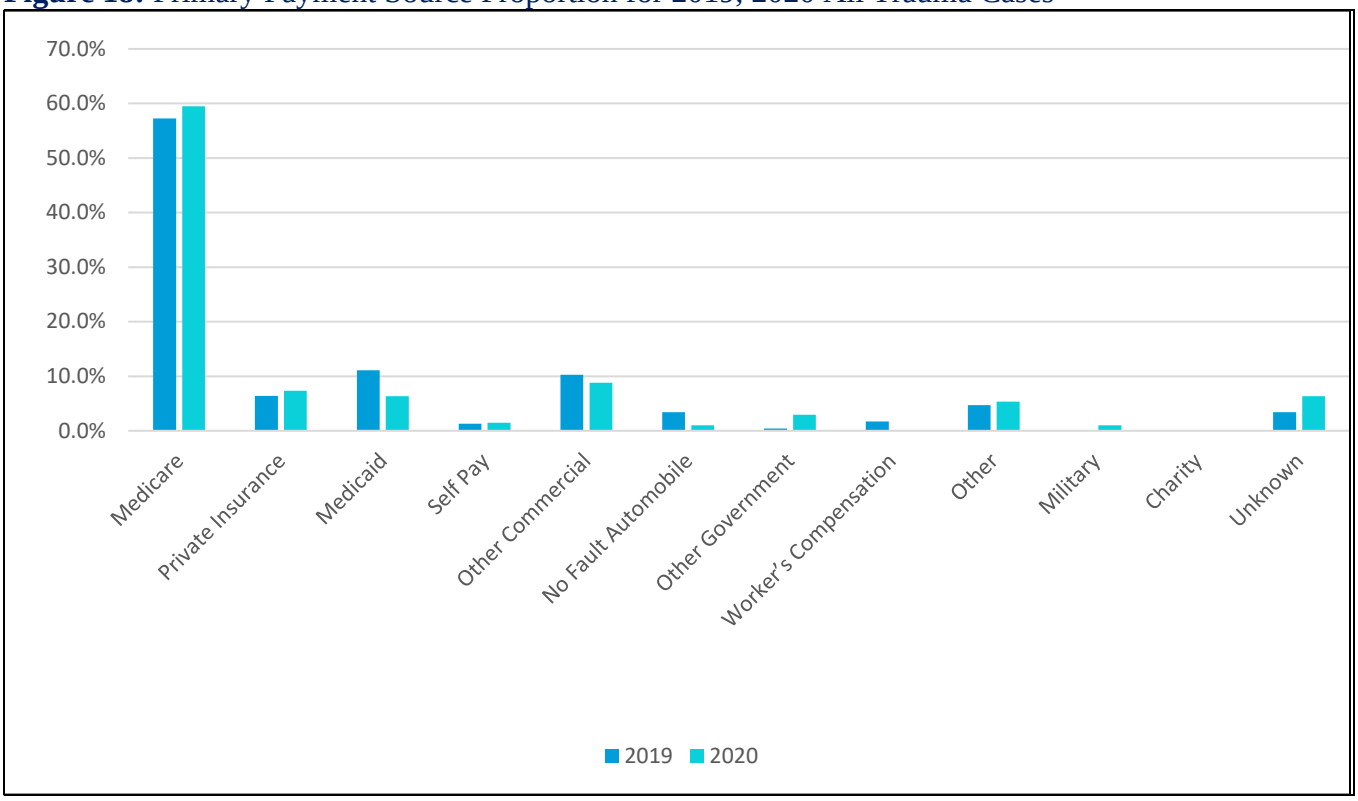


Table 44: Primary Payment Source Proportion for 2019, 2020

Primary Source of Payment	2019	2020
Medicare	57.3%	59.5%
Private Insurance	6.4%	7.3%
Medicaid	11.1%	6.3%
Self-Pay	1.3%	1.5%
Other Commercial	10.3%	8.8%
No Fault Automobile	3.4%	1.0%
Other Government	0.4%	2.9%
Worker's Compensation	1.7%	0.0%
Other	4.7%	5.4%
Military	0.0%	1.0%
Charity	0.0%	0.0%
Unknown	3.4%	6.3%

Note: 2019 was first year compared.

Figure 18: Primary Payment Source Proportion for 2019, 2020 All Trauma Cases



APPENDIX A: PLACE AND MECHANISM OF INJURY

Table 45: Trauma Incidence by Place of Injury (Unique Traumas)

Place of Injury	Trauma Count	Column Percent
Residential	115	62%
Street	22	12%
Trade and Service Area	3	2%
Recreation area	3	2%
Wilderness	4	2%
Other Specified	3	2%
School or Public Area	3	2%
Farm	2	1%
Unknown/Unspecified	30	16%
Total	**185**	**100%**

Table 46: Trauma Incidence and Mortality by Mechanism of Injury (Unique Traumas)

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	133	70.7%	2	1.5%
Motor Vehicle Traffic	19	10.1%	1	5.3%
Struck by/Against	4	2.1%	0	0.0%
Firearm	2	1.1%	2	100.0%
Cut/Pierce	2	1.1%	0	0.0%
Motor Vehicle Non-Traffic	6	3.2%	0	0.0%
Other Transport (Land, Sea, Sky)	3	1.6%	0	0.0%
Other Specified	5	2.7%	0	0.0%
Pedal Cyclist, Other	3	1.6%	0	0.0%
Natural/Environmental	3	1.6%	0	0.0%
Fire/Burn	2	1.1%	0	0.0%
Unknown	2	1.1%	0	0.0%
Overexertion	2	1.1%	0	0.0%
Suffocation	2	1.1%	0	0.0%
Total	**188**	**100.0%**	**5**	**2.7%**

Table 47: Trauma Rates for Top Three Mechanisms of Injury by Age (Unique Traumas)

Age Group	Falls		Struck by/Against		Motor Vehicle Traffic	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Adult 18-64	17	0.9 (0.5-1.3)	2	0.1 (0.0-0.2)	11	0.6 (0.2-0.9)
Geriatric >64	113	24.9 (20.3-29.5)	3	0.7 (-0.1-1.4)	5	1.1 (0.1-2.1)
Total	**130**	**4.2 (3.5-4.9)**	**5**	**0.2 (0.0-0.3)**	**16**	**0.5 (0.3-0.8)**

Figure 19: Top Five Mechanisms of Unintentional Trauma (n=177)

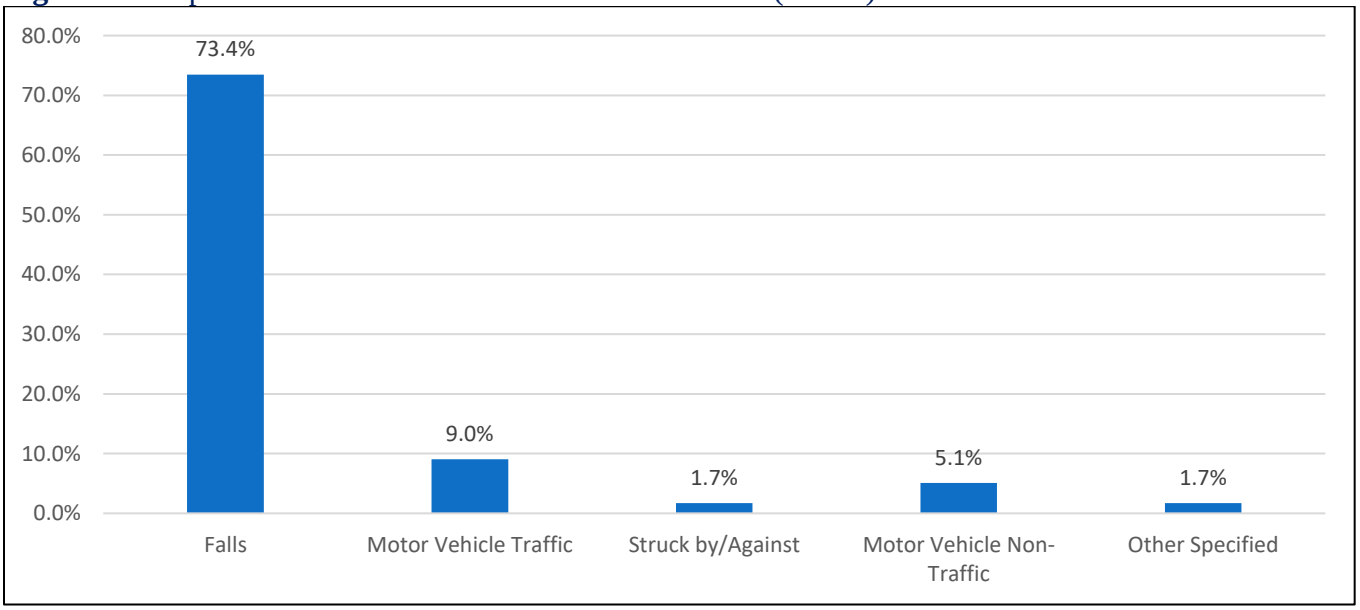


Figure 20: Top Five Mechanisms of Homicide/Assault Related Trauma (n=3)

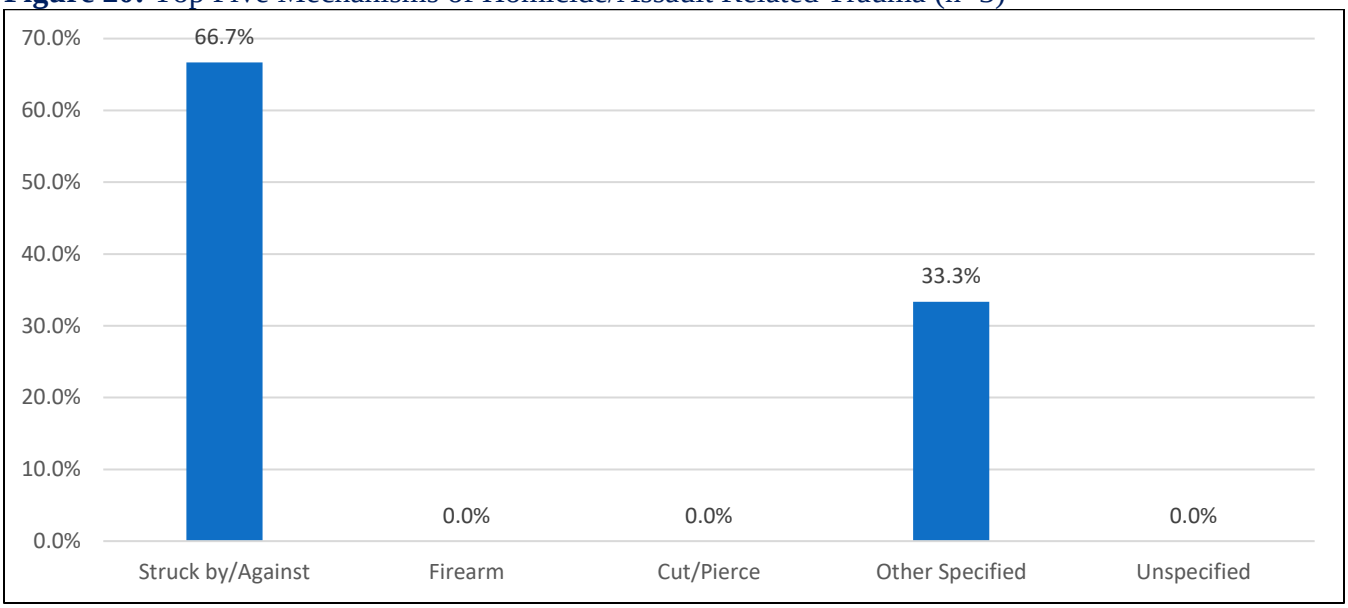


Figure 21: Top Five Mechanisms of Suicide/Self-Inflicted Trauma (n=3)

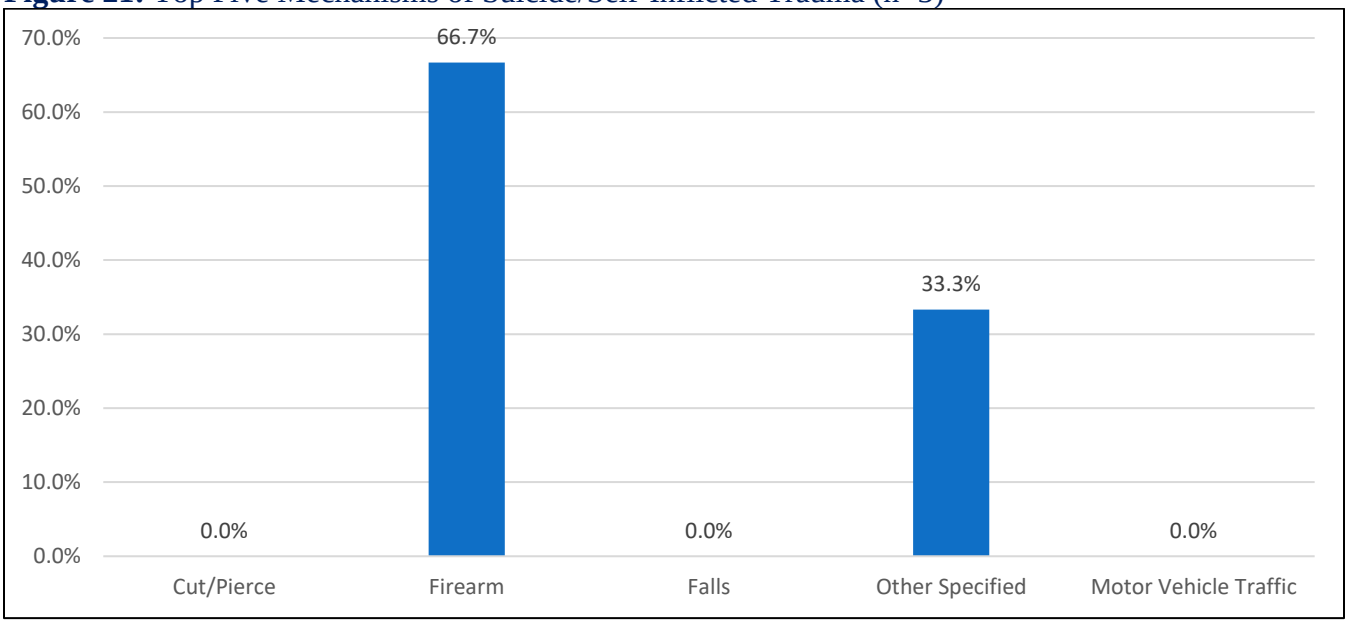
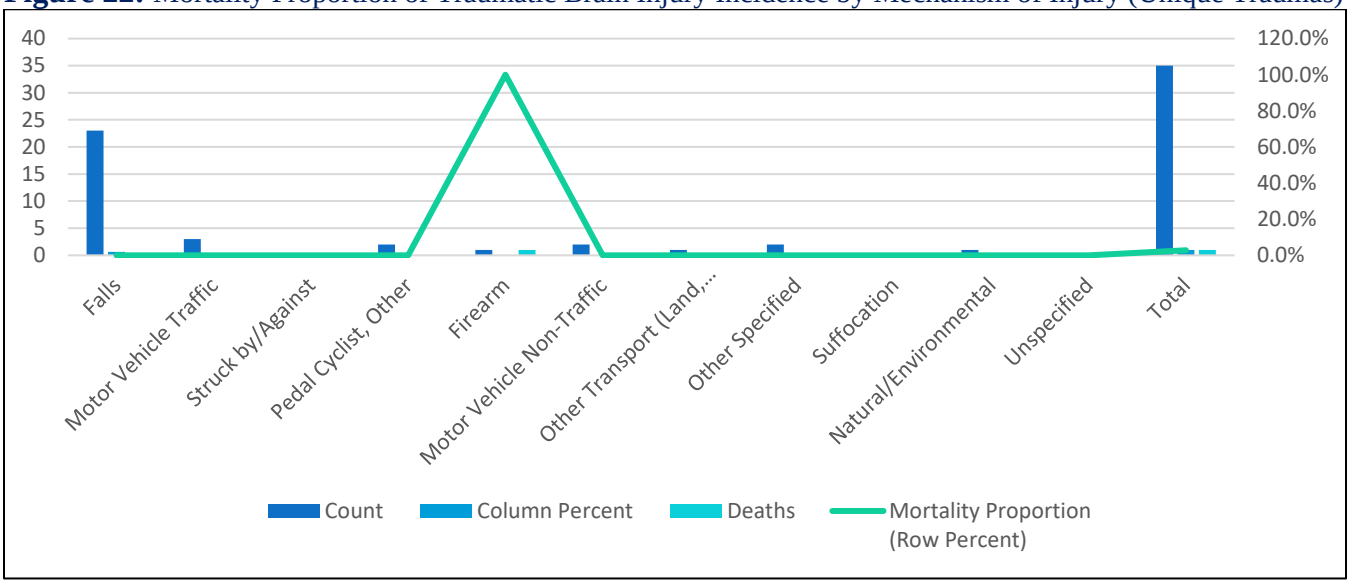


Table 48: Traumatic Brain Injury Incidence and Mortality by Mechanism of Injury

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	23	65.7%	0	0.0%
Motor Vehicle Traffic	3	8.6%	0	0.0%
Pedal Cyclist, Other	2	5.7%	0	0.0%
Firearm	1	2.9%	1	100.0%
Motor Vehicle Non-Traffic	2	5.7%	0	0.0%
Other Transport (Land, Sea, Sky)	1	2.9%	0	0.0%
Other Specified	2	5.7%	0	0.0%
Natural/Environmental	1	2.9%	0	0.0%
Total	**35**	**100.0%**	**1**	**2.9%**

Figure 22: Mortality Proportion of Traumatic Brain Injury Incidence by Mechanism of Injury (Unique Traumas)



APPENDIX A: INJURY CHARACTERISTICS: INJURY SEVERITY SCORE (ISS)

Table 49: Trauma Incidence and Mortality by Injury Severity Score (ISS) (Unique Traumas)

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	80	42.6%	1	1.3%
Moderate, 9-15	90	47.9%	1	1.1%
Serious, 16-24	7	3.7%	0	0.0%
Severe, 25-75	11	5.9%	3	27.3%

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Figure 23: Trauma Mortality Proportion by Injury Severity Score

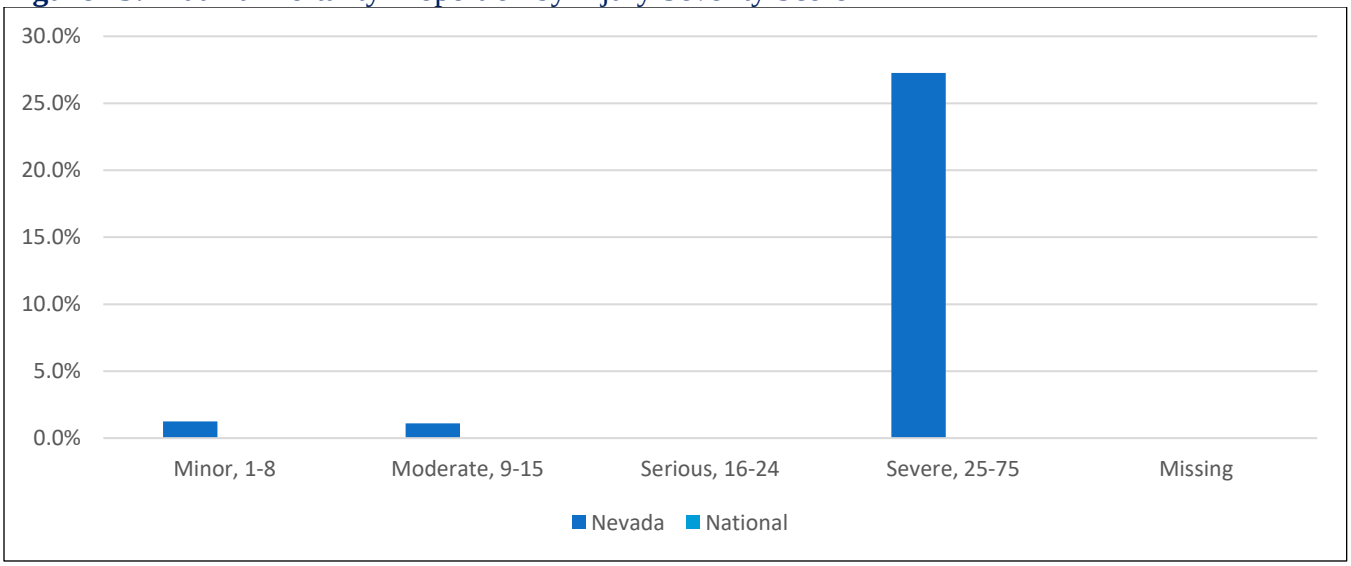


Table 50: Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas) by Injury Severity

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	6	17.1%	0	0.0%
Moderate, 9-15	18	51.4%	0	0.0%
Serious, 16-24	5	14.3%	0	0.0%
Severe, 25-75	6	17.1%	1	16.7%
Total	**35**	**100.0%**	**1**	**2.9%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 51: ED Arrival Time for Patient with an ISS Score >15 by Injury Location: Rural, Urban, Statewide

County	<1 hour	1-3 hours	3-6 hours	6-9 hours	9-12 hours	>12 hours
Carson City	1	1	0	0	0	0
Douglas	2	1	0	1	0	0
Lyon	0	1	0	0	0	0
Washoe	2	1	0	0	0	0
Out of State	4	0	0	0	0	0
Total	**9**	**4**	**0**	**1**	**0**	**0**

APPENDIX A: PATIENT TRANSPORTATION

Table 52: Trauma Incidence by Mode of Arrival (Unique Traumas)

Mode of Arrival	Trauma Count	Column Percent
Ground Ambulance	123	66%
Private Vehicle or Walk-in	46	25%
Helicopter Ambulance	15	8%
Fixed-Wing Ambulance	1	1%
Total	**185**	**100%**

Table 53: Mode of Transport by ISS (Unique Traumas)

Mode of Arrival	Injury Severity Score Range				
	Minor 1-8	Moderate 9-15	Serious 16-24	Severe 25-75	Missing/NA ISS Scores
Ground Ambulance	50	67	4	2	0
Private Vehicle or Walk-in	31	14	1	0	0
Helicopter Ambulance	3	6	1	5	0
Fixed-Wing Ambulance	0	0	0	1	0
Total	**84**	**87**	**6**	**8**	**0**

APPENDIX A: PATIENT DISCHARGE AND TRANSFER

Table 54: Patient Transfer to Nevada Trauma Centers by ISS

Facility Patient Transferred To	Injury Severity Score Range			
	Trauma Cases	Mean ISS	Standard Deviation	ISS Range
Renown Regional Medical Center	51	6.9215686	3.3813792	1 - 16

"Patient transfer Transferred To" is determined by the question, "Was Patient Transferred to Facility" and not through the matching process with Unique Traumas.

APPENDIX A: RISK FACTORS: DRUG/ALCOHOL USE

Table 55: Injury Intent and Drug/Alcohol Use (Unique Traumas)

Injury Intent	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Unintentional	177	18	10%
Suicide	3	1	33%
Homicide/Assault	3	1	33%
Missing	2	0	0%
Total	**185**	**20**	**11%**

APPENDIX A: SAFETY EQUIPMENT

Figure 24: Proportion of Helmet Use Among Pedal Cyclists, Motor Cyclists, and Off-Road Users (Unique Traumas)

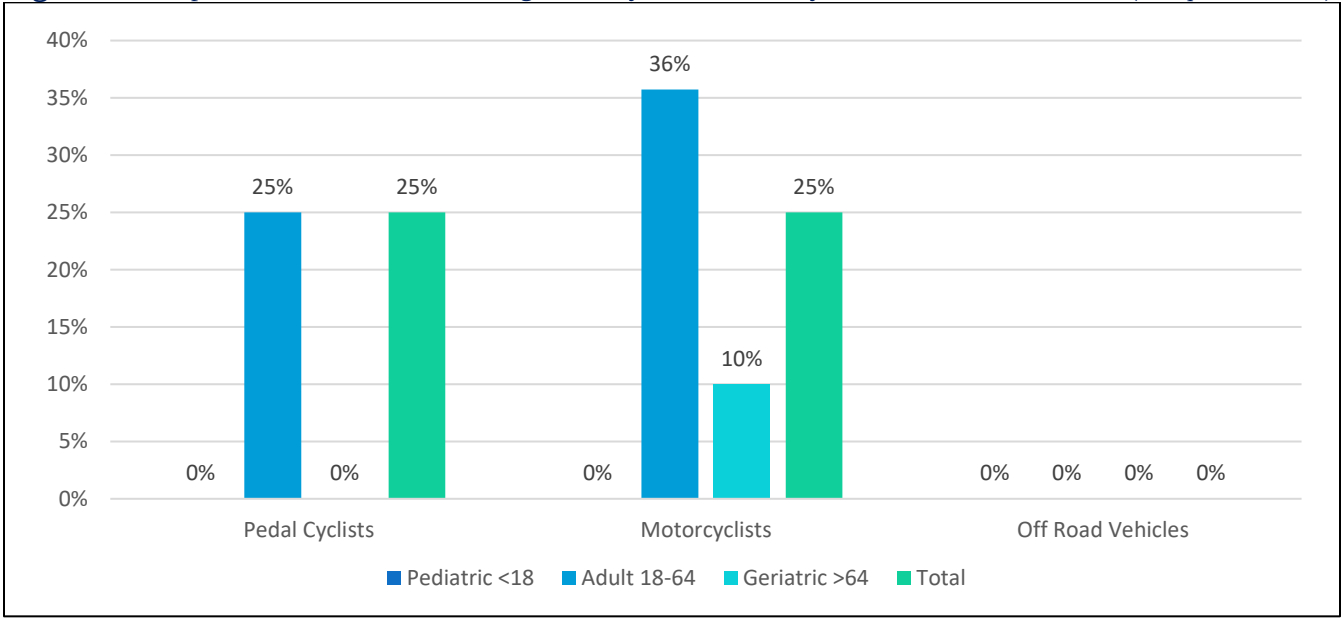


Table 56: Age-Specific restraint use among Motor Vehicle Traffic Occupants

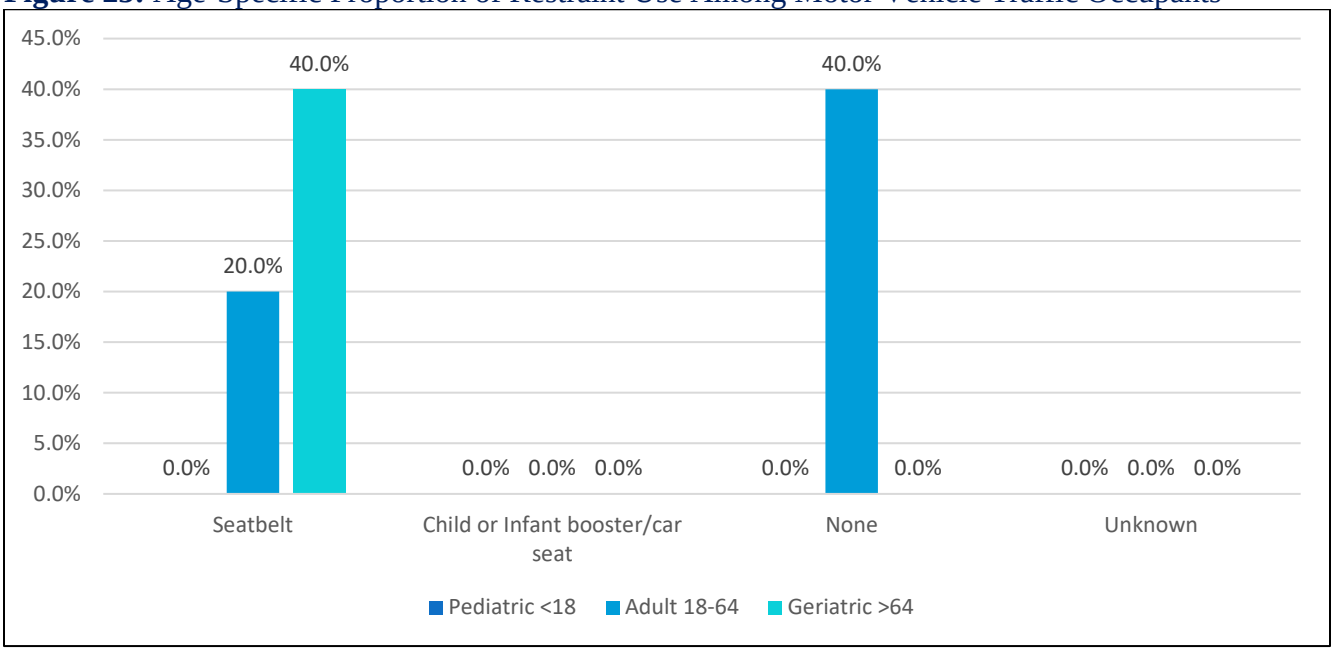
Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total
Seatbelt	0	2	4	6
None	0	4	0	4
Total	**0**	**6**	**4**	**10**

Table 57: Age-Specific Proportion of Restraint Use Among Motor-Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total (column percent)
Seatbelt	0.0%	20.0%	40.0%	60.0%
Child or Infant booster/car seat	0.0%	0.0%	0.0%	0.0%
None	0.0%	40.0%	0.0%	40.0%
Unknown	0.0%	0.0%	0.0%	0.0%
Total	**0.0%**	**60.0%**	**40.0%**	**100.0%**

- *Among Motor vehicle occupants: 0% are <18, 60% are 18-64 and 40% are >64years.*
- *Among Motor vehicle occupants 60% used seatbelt, 40% used no restraint.*
- *Among all motor vehicle traffic occupants 20% used seatbelt and between 18 - 24 years and 40% are >64years etc.*

Figure 25: Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants



APPENDIX A: FALLS – BY LAST TRANSFER FACILITY

Table 58: Trauma Rate for Falls by Sex (Unique Traumas)

Sex	n	Rate per 100,000 (95% CI)
Female	79	5.1 (4.0-6.2)
Male	59	3.8 (2.8-4.8)
Total	**138**	**4.4 (3.7-5.2)**

Table 59: Incidence and Mortality Proportion by Type of Fall (Unique Traumas)

Type of Falls	Count	Percent of Falls (Column Percent)	Deaths	Mortality Proportion (Row Percent)
Same Level (Slipping, Tripping, Stumbling)	101	73.2%	2	2.0%
From Furniture	4	2.9%	0	0.0%
Steps	6	4.3%	0	0.0%
Unspecified	15	10.9%	0	0.0%
Pedestrian Conveyance Accident	2	1.4%	0	0.0%
Multi-Level: Cliff, Tree, Water, Etc.	2	1.4%	0	0.0%
Fall Due to Environmental Factors	2	1.4%	0	0.0%
On or From Ladder/Scaffolding	4	2.9%	0	0.0%
Out of Building or Structure	1	0.7%	0	0.0%
Collision, Push or Shove By, or Other Person	1	0.7%	0	0.0%
Total	**138**	**100.0%**	**2**	**1.4%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 60: Trauma Rate by Age and Type of Fall (Unique Traumas)

Age Group	Type of Fall					
	Unspecified		From Same Level (tripping, slipping, stumbling)		From Furniture (bed, chair, etc.)	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Adult 18-64	4	0.2 (0.0-0.4)	10	0.5 (0.2-0.8)	0	0.0 (0.0-0.0)
Geriatric >64	11	2.4 (1.0-3.9)	91	20.0 (15.9-24.2)	4	0.9 (0.0-1.7)
Total	**15**	**0.5 (0.2-0.7)**	**101**	**3.3 (2.6-3.9)**	**4**	**0.1 (0.0-0.3)**

APPENDIX B: WASHOE COUNTY RESULTS

APPENDIX B: TRAUMA CASES BY FACILITY

Table 61: Trauma Cases by Facility (includes Nevada Residents and Non-Residents)

County	Facility	Unique Traumas Trauma Patients^		Total Trauma Cases*	
Clark County	Boulder City Hospital		0.0%		0.0%
	Centennial Hills Hospital		0.0%		0.0%
	Desert Springs Hospital Center		0.0%		0.0%
	Henderson ER at Green Valley Ranch		0.0%		0.0%
	Henderson Hospital	1	0.1%	1	0.1%
	Mesa View Regional Hospital		0.0%		0.0%
	Mike O'Callaghan's Federal Medical Center		0.0%		0.0%
	Mountain View ER at Aliante		0.0%		0.0%
	Mountain View Hospital		0.0%		0.0%
	North Vista Hospital		0.0%		0.0%
	Southern Hills ER at the Lakes		0.0%		0.0%
	Southern Hills Hospital Medical Center		0.0%		0.0%
	Spring Valley ER at Blue Diamond		0.0%		0.0%
	Spring Valley Hospital Medical Center		0.0%		0.0%
	St. Rose Dominican Hospital Blue Diamond		0.0%		0.0%
	St. Rose Dominican Hospital De Lima Campus		0.0%		0.0%
	St. Rose Dominican Hospital North Las Vegas		0.0%		0.0%
	St. Rose Dominican Hospital San Martin Campus		0.0%		0.0%
	St. Rose Dominican Hospital Siena Campus		0.0%		0.0%
	St. Rose Dominican Hospital West Flamingo		0.0%		0.0%
	St. Rose Dominican Hospital West Sahara		0.0%		0.0%
	Summerlin Hospital Medical Center		0.0%		0.0%
	Sunrise Hospital Medical Center	2	0.2%	2	0.2%
	University Medical Center	2	0.2%	4	0.5%
	Valley Hospital Medical Center		0.0%		0.0%
Washoe County	Incline Village Community Hospital	2	0.2%	2	0.2%
	Northern Nevada Medical Center	107	13.3%	107	12.9%
	Renown Regional Medical Center	316	39.2%	334	40.3%
	Renown South Meadows Medical Center	151	18.7%	151	18.2%
	St. Mary's Regional Medical Center	201	24.9%	202	24.4%
All Other Counties	Banner Churchill Community Hospital	1	0.1%	1	0.1%
	Battle Mountain General Hospital	0	0.0%	0	0.0%
	Carson Tahoe Regional Medical Center	12	1.5%	12	1.4%
	Carson Valley Medical Center	4	0.5%	4	0.5%
	Desert View Hospital	2	0.2%	2	0.2%
	Grover C. Dils Medical Center	1	0.1%	1	0.1%
	Humboldt General Hospital	4	0.5%	4	0.5%
	Mt. Grant General Hospital		0.0%		0.0%
	Northeastern Nevada Regional Hospital	1	0.1%	1	0.1%
	Pershing General Hospital		0.0%		0.0%
	South Lyon Medical Center		0.0%		0.0%
	Williams Bee Ririe Hospital		0.0%		0.0%
Nevada (Total)		**807**	**100.0%**	**828**	**100.0%**

Table 62: Trauma Incidence and Mortality Proportion by Trauma Center Designation for Trauma Center Levels 1 & 2.

Trauma Center designation	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Trauma Center level 1	4	1.2%	0	0.0%
Trauma Center level 2	336	98.8%	23	6.8%
Total	**340**	**100.0%**	**23**	**6.8%**

APPENDIX B: DEMOGRAPHICS

Table 63: Nevada Trauma Cases by Sex (Unique Traumas)

Sex	Count	Column Percent	Rate per 100,000 (95% CI)
Male	431	53.4%	27.8 (25.1-30.4)
Female	373	46.2%	24.1 (21.6-26.5)
Sex Not Reported	3	0.4%	-
Total	**807**	**100%**	**26.0 (24.2-27.8)**

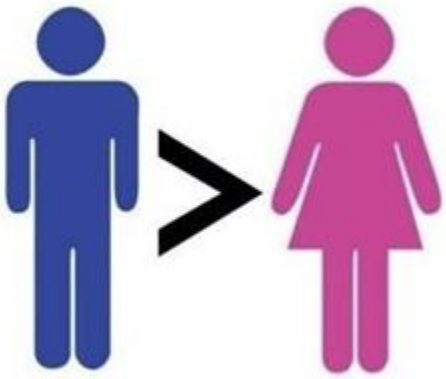


Table 64: Trauma Cases by Race/Ethnicity (Unique Traumas)

Race/Ethnicity	Count	Column Percent	Rate per 100,000 (95% CI)
White	634	78.6%	40.6 (37.4-43.8)
Black	30	3.7%	10.9 (7.0-14.8)
American Indian, Alaskan Native	11	1.4%	31.0 (12.7-49.3)
Asian	18	2.2%	5.9 (3.2-8.7)
Hispanic	89	11.0%	9.6 (7.6-11.6)
Other	9	1.1%	. (.-.)
Unknown	16	2.0%	. (.-.)
Total	**807**	**100.0%**	**26.0 (24.2-27.8)**

Figure 26: Number and percentage of Unique Trauma Cases by Race/Ethnicity

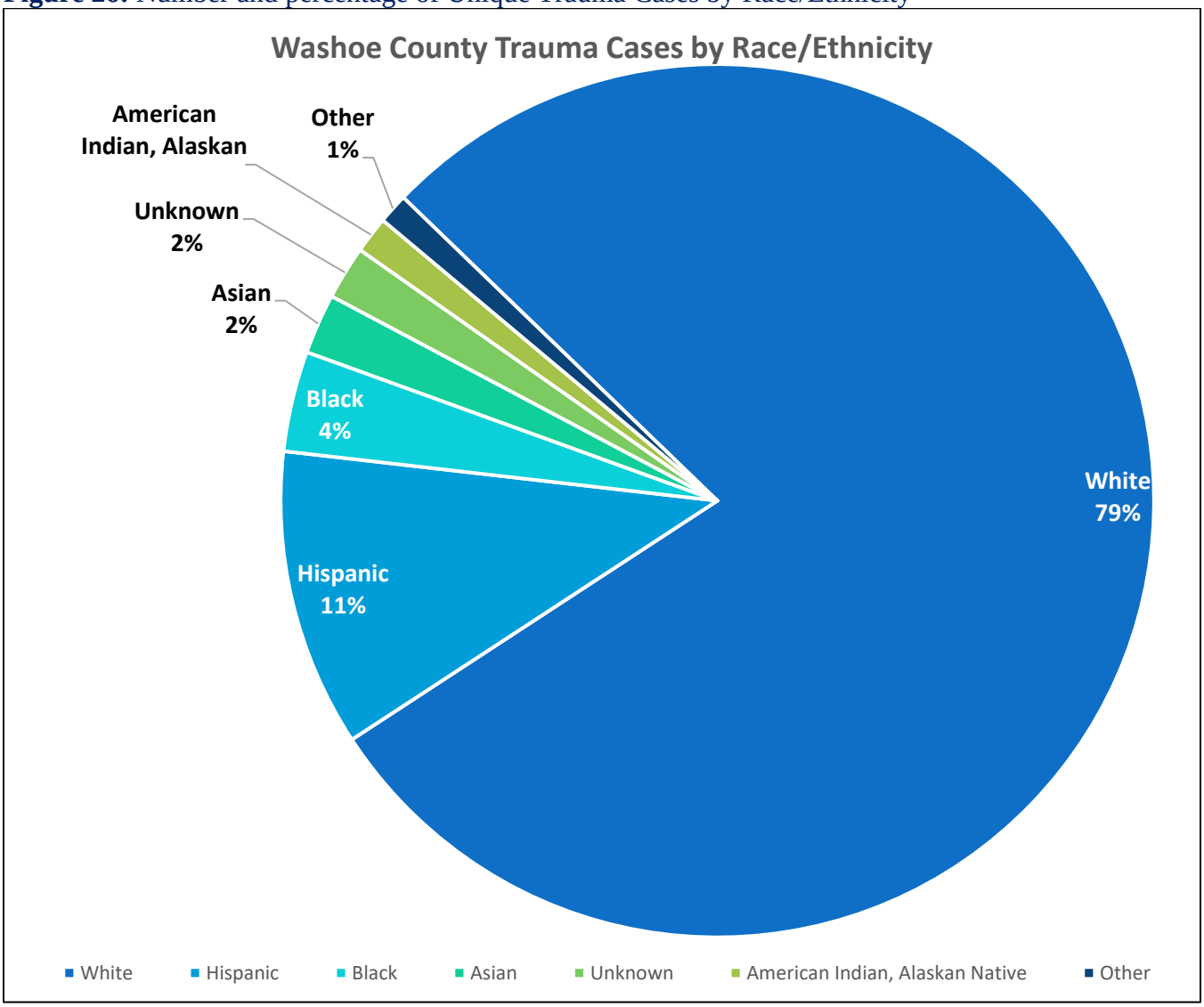


Table 65: Age-Specific Trauma Cases by Race/Ethnicity (Unique Traumas)

Age Groups	White	Black	American Indian, Alaskan Native	Asian	Hispanic	Other	Unknown	Total
<1	1	0	0	1	0	0	0	2
1-5	10	1	0	0	1	0	0	12
6-17	18	5	1	2	15	0	1	42
18-24	24	3	3	1	12	3	2	48
25-34	47	3	5	0	17	0	1	73
35-44	29	3	0	2	12	1	4	51
45-54	47	2	0	1	9	0	1	60
55-64	79	1	2	0	5	1	3	91
65-74	115	7	0	3	7	0	4	136
75-84	135	2	0	5	3	2	0	147
85+	129	3	0	3	8	2	0	145
Total	**634**	**30**	**11**	**18**	**89**	**9**	**16**	**807**

Table 66: Age-Specific Trauma Cases and Mortality Proportion (Unique Traumas)

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Total	806	100.0%	28	3.5%
<1	2	0.2%	0	0.0%
1-5	12	1.5%	0	0.0%
6-17	42	5.2%	2	4.8%
18-24	47	5.8%	2	4.3%
25-34	72	8.9%	2	2.8%
35-44	51	6.3%	5	9.8%
45-54	61	7.6%	5	8.2%
55-64	90	11.2%	4	4.4%
65-74	136	16.9%	2	1.5%
75-84	147	18.2%	2	1.4%
85+	146	18.1%	4	2.7%

Table 67: Age and Sex-Specific Trauma Rates per 100,000 Nevada Residents (Unique Traumas)

Age Group	Male		Female		Total	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	42	11.3 (7.9-14.7)	14	3.9 (1.9-6.0)	56	7.7 (5.7-9.7)
Adult 18-64	223	22.9 (19.9-25.9)	98	10.4 (8.3-12.4)	323	16.8 (15.0-18.7)
Geriatric >64	166	79.9 (67.7-92.0)	261	105.9 (93.1-118.8)	428	94.2 (85.3-103.2)
Total	**431**	**27.8 (25.1-30.4)**	**373**	**24.1 (21.6-26.5)**	**807**	**26.0 (24.2-27.8)**

Figure 27: Age and Sex-Specific Trauma Rates per 100,000 Nevada Residents

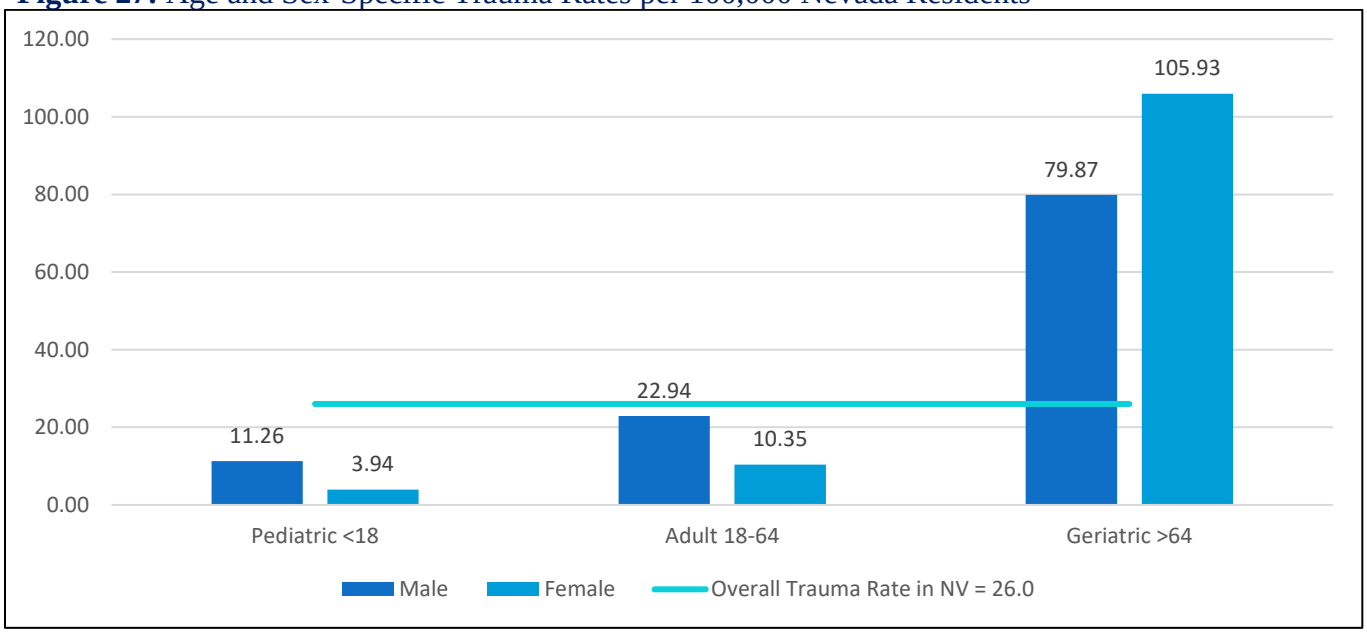


Table 68: County-Specific Trauma Rates per 100,00 County Residents (Unique Traumas)

County	Count	Rate per 100,000 (95% CI)
Carson City	2	3.6 (-1.4-8.5)
Churchill	2	7.8 (-3.0-18.5)
Clark	2	0.1 (0.0-0.2)
Douglas	2	4.0 (-1.6-9.7)
Humboldt	3	17.6 (-2.3-37.5)
Lander	2	33.2 (-12.8-79.1)
Lyon	2	3.5 (-1.4-8.4)
Storey	2	46.0 (0.0-109.8)
Washoe	711	151.3 (140.2-162.4)
Out of State	16	24.0 (22.3-25.7)
Unknown	416	0.0 (0.0-0.0)

Figure 28: County-Specific Trauma Rates per 100,000 County Residents

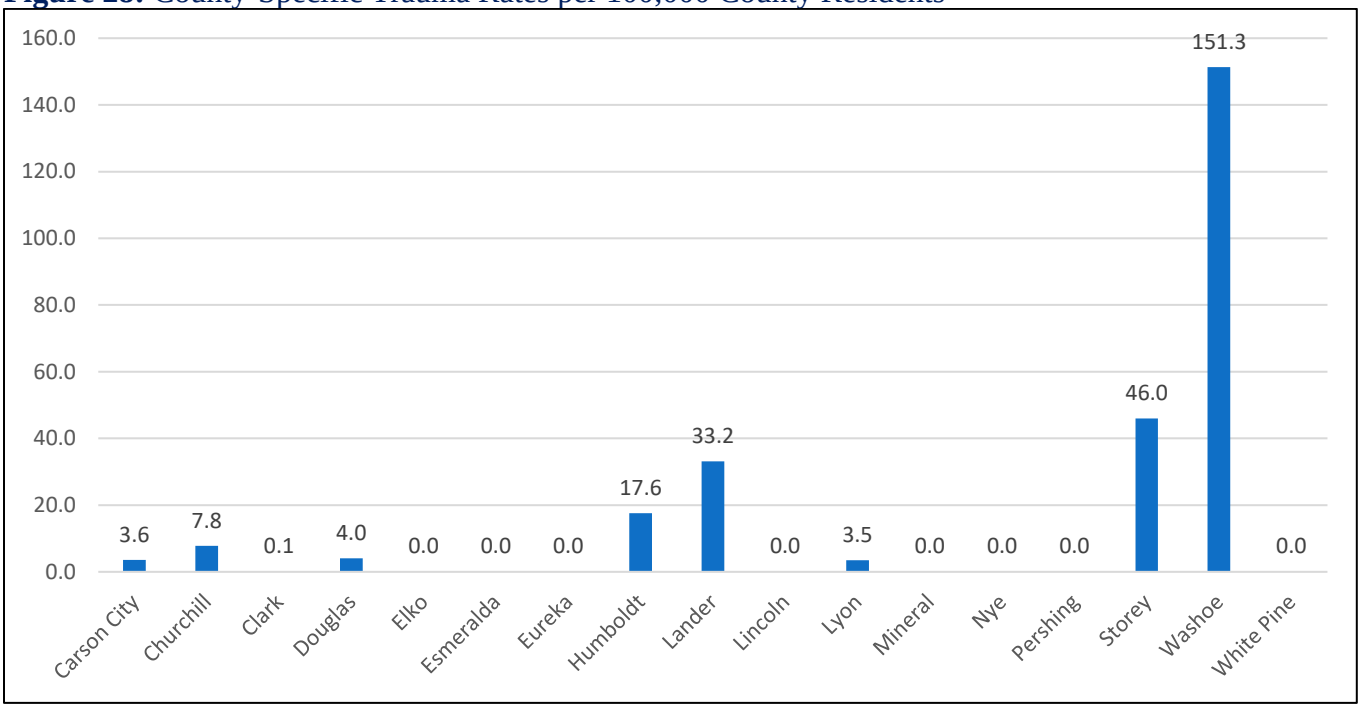


Table 69: Age-Specific Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas)

Age Group	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Pediatric <18	80	50.3%	15	18.8%
Adult 18-64	60	37.7%	4	6.7%
Geriatric >64	19	11.9%	1	5.3%
Total	**159**	**100.0%**	**20**	**12.6%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 70: Age-Specific Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas)

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Total	159	100.0%	20	12.6%
<1	1	0.6%	0	0.0%
1-5	4	2.5%	0	0.0%
6-17	14	8.8%	1	7.1%
18-24	13	8.2%	2	15.4%
25-34	17	10.7%	2	11.8%
35-44	13	8.2%	4	30.8%
45-54	13	8.2%	3	23.1%
55-64	24	15.1%	4	16.7%
65-74	19	11.9%	1	5.3%
75-84	27	17.0%	2	7.4%
85+	14	8.8%	1	7.1%

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

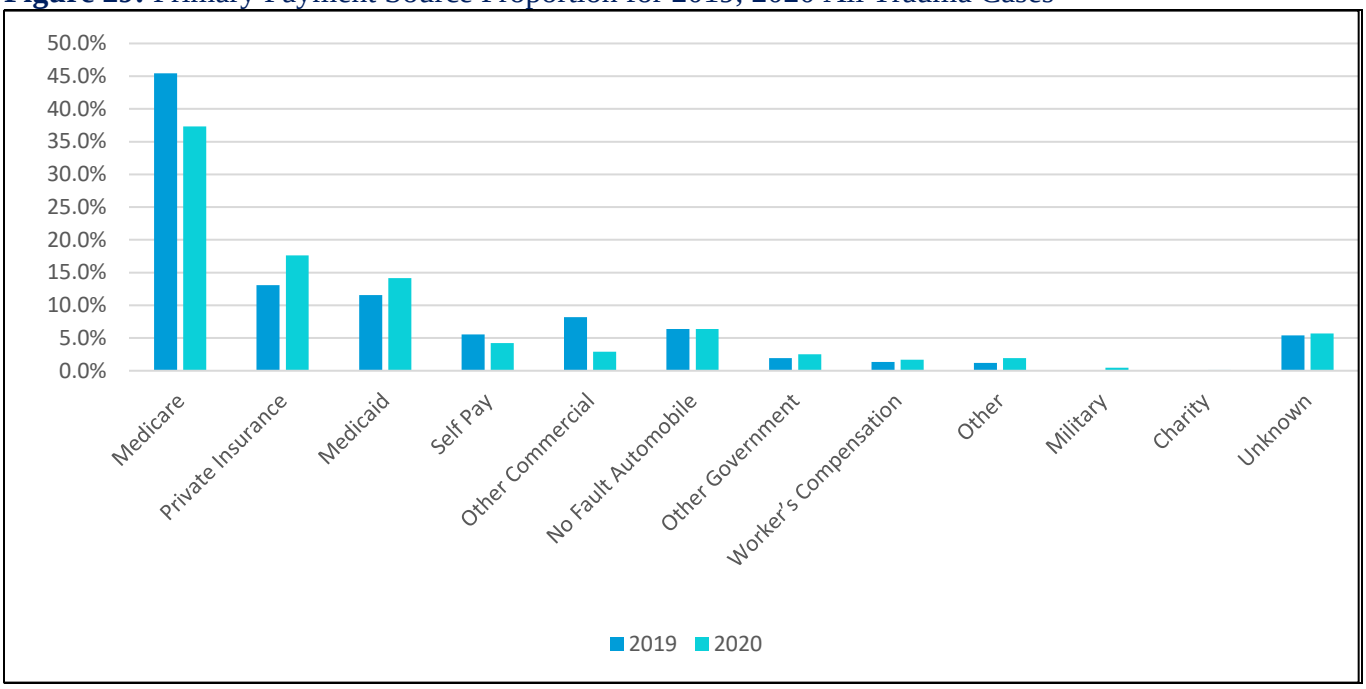
Table 71: Primary Payment Source Proportion for 2019, 2020 All Trauma Cases

Primary Source of Payment	2019	2020
Medicare	45.4%	37.3%
Private Insurance	13.1%	17.6%
Medicaid	11.5%	14.1%
Self-Pay	5.5%	4.2%
Other Commercial	8.2%	2.9%
No Fault Automobile	6.4%	6.4%
Other Government	1.9%	2.5%
Worker's Compensation	1.3%	1.7%
Other	1.2%	1.9%
Military	0.0%	0.5%
Charity	0.0%	0.1%
Unknown	5.4%	5.7%

Note: 2019 was first year compared

***41 combined payment*

Figure 29: Primary Payment Source Proportion for 2019, 2020 All Trauma Cases



APPENDIX B: PLACE AND MECHANISM OF INJURY

Table 72: Trauma Incidence by Place of Injury (Unique Traumas)

Place of Injury	Trauma Count	Percent
Residential	411	51%
Street	234	29%
Trade and Service Area	17	2%
Recreation area	28	3%
Sports Area	6	1%
Wilderness	22	3%
Other Specified	8	1%
School or Public Area	3	0%
Industrial and Construction	7	1%
Farm	2	0%
Transport Vehicle as Place	1	0%
Railroad Track	3	0%
Unknown/Unspecified	65	8%
Total	**807**	**100%**

Table 73: Trauma Incidence and Mortality by Mechanism of Injury (Unique Traumas)

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	483	59.9%	9	1.9%
Motor Vehicle Traffic	118	14.6%	9	7.6%
Struck by/Against	43	5.3%	0	0.0%
Firearm	23	2.9%	5	21.7%
Cut/Pierce	28	3.5%	0	0.0%
Motor Vehicle Non-Traffic	16	2.0%	1	6.3%
Other Transport (Land, Sea, Sky)	15	1.9%	1	6.7%
Other Specified	11	1.4%	1	9.1%
Pedal Cyclist, Other	22	2.7%	0	0.0%
Natural/Environmental	15	1.9%	0	0.0%
Pedestrian, Other	7	0.9%	2	28.6%
Unspecified	2	0.2%	0	0.0%
Fire/Burn	5	0.6%	0	0.0%
Unknown	1	0.1%	0	0.0%
Overexertion	2	0.2%	0	0.0%
Suffocation	15	1.9%	0	0.0%
Total	**806**	**100.0%**	**28**	**3.5%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 74: Trauma Rates for Top Three Mechanisms of Injury by Age (Unique Traumas)

Age Group	Falls		Struck by/Against		Motor Vehicle Traffic	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	12	1.6 (0.7-2.6)	3	0.4 (-0.1-0.9)	15	2.1 (1.0-3.1)
Adult 18-64	92	4.8 (3.8-5.8)	29	1.5 (1.0-2.1)	88	4.6 (3.6-5.5)
Geriatric >64	379	83.4 (75.0-91.8)	11	2.4 (1.0-3.9)	17	3.7 (2.0-5.5)
Total	**483**	**15.6 (14.2-17.0)**	**43**	**1.4 (1.0-1.8)**	**120**	**3.9 (3.2-4.6)**

Figure 30: Top Five Mechanisms of Unintentional Trauma (n=732)

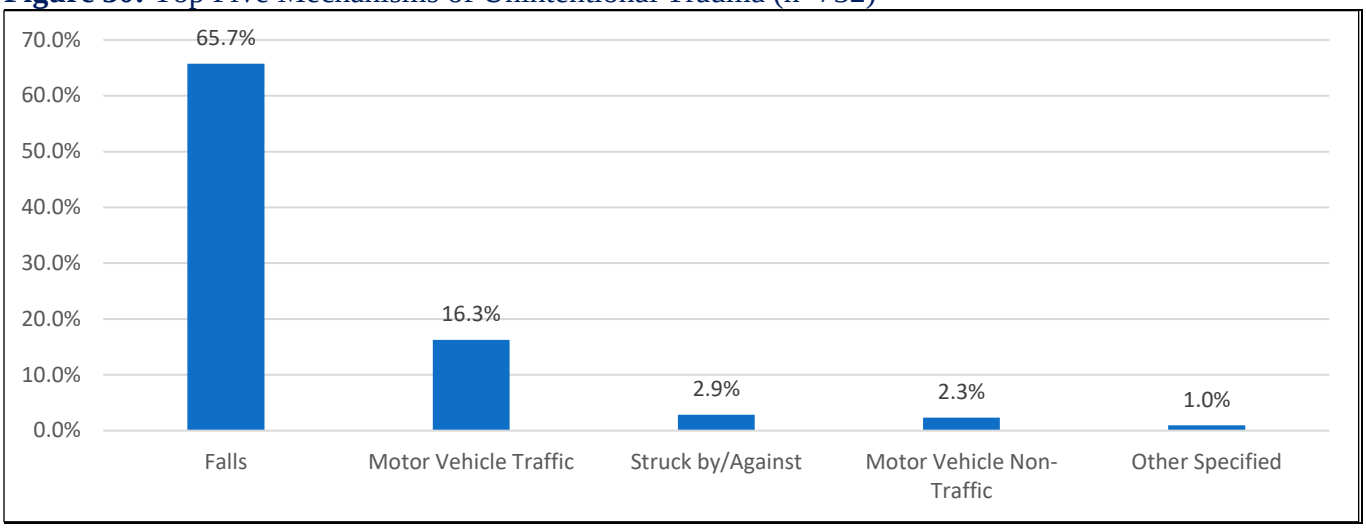


Figure 31: Top Five Mechanisms of Homicide/Assault-Related Trauma (n=61)

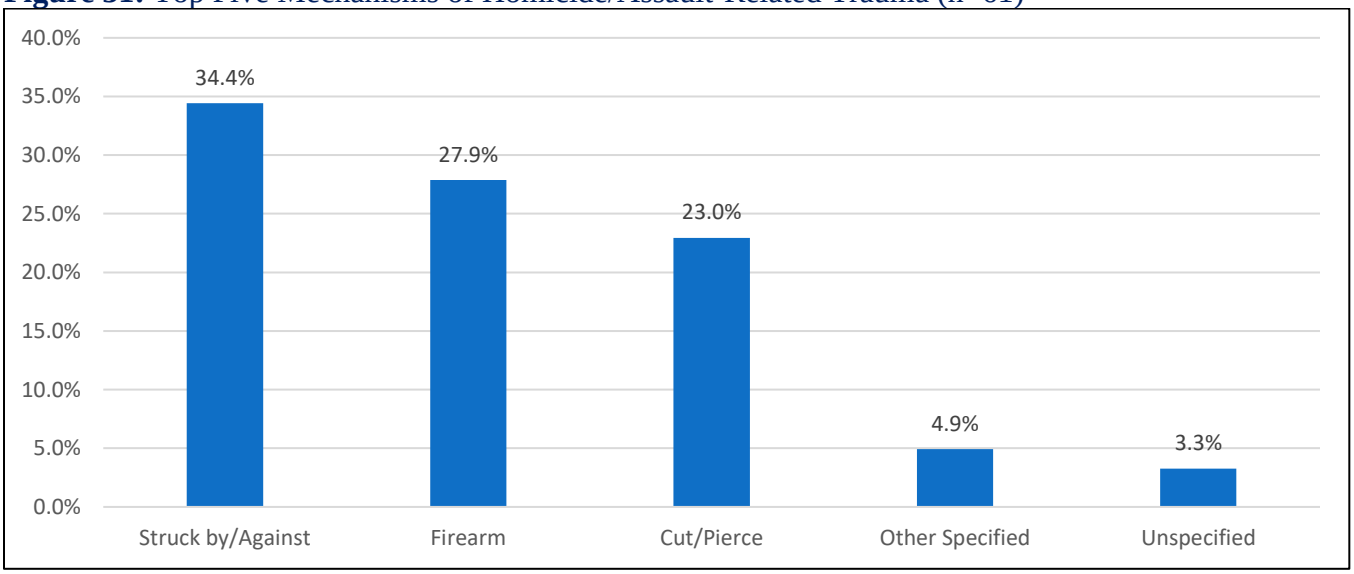


Figure 32: Top Five Mechanisms of Suicide/Self-Inflicted Trauma (n=9)

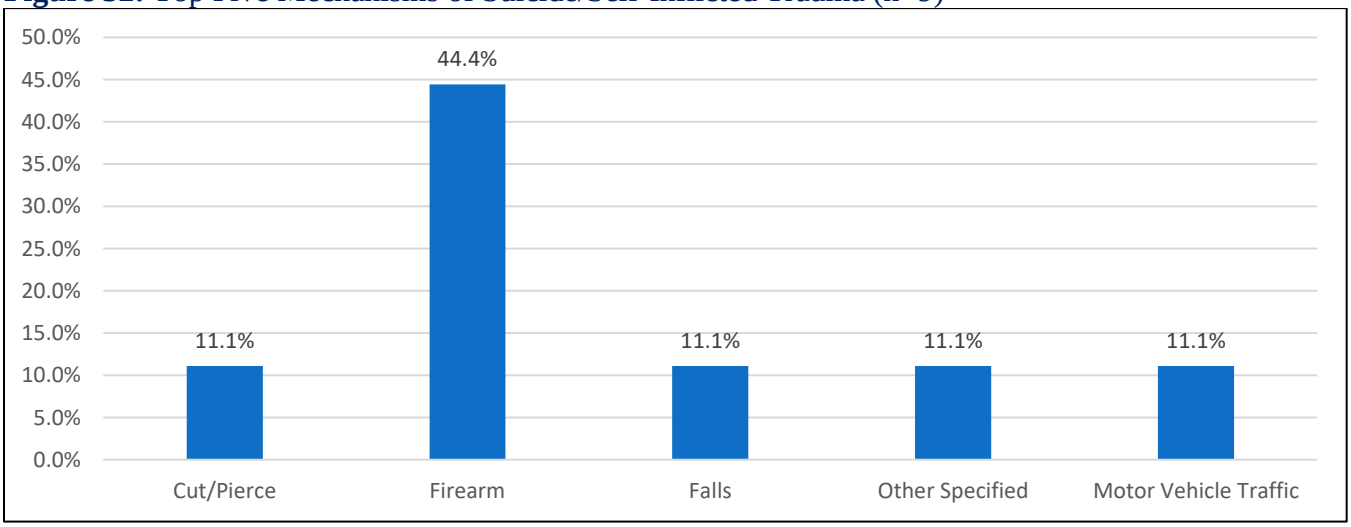
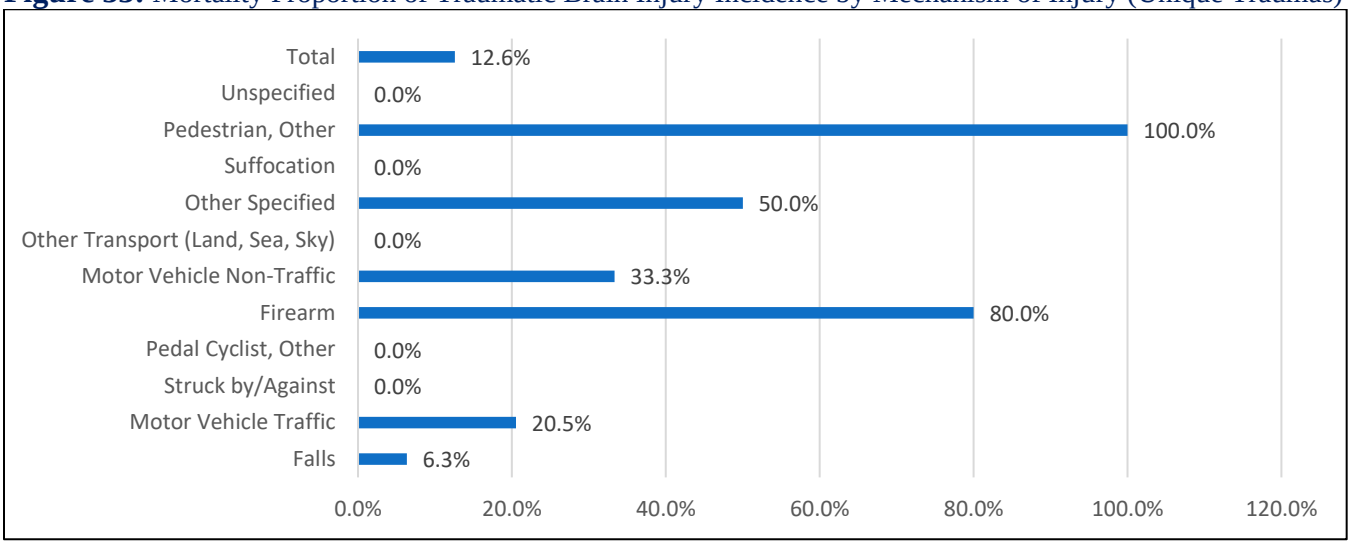


Table 75: Traumatic Brain Injury Incidence and Mortality by Mechanism of Injury

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	79	49.7%	5	6.3%
Motor Vehicle Traffic	39	24.5%	8	20.5%
Struck by/Against	15	9.4%	0	0.0%
Pedal Cyclist, Other	9	5.7%	0	0.0%
Firearm	5	3.1%	4	80.0%
Motor Vehicle Non-Traffic	3	1.9%	1	33.3%
Other Transport (Land, Sea, Sky)	3	1.9%	0	0.0%
Other Specified	2	1.3%	1	50.0%
Suffocation	2	1.3%	0	0.0%
Pedestrian, Other	1	0.6%	1	100.0%
Unspecified	1	0.6%	0	0.0%
Total	**159**	**100.0%**	**20**	**12.6%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Figure 33: Mortality Proportion of Traumatic Brain Injury Incidence by Mechanism of Injury (Unique Traumas)



APPENDIX B: INJURY CHARACTERISTICS: INJURY SEVERITY SCORE (ISS)

Table 76: Trauma Incidence and Mortality Proportion by ISS (Unique Traumas)

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	413	51.2%	4	1.0%
Moderate, 9-15	258	32.0%	1	0.4%
Serious, 16-24	77	9.6%	1	1.3%
Severe, 25-75	56	6.9%	22	39.3%
Missing/NA/ND	2	0.2%	0	0.0%

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Figure 34: Trauma Mortality Proportion by ISS, National vs Nevada

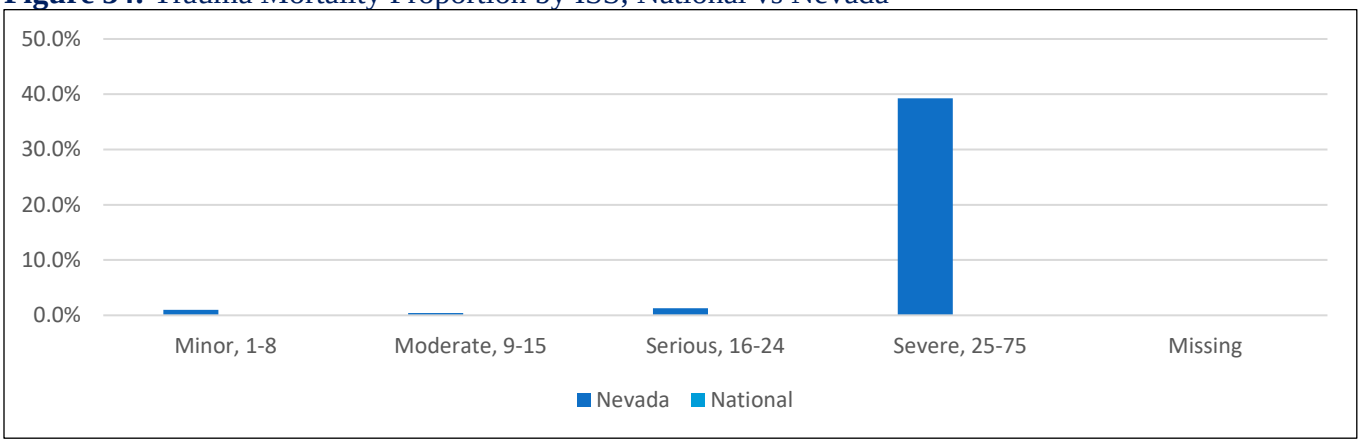


Table 77: Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas) by Injury Severity

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	32	20.1%	0	0.0%
Moderate, 9-15	53	33.3%	1	1.9%
Serious, 16-24	40	25.2%	1	2.5%
Severe, 25-75	34	21.4%	18	52.9%
Total	**159**	**100.0%**	**20**	**12.6%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 78: Injury to ED Arrival Time for Patient with an ISS >15 by Injury Location; Rural, Urban, Statewide

County	<1 hour	1-3 hours	3-6 hours	6-9 hours	9-12 hours	>12 hours
Carson City	1	0	0	0	0	0
Churchill	1	0	0	0	0	0
Storey	1	0	0	0	0	0
Washoe	96	17	0	1	1	0
Out of State	9	1	3	0	0	0
Total	**108**	**18**	**3**	**1**	**1**	**0**

APPENDIX B: PATIENT TRANSPORTATION

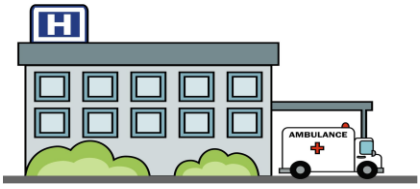


Table 79: Trauma Incidence by Mode of Arrival (Unique Traumas)

Mode of Arrival	Trauma Count	Percent
Ground Ambulance	600	74%
Private Vehicle or Walk-in	178	22%
Helicopter Ambulance	24	3%
Fixed-Wing Ambulance	2	0%
Other	2	0%
Public Safety	1	0%
Total	**807**	**100%**

Table 80: Mode of Transport by ISS (Unique Traumas)

Mode of Arrival	Injury Severity Score Range				
	Minor 1-8	Moderate 9-15	Serious 16-24	Severe 25-75	Missing/NA ISS Scores
Ground Ambulance	284	204	68	44	0
Private Vehicle or Walk-in	126	45	3	2	2
Helicopter Ambulance	3	8	4	9	0
Fixed-Wing Ambulance	1	1	0	0	0
Other	1	0	0	0	1
Public Safety	0	0	1	0	0
Total	**415**	**258**	**76**	**55**	**3**

APPENDIX B: PATIENT DISCHARGE AND TRANSFER

Table 81: Patient Transfer to Nevada Trauma Centers by ISS

Facility Patient Transferred To	Injury Severity Score Range			
	Trauma Cases	Mean ISS	Standard Deviation	ISS Range
Renown Regional Medical Center	84	5.4642857	3.5919805	1 - 16
Sunrise Hospital Medical Center	3	4.3333333	3.5118846	1 - 8

"Patient transfer Transferred To" is determined by the question, "Was Patient Transferred to Facility" and not through the matching process with Unique Traumas.

APPENDIX B: RISK FACTORS: DRUG/ALCOHOL USE

Table 82: Injury Intent and Drug/Alcohol Use (Unique Traumas)

Injury Intent	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Unintentional	732	94	13%
Suicide	9	4	44%
Homicide/Assault	61	22	36%
Legal Intervention	2	2	100%
Undetermined (accidental/intentional)	2	0	0%
Missing	1	1	100%
Total	**807**	**123**	**15%**

APPENDIX B: SAFETY EQUIPMENT

Figure 35: Proportion of Helmet Use Among Pedal Cyclists, Motorcyclists, and Off-Road Users (Unique Traumas)

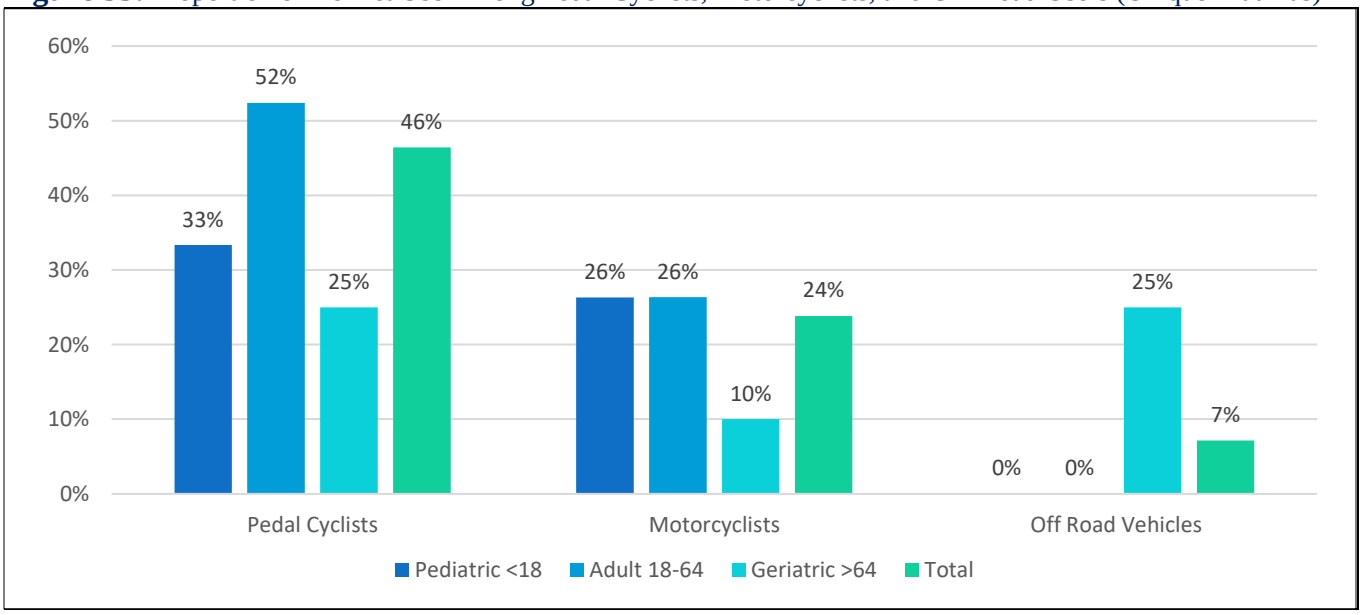


Table 83: Age-Specific Restraint Use Among Motor Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total
Seatbelt	4	31	9	44
Child booster/car seat	2	0	0	2
None	6	16	4	26
Unknown	0	4	0	4
Total	**12**	**51**	**13**	**76**

Table 84: Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total (column percent)
Seatbelt	5.3%	40.8%	11.8%	57.9%
Child or Infant booster/car seat	2.6%	0.0%	0.0%	2.6%
None	7.9%	21.1%	5.3%	34.2%
Unknown	0.0%	5.3%	0.0%	5.3%
Total	15.8%	67.1%	17.1%	100.0%

1. Among Motor vehicle occupants: 15.8% are <18, 67.2% are 18-64 and 17.1% are >64years.

2. Among Motor vehicle occupants 57.9% used seatbelt, 2.6% used Child booster/car seat,34.2% used no restraint. 5.3% of motor vehicle occupants have unknown restraint information.

3. Among all motor vehicle traffic occupants 5.3% used seatbelt and are < 18 years etc.

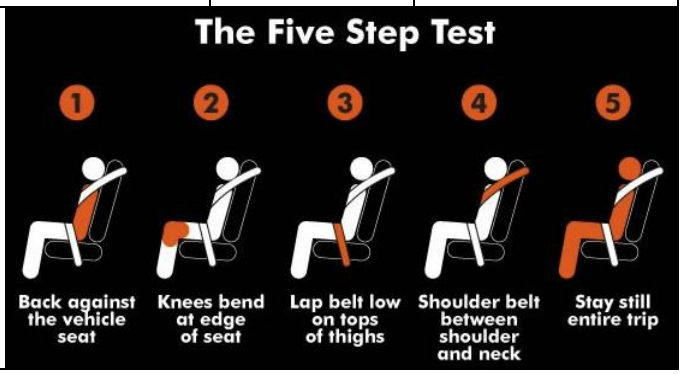
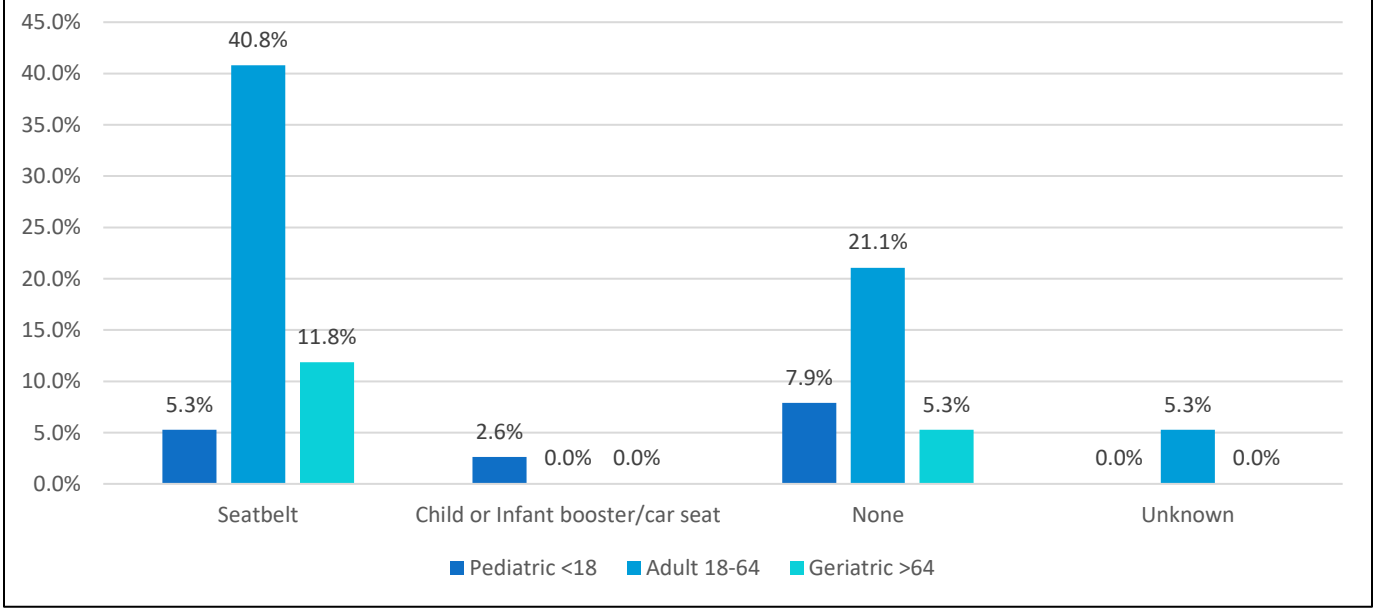


Figure 36: Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants



APPENDIX B: FALLS – BY LAST TRANSFER FACILITY

Table 85: Trauma Rate for Falls by Sex (Unique Traumas)

Sex	n	Rate per 100,000 (95% CI)
Female	291	18.8 (16.6-21.0)
Male	209	13.5 (11.6-15.3)
Total	500	16.1 (14.7-17.5)

Table 86: Incidence and Mortality Proportion by Type of Fall (Unique Traumas)

Type of Falls	Count	Percent of Falls (Column Percent)	Deaths	Mortality Proportion (Row Percent)
Same Level (Slipping, Tripping, Stumbling)	328	0.0%	6	1.8%
From Furniture	42	0.0%	0	0.0%
Steps	32	0.0%	0	0.0%
Unspecified	25	0.0%	1	4.0%
Pedestrian Conveyance Accident	19	0.0%	1	5.3%
Multi-Level: Cliff, Tree, Water, Etc.	14	0.0%	0	0.0%
Fall Due to Environmental Factors	11	0.0%	0	0.0%
On or From Ladder/Scaffolding	11	0.0%	1	9.1%
Out of Building or Structure	11	0.0%	0	0.0%
Collision, Push or Shove By, or Other Person	3	0.0%	0	0.0%
Playground Equipment	2	0.0%	0	0.0%
Assault Related	1	0.0%	0	0.0%
Suicide Related	1	0.0%	0	0.0%
Total	500	0.0%	9	1.8%

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 87: Trauma Rate by Age and Type of Fall (Unique Traumas)

Age Group	Type of Fall					
	Unspecified		From Same Level (tripping, slipping, stumbling)		From Furniture (bed, chair, etc.)	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	0	0.0 (0.0-0.0)	3	0.4 (0.0-0.9)	0	0.0 (0.0-0.0)
Adult 18-64	5	0.3 (0.0-0.5)	46	2.4 (1.7-3.1)	3	0.2 (0.0-0.3)
Geriatric >64	20	4.4 (2.5-6.3)	279	61.4 (54.2-68.6)	39	8.6 (5.9-11.3)
Total	25	0.8 (0.5-1.1)	328	10.6 (9.4-11.7)	42	1.4 (0.9-1.8)

APPENDIX C: CLARK COUNTY RESULTS

APPENDIX C: TRAUMA CASES BY FACILITY

Table 88: Trauma Cases by Facility (includes Nevada Residents and Non-Residents)

County	Facility	Unique Traumas Trauma Patients^		Total Trauma Cases*	
Clark County	Boulder City Hospital	47	0.7%	47	0.6%
	Centennial Hills Hospital	199	2.8%	200	2.6%
	Desert Springs Hospital Center	21	0.3%	21	0.3%
	Henderson ER at Green Valley Ranch	88	1.2%	88	1.1%
	Henderson Hospital	325	4.5%	325	4.1%
	Mesa View Regional Hospital	32	0.4%	32	0.4%
	Mike O'Callaghan Federal Medical Center	12	0.2%	12	0.2%
	Mountain View ER at Aliante	22	0.3%	22	0.3%
	Mountain View Hospital	639	8.8%	649	8.3%
	North Vista Hospital	167	2.3%	167	2.1%
	Southern Hills ER at the Lakes	15	0.2%	15	0.2%
	Southern Hills Hospital Medical Center	156	2.2%	156	2.0%
	Spring Valley ER at Blue Diamond	20	0.3%	20	0.3%
	Spring Valley Hospital Medical Center	466	6.4%	482	6.1%
	St. Rose Dominican Hospital Blue Diamond	20	0.3%	20	0.3%
	St. Rose Dominican Hospital De Lima Campus	101	1.4%	101	1.3%
	St. Rose Dominican Hospital North Las Vegas	21	0.3%	21	0.3%
	St. Rose Dominican Hospital San Martin Campus	86	1.2%	90	1.1%
	St. Rose Dominican Hospital Siena Campus	403	5.6%	410	5.2%
	St. Rose Dominican Hospital West Flamingo	6	0.1%	6	0.1%
	St. Rose Dominican Hospital West Sahara	11	0.2%	11	0.1%
	Summerlin Hospital Medical Center	241	3.3%	242	3.1%
	Sunrise Hospital Medical Center	1666	23.0%	1893	24.1%
	University Medical Center	2426	33.6%	2771	35.3%
	Valley Hospital Medical Center	25	0.3%	25	0.3%
Washoe County	Incline Village Community Hospital	0	0.0%	0	0.0%
	Northern Nevada Medical Center	1	0.0%	1	0.0%
	Renown Regional Medical Center	3	0.0%	3	0.0%
	Renown South Meadows Medical Center	0	0.0%	0	0.0%
	St. Mary's Regional Medical Center	0	0.0%	0	0.0%
All Other Counties	Banner Churchill Community Hospital	0	0.0%	0	0.0%
	Battle Mountain General Hospital	0	0.0%	0	0.0%
	Carson Tahoe Regional Medical Center	0	0.0%	0	0.0%
	Carson Valley Medical Center	0	0.0%	0	0.0%
	Desert View Hospital	6	0.1%	6	0.1%
	Grover C. Dils Medical Center	0	0.0%	0	0.0%
	Humboldt General Hospital	1	0.0%	1	0.0%
	Mt. Grant General Hospital	1	0.0%	1	0.0%
	Northeastern Nevada Regional Hospital	1	0.0%	1	0.0%
	Pershing General Hospital	0	0.0%	0	0.0%
	South Lyon Medical Center	0	0.0%	0	0.0%
	Williams Bee Ririe Hospital	2	0.0%	2	0.0%
Nevada (Total)		**7,230**	**100.0%**	**7,841**	**100.0%**

Table 89: Trauma Incidence and Mortality Proportion by Trauma Center Designation for Trauma Center Levels 1-3

Trauma Center designation	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Trauma Center level 1	2770	55.8%	150	5.4%
Trauma Center level 2	1895	38.2%	113	6.0%
Trauma Center Level 3	300	6.0%	3	1.0%
Total	**4965**	**100.0%**	**266**	**5.4%**

There were 2 unknown discharge status (dead / alive) case.

Table 90: Nevada Trauma Cases by Sex (Unique Traumas)

Sex	Count	Percent	Rate per 100,000 (95% CI)
Male	4,154	57.5%	267.5 (259.4-275.6)
Female	3,076	42.5%	198.7 (191.6-205.7)
Sex Not Reported	0	0.0%	-
Total	**7,230**	**100%**	**233.1 (227.7-238.5)**

Table 91: Nevada Trauma Cases by Race/Ethnicity (Unique Traumas)

Race/Ethnicity	Count	Column Percent	Rate per 100,000 (95% CI)
White	2,931	40.5%	187.7 (180.9-194.5)
Black	735	10.2%	267.8 (248.4-287.2)
American Indian/ Alaskan Native	12	0.2%	33.8 (14.7-52.9)
Asian	269	3.7%	88.6 (78.0-99.2)
Hispanic	859	11.9%	92.7 (86.5-98.9)
Other	212	2.9%	. (.-.)
Unknown	2,212	30.6%	. (.-.)
Total	**7,230**	**100.0%**	**233.1 (227.7-238.5)**

Figure 37: Number and Percentage of Unique Trauma Cases by Race/Ethnicity (Unique Traumas)

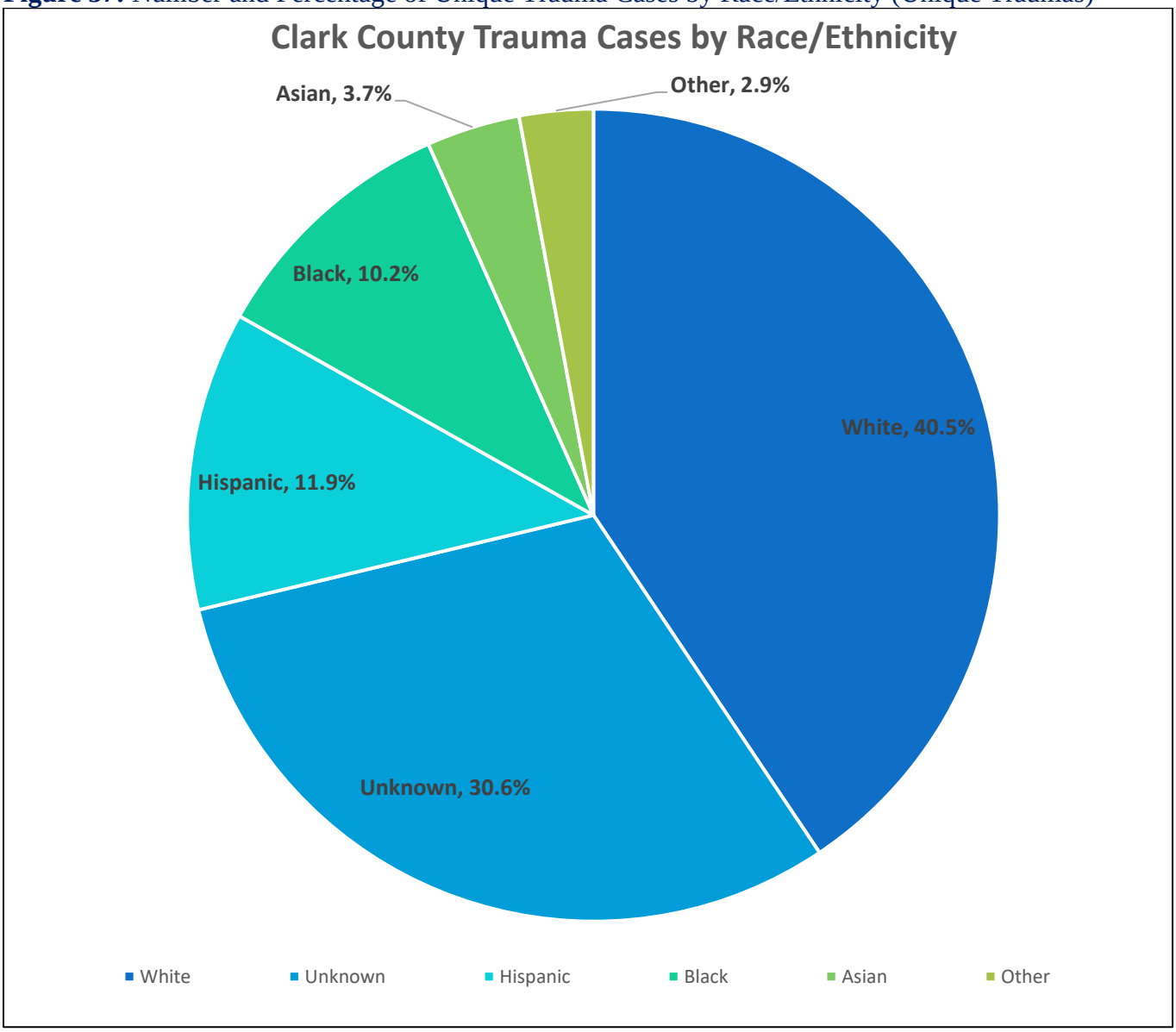


Table 92: Age-Specific Trauma Cases by Race/Ethnicity (Unique Traumas)

Age Groups	White	Black	American Indian, Alaskan Native	Asian	Hispanic	Other	Unknown	Total
<1	13	4	0	3	10	4	25	59
1-5	48	19	0	4	26	8	46	151
6-17	81	52	0	6	66	11	104	320
18-24	112	80	1	10	111	18	135	467
25-34	206	182	2	18	149	31	216	804
35-44	194	94	3	18	124	24	230	687
45-54	263	72	2	28	96	28	226	715
55-64	397	111	1	25	101	25	305	965
65-74	580	56	2	59	63	25	355	1,140
75-84	577	44	0	61	64	23	342	1,111
85+	460	21	1	37	49	15	228	811
Total	**2,931**	**735**	**12**	**269**	**859**	**212**	**2,212**	**7,230**

Table 93: Age-Specific Trauma Cases and Mortality Proportion (Unique Traumas)

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Total	7,227	100.0%	294	4.1%
<1	59	0.8%	2	3.4%
1-5	151	2.1%	3	2.0%
6-17	319	4.4%	13	4.1%
18-24	466	6.4%	24	5.2%
25-34	805	11.1%	41	5.1%
35-44	688	9.5%	46	6.7%
45-54	715	9.9%	22	3.1%
55-64	963	13.3%	34	3.5%
65-74	1,140	15.8%	37	3.2%
75-84	1,110	15.4%	43	3.9%
85+	811	11.2%	29	3.6%

Table 94: Age and Sex-Specific Trauma Rate per 100,000 Nevada Residents (Unique Traumas)

Age Group	Male		Female		Total	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	352	94.4 (84.5-104.2)	178	50.1 (42.7-57.4)	530	72.8 (66.6-79.0)
Adult 18-64	2,532	260.5 (250.3-270.6)	1,106	116.8 (109.9-123.7)	3,638	189.6 (183.4-195.8)
Geriatric >64	1,270	611.1 (577.4-644.7)	1,792	727.3 (693.7-761.0)	3,062	674.1 (650.2-698.0)
Total	**4,154**	**267.5 (259.4-275.6)**	**3,076**	**198.7 (191.6-205.7)**	**7,230**	**233.1 (227.7-238.5)**

Figure 38: Age and Sex-Specific Trauma Rates per 100,000 Nevada Residents

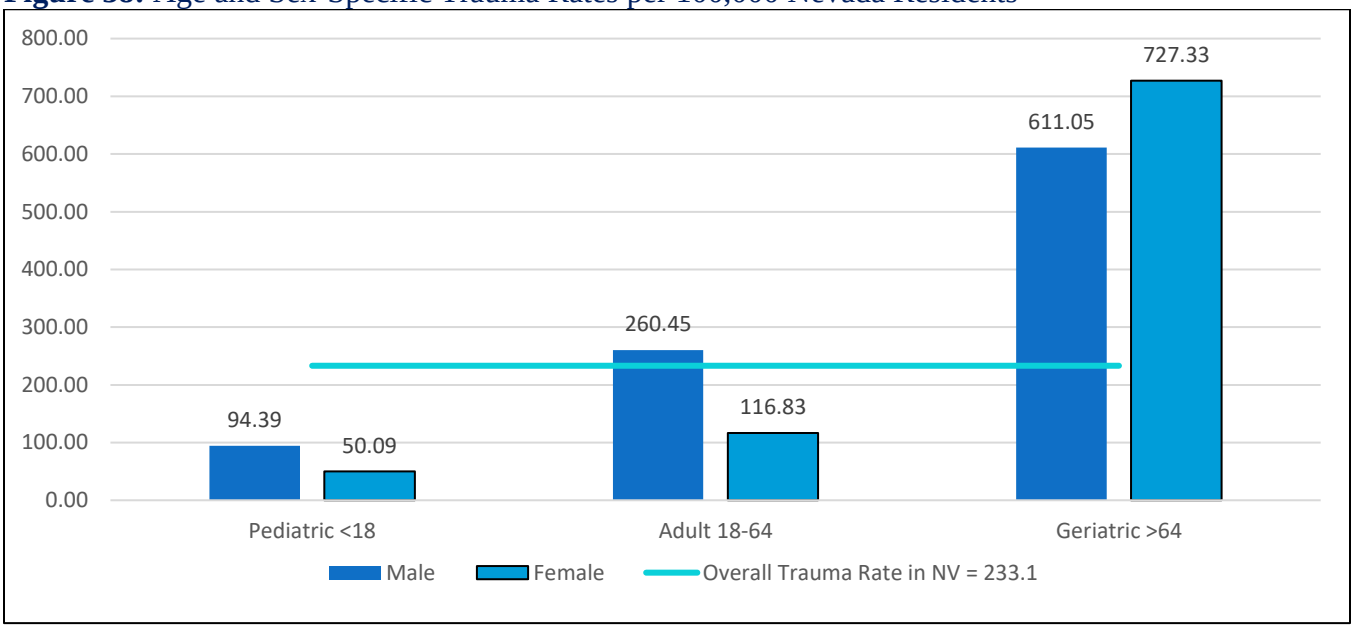


Table 95: Nevada Trauma Cases by County of Injury (Non-Duplicated)

County	Count	Rate per 100,000 (95% CI)
Carson City	.	. (.-.)
Churchill	.	. (.-.)
Clark	7,062	309.4 (302.2-316.7)
Douglas	.	. (.-.)
Elko	1	1.8 (-1.8-5.4)
Esmeralda	1	102.8 (0.0-304.2)
Eureka	.	. (.-.)
Humboldt	.	. (.-.)
Lander	.	. (.-.)
Lincoln	1	19.1 (-18.4-56.7)
Lyon	1	1.8 (-1.7-5.2)
Mineral	.	. (.-.)
Nye	15	031.0 (015.3-0,046.7)
Pershing	.	. (.-.)
Storey	.	. (.-.)
Washoe	0	0.0 (0.0-0.0)
White Pine	1	9.4 (-9.0-27.8)
Out of State	61	230.3 (225.0-235.7)
Unknown	.	0.0 (0.0-0.0)

Figure 39: County-Specific Trauma Rates per 100,000 County Residents

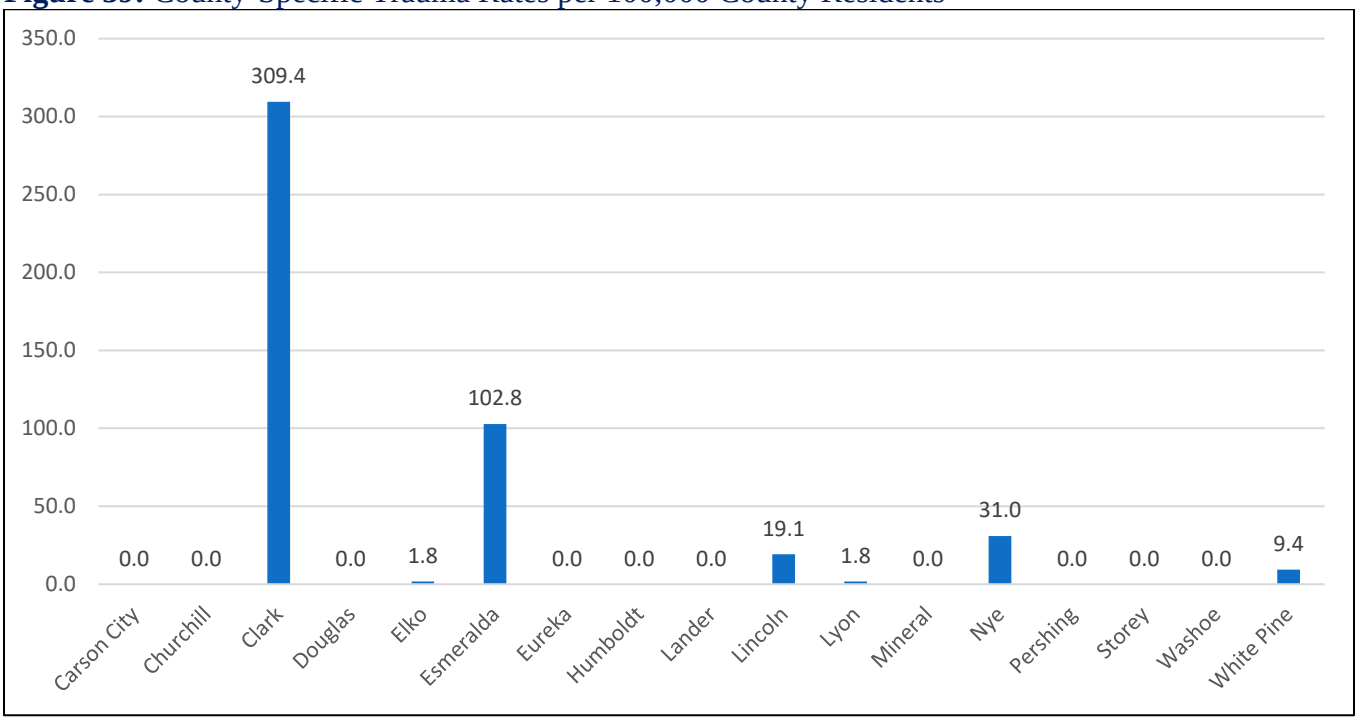


Table 96: Age-Specific Traumatic Brain Injury and Mortality Proportion (Unique Traumas)

Age Group	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Pediatric <18	613	47.9%	65	10.6%
Adult 18-64	527	41.1%	49	9.3%
Geriatric >64	141	11.0%	10	7.1%
Total	**1,281**	**100.0%**	**124**	**9.7%**

*Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility. **1 Unknown dead/alive status***

Table 97: Age-Specific Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas)

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Total	1,281	100.0%	124	9.7%
<1	37	2.9%	1	2.7%
1-5	39	3.0%	2	5.1%
6-17	65	5.1%	7	10.8%
18-24	80	6.2%	10	12.5%
25-34	110	8.6%	9	8.2%
35-44	116	9.1%	18	15.5%
45-54	126	9.8%	12	9.5%
55-64	181	14.1%	16	8.8%
65-74	204	15.9%	21	10.3%
75-84	211	16.5%	18	8.5%
85+	112	8.7%	10	8.9%

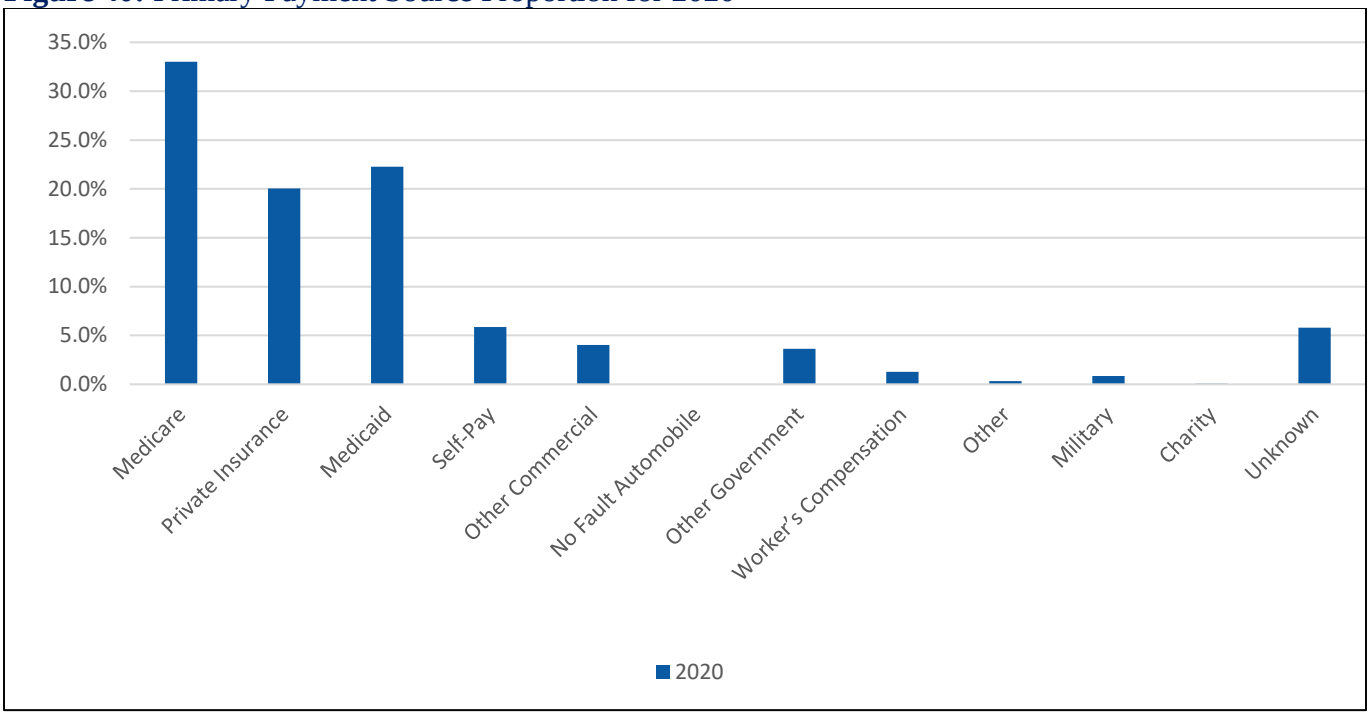
*Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility. **1 Unknown dead/alive status***

Table 98: Primary Payment Source Proportion for 2020

Primary Source of Payment	2020
Medicare	33.0%
Private Insurance	20.0%
Medicaid	22.3%
Self-Pay	5.9%
Other Commercial	4.0%
Other Government	3.6%
Worker's Compensation	1.3%
Other	0.3%
Military	0.9%
Charity	0.1%
Unknown	5.8%

***220 Combined payments*

Figure 40: Primary Payment Source Proportion for 2020



APPENDIX C: PLACE AND MECHANISM OF INJURY

Table 99: Trauma Incident by Place of Injury (Unique Traumas)

Place of Injury	Trauma Count	Percent
Residential	3,556	49%
Street	1,927	27%
Trade and Service Area	349	5%
Recreation area	104	1%
Sports Area	64	1%
Wilderness	99	1%
Other Specified	108	1%
School or Public Area	72	1%
Industrial and Construction	61	1%
Farm	4	0%
Transport Vehicle as Place	34	0%
Military Training Ground	0	0%
Railroad Track	3	0%
Slaughterhouse	0	0%
Unknown/Unspecified	849	12%
Total	**7,230**	**100%**

Table 100: Trauma Incidence and Mortality by Mechanism of Injury (Unique Traumas)

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	4,008	55.5%	105	2.6%
Motor Vehicle Traffic	1,219	16.9%	90	7.4%
Struck by/Against	467	6.5%	2	0.4%
Firearm	358	5.0%	74	20.7%
Cut/Pierce	329	4.6%	6	1.8%
Motor Vehicle Non-Traffic	65	0.9%	0	0.0%
Other Transport (Land, Sea, Sky)	37	0.5%	1	2.7%
Other Specified	154	2.1%	5	3.2%
Pedal Cyclist, Other	121	1.7%	1	0.8%
Natural/Environmental	102	1.4%	0	0.0%
Pedestrian, Other	52	0.7%	6	11.5%
Unspecified	35	0.5%	0	0.0%
Fire/Burn	42	0.6%	0	0.0%
Unknown	58	0.8%	1	1.7%
Machinery	38	0.5%	0	0.0%
Overexertion	33	0.5%	0	0.0%
Drowning	2	0.0%	1	50.0%
Suffocation	107	1.5%	2	1.9%
Total	**7,227**	**100.0%**	**294**	**4.1%**

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Table 101: Trauma Rates for Top Three Mechanisms of Injury by Age (Unique Traumas)

Age Group	Falls		Struck by/Against		Motor Vehicle Traffic	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	226	31.0 (27.0-35.1)	29	4.0 (2.5-5.4)	73	10.0 (7.7-12.3)
Adult 18-64	1,181	61.5 (58.0-65.1)	357	18.6 (16.7-20.5)	903	47.1 (44.0-50.1)
Geriatric >64	2,602	572.8 (550.8-594.9)	77	17.0 (13.2-20.7)	227	50.0 (43.5-56.5)
Total	**4,009**	**129.3 (125.3-133.3)**	**463**	**14.9 (13.6-16.3)**	**1,203**	**38.8 (36.6-41.0)**

Figure 41: Top Five Mechanisms of Unintentional Trauma (n=6,152)

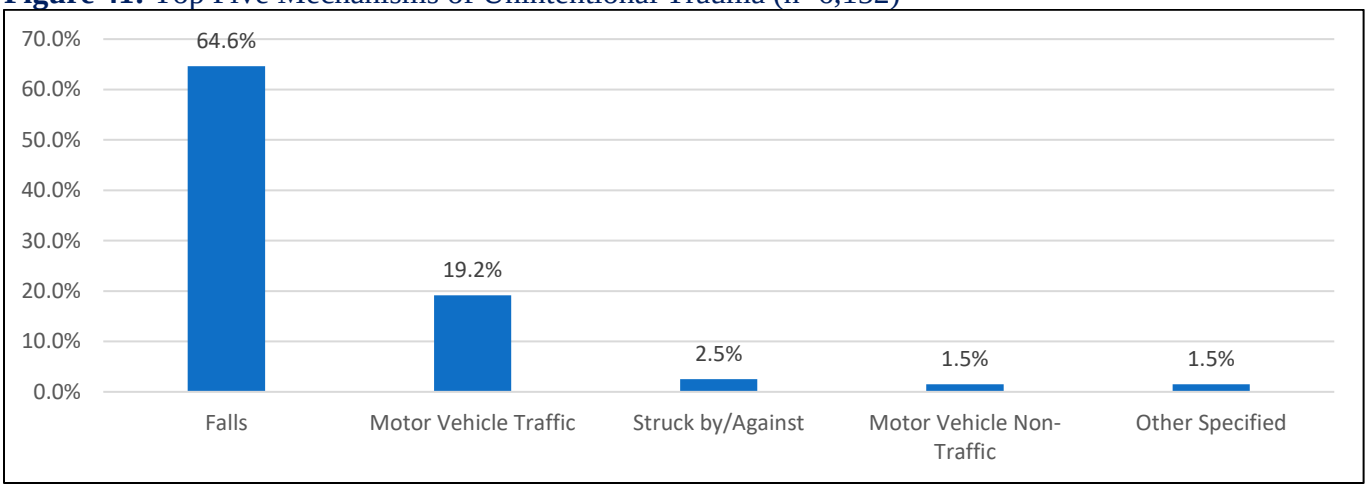


Figure 42: Top Five Mechanisms of Homicide/Assault Related Trauma (n=796)

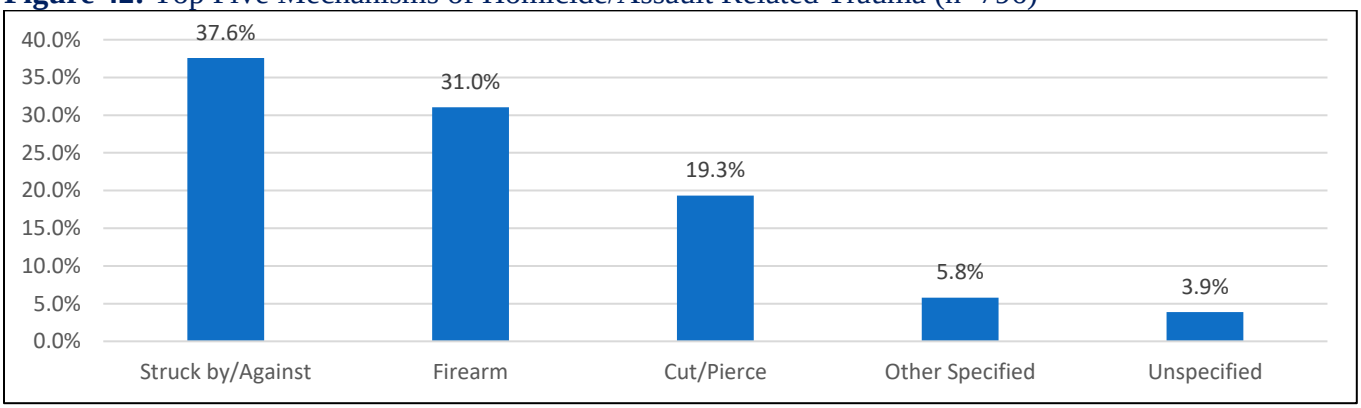


Figure 43: Top Five Mechanisms of Suicide/Self-Inflicted Trauma (n=135)

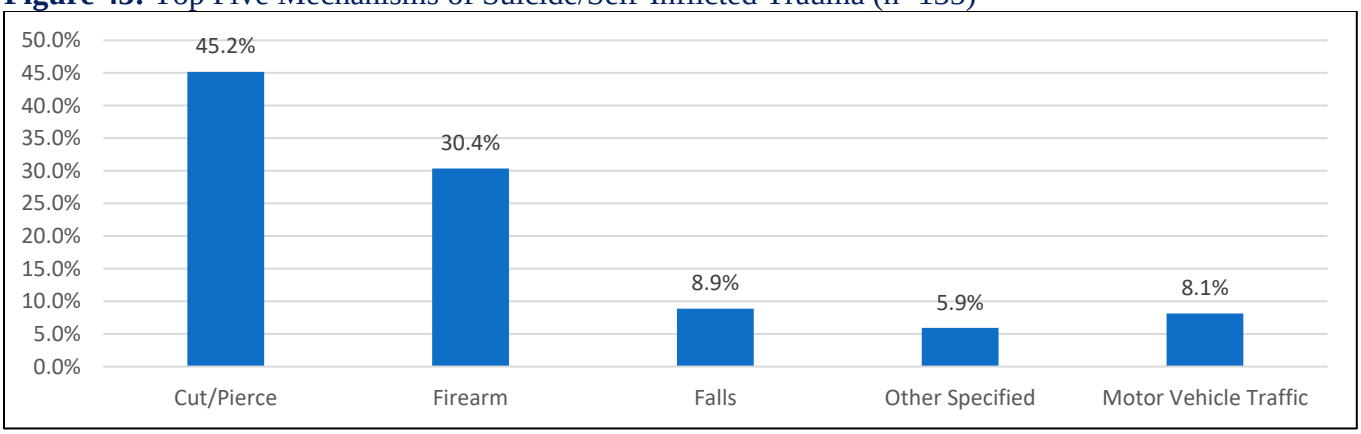
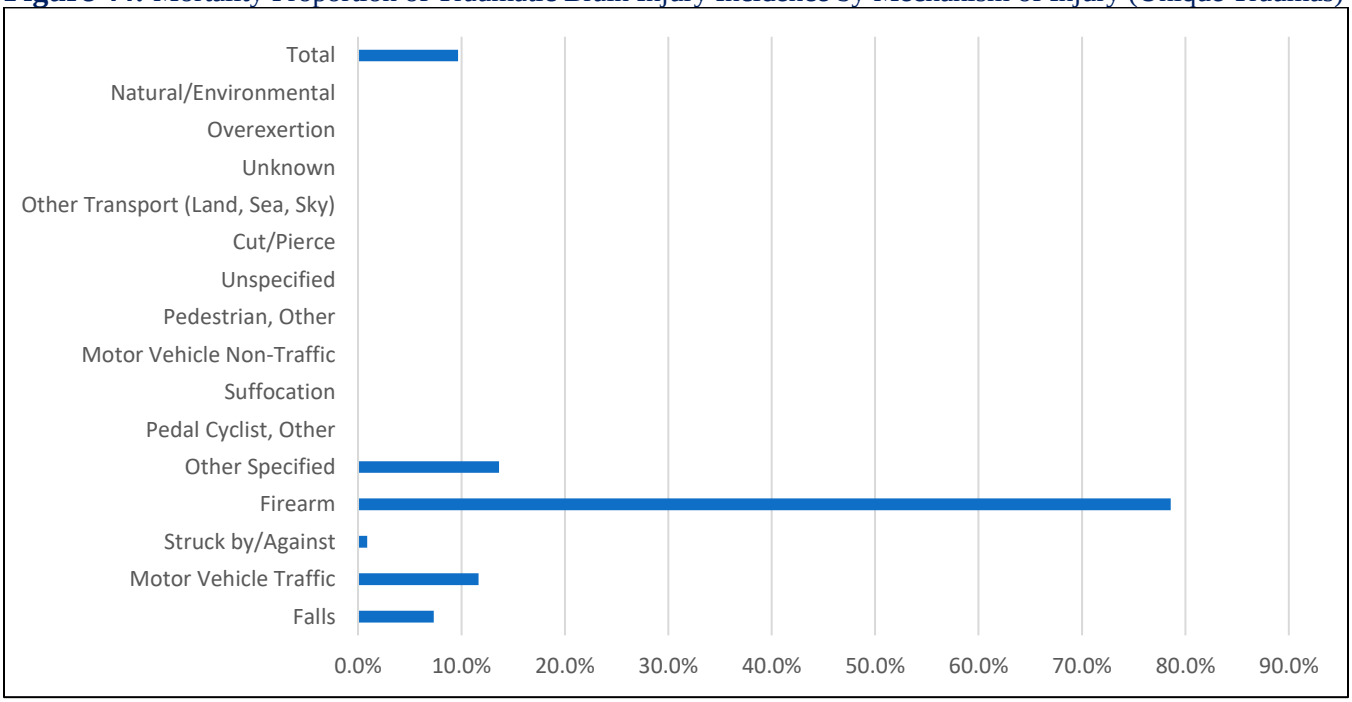


Table 102: Traumatic Brain Injury Incidence and Mortality by Mechanism of Injury

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	764	59.6%	56	7.3%
Motor Vehicle Traffic	266	20.8%	31	11.7%
Struck by/Against	112	8.7%	1	0.9%
Firearm	42	3.3%	33	78.6%
Other Specified	22	1.7%	3	13.6%
Pedal Cyclist, Other	20	1.6%	0	0.0%
Suffocation	19	1.5%	0	0.0%
Motor Vehicle Non-Traffic	8	0.6%	0	0.0%
Pedestrian, Other	6	0.5%	0	0.0%
Unspecified	6	0.5%	0	0.0%
Cut/Pierce	5	0.4%	0	0.0%
Other Transport (Land, Sea, Sky)	4	0.3%	0	0.0%
Unknown	4	0.3%	0	0.0%
Overexertion	2	0.2%	0	0.0%
Natural/Environmental	1	0.1%	0	0.0%
Total	**1,281**	**100.0%**	**124**	**9.7%**

*Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility. **1 unknown dead/alive status***

Figure 44: Mortality Proportion of Traumatic Brain Injury Incidence by Mechanism of Injury (Unique Traumas)



APPENDIX C: INJURY CHARACTERISTICS: INJURY SEVERITY SCORE (ISS)

Table 103: Trauma Incidence and Mortality by Injury Severity Score (ISS) (Unique Traumas)

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	3,342	46.2%	23	0.7%
Moderate, 9-15	2,840	39.3%	61	2.1%
Serious, 16-24	586	8.1%	51	8.7%
Severe, 25-75	449	6.2%	159	35.4%
Missing/NA/ND	10	0.1%	0	0.0%

Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility.

Figure 45: Trauma Mortality Proportion by Injury Severity Score

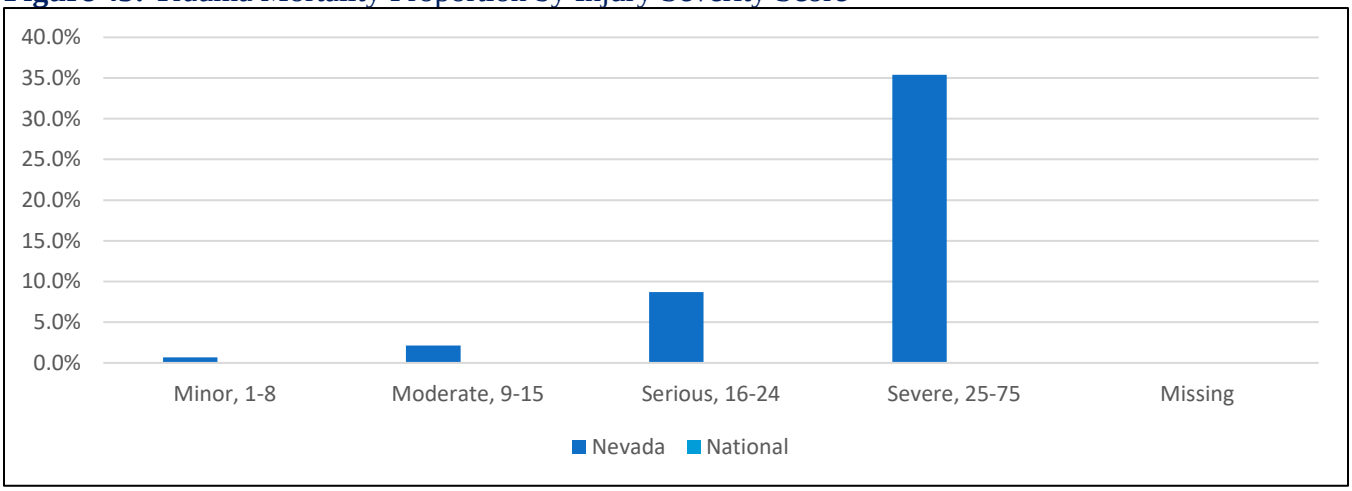


Table 104: Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas) by Injury Severity

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	266	20.8%	6	2.3%
Moderate, 9-15	541	42.2%	15	2.8%
Serious, 16-24	223	17.4%	17	7.6%
Severe, 25-75	250	19.5%	86	34.4%
Unknown	1	0.1%	0	0.0%
Total	**1,281**	**100.0%**	**124**	**9.7%**

1 unknown dead/alive status

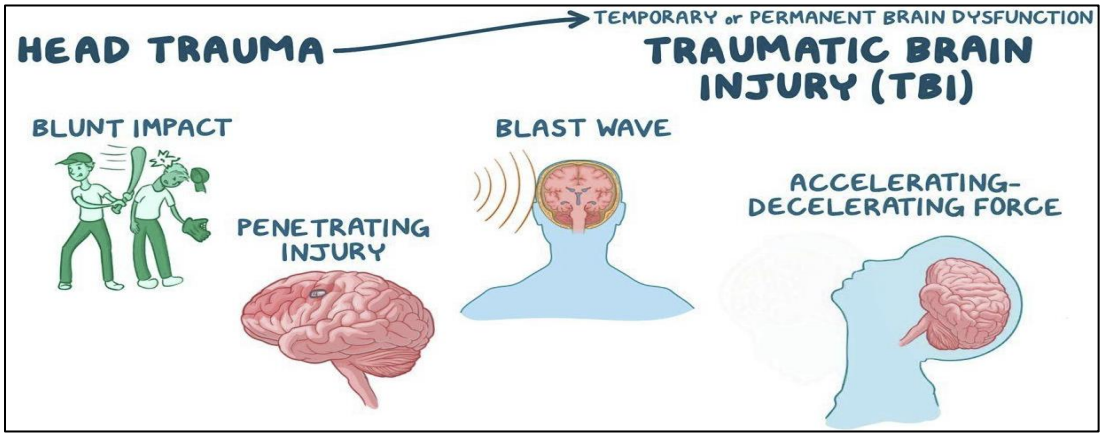


Table 105: Injury to ED arrival time for patient with an ISS > 15 by injury location; Rural, Urban, Statewide

County	<1hour	1-3hours	3-6hours	6-9hours	9-12-hours	>12 hours
Clark	899	89	21	7	6	42
Lyon	1	0	0	0	0	0
Nye	7	0	0	0	0	0
Unknown	2	2	0	0	0	0
White Pine	1	0	0	0	0	0
Out of State	13	1	2	1	1	0
Total	**923**	**92**	**23**	**8**	**7**	**42**

APPENDIX C: PATIENT TRANSPORTATION

Table 106: Trauma Incidence by Mode of Arrival (Unique Traumas)

Mode of Arrival	Trauma Count	Percent
Ground Ambulance	5,218	72%
Private Vehicle or Walk-in	1,878	26%
Helicopter Ambulance	109	2%
Fixed-Wing Ambulance	1	0%
Missing	5	0%
Police	19	0%
Total	**7,230**	**100%**

Table 107: Mode of Transport by ISS (Unique Traumas)

Mode of Arrival	Injury Severity Score Range				
	Minor 1-8	Moderate 9-15	Serious 16-24	Severe 25-75	Missing/NA ISS Scores
Ground Ambulance	2,120	2,231	472	393	2
Private Vehicle or Walk-in	1,193	500	133	45	7
Helicopter Ambulance	20	42	26	21	0
Fixed-Wing Ambulance	0	1	0	0	0
Missing	3	1	0	0	1
Police	11	3	5	0	0
Other	0	0	0	0	0
Public Safety	0	0	0	0	0
Water Ambulance	0	0	0	0	0
Total	**3,347**	**2,778**	**636**	**459**	**10**

APPENDIX C: PATIENT DISCHARGE AND TRANSFER

Table 108: Patient Transfer to Nevada Trauma Centers by ISS

Facility Patient Transferred To	Injury Severity Score Range			
	Trauma Cases	Mean ISS	Standard Deviation	ISS Range
Renown Regional Medical Center	1	4.0	.	4 - 4
St. Rose Dominican Hospital Siena Campus	34	5.1	2.9	1 - 10
Sunrise Hospital Medical Center	321	8.2	7.7	1 - 50
University Medical Center	453	9.0	8.7	1 - 75

"Patient transfer Transferred To" is determined by the question, "Was Patient Transferred to Facility" and not through the matching process with Unique Traumas.

APPENDIX C: RISK FACTORS: DRUG/ALCOHOL USE

Table 109: Injury Intent and Drug/Alcohol Use (Unique Traumas)

Injury Intent	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Unintentional	6,152	798	13%
Suicide	135	60	44%
Homicide/Assault	796	244	31%
Legal Intervention	15	3	20%
Undetermined (accidental/intentional)	63	16	25%
Missing	68	9	13%
Unknown	1	0	0%
Total	**7,230**	**1,130**	**16%**

APPENDIX C: SAFETY EQUIPMENT

Figure 46: Proportion of Helmet Use Among Pedal Cyclists, Motor Cyclist, and Off-Road Users (Unique Traumas)

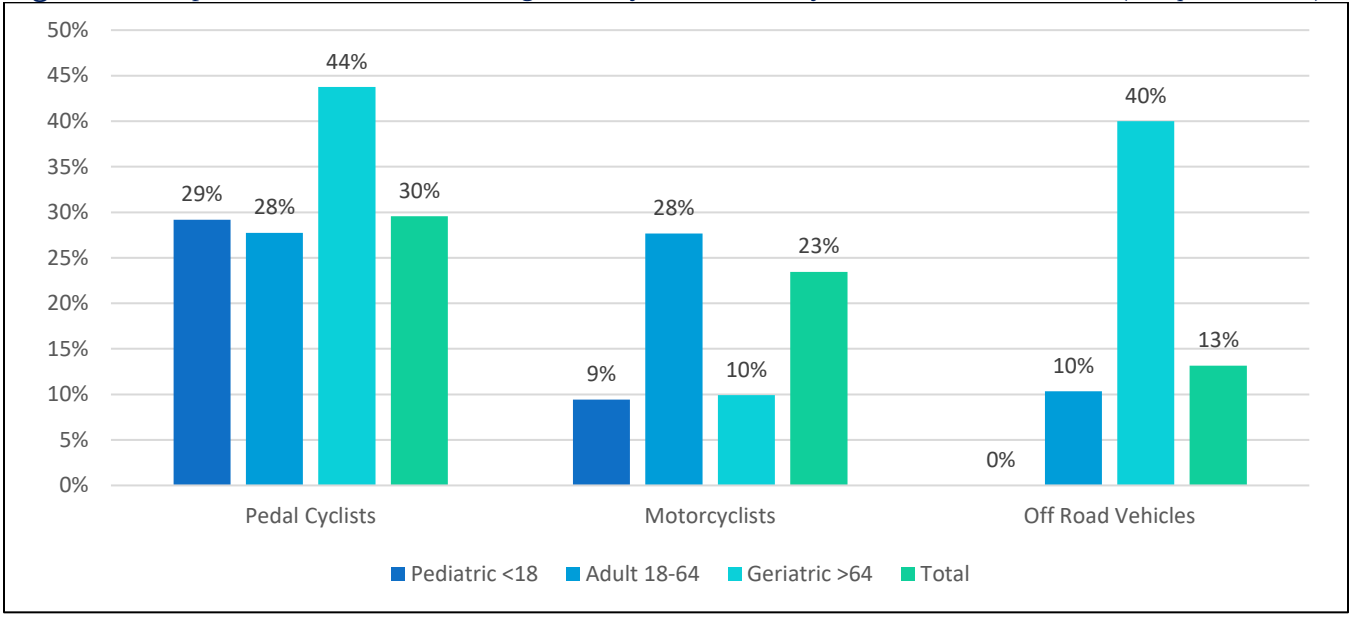


Table 110: Age-Specific restraint use among Motor Vehicle Traffic Occupants

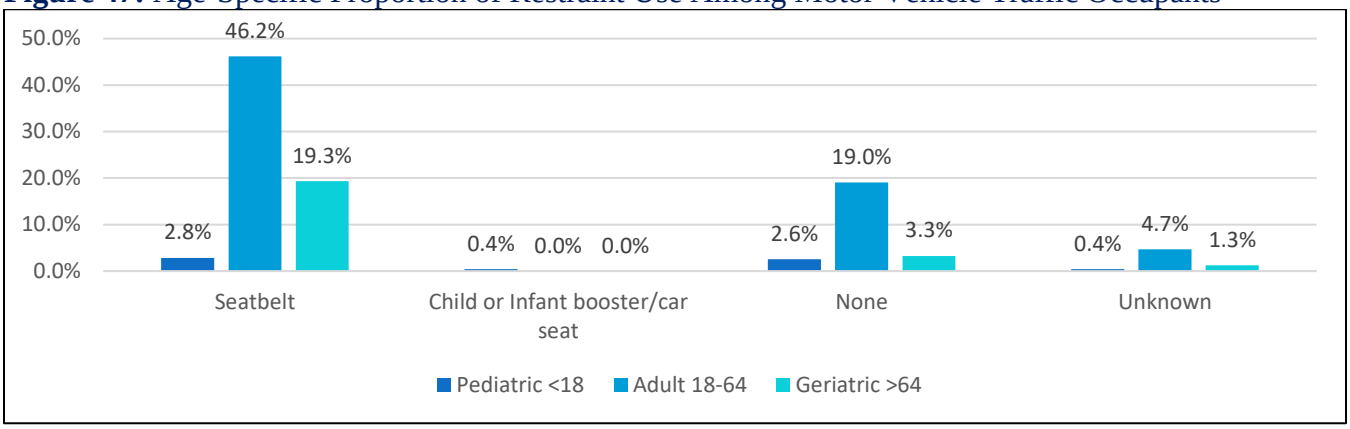
Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total
Seatbelt	20	325	136	481
Child or Infant booster/car seat	3	0	0	3
None	18	134	23	175
Unknown	3	33	9	45
Total	**44**	**492**	**168**	**704**

Table 111: Age-Specific Proportion of Restraint Use Among Motor-Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total (column percent)
Seatbelt	2.8%	46.2%	19.3%	68.3%
Child or Infant booster/car seat	0.4%	0.0%	0.0%	0.4%
None	2.6%	19.0%	3.3%	24.9%
Unknown	0.4%	4.7%	1.3%	6.4%
Total	**6.3%**	**69.9%**	**23.9%**	**100.0%**

- *Among Motor vehicle occupants 6.3% are <18, 69.6% are 18-64 and 23.9% are >64years.*
- *2. Among Motor vehicle occupants 68.3% used seatbelt, 0.4% used Child booster/car seat, 24.9% used no restraint. 6.4% of motor vehicle occupants have unknown restraint information.*
- *3. Among all motor vehicle traffic occupants 2.8% used seatbelt and are < 18 years, etc.*

Figure 47: Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants



APPENDIX C: FALLS – BY LAST TRANSFER FACILITY

Table 112: Trauma Rate for Falls by Sex (Unique Traumas)

Sex	n	Rate per 100,000 (95% CI)
Female	2,205	142.4 (136.5-148.3)
Male	1,895	122.0 (116.5-127.5)
Total	**4,100**	**132.2 (128.2-136.2)**

Table 113: Incidence and Mortality Proportion by Type of Fall (Unique Traumas)

Type of Falls	Count	Percent of Falls (Column Percent)	Deaths	Mortality Proportion (Row Percent)
Same Level (Slipping, Tripping, Stumbling)	2,775	67.7%	69	2.5%
From Furniture	303	7.4%	8	2.6%
Unspecified	295	7.2%	12	4.1%
Steps	201	4.9%	4	2.0%
Multi-Level: Cliff, Tree, Water, etc.	149	3.6%	1	0.7%
On or From Ladder/Scaffolding	128	3.1%	2	1.6%
Pedestrian Conveyance Accident	81	2.0%	1	1.2%
Out of Building or Structure	54	1.3%	2	3.7%
Collision, Push or Shove By, or Other Person	40	1.0%	2	5.0%
Playground Equipment	32	0.8%	0	0.0%
Suicide Related	23	0.6%	6	26.1%
Undetermined Fall from High Place	13	0.3%	2	15.4%
Assault Related	5	0.1%	0	0.0%
Fall Due to Environmental Factors	1	0.0%	0	0.0%
Total	**4,100**	**100.0%**	**109**	**2.7%**

*Throughout the report, Unique Traumas are analyzed by where the patient first originated, however, mortality data is analyzed based on their final facility. **2 unknown dead/alive status***

Table 114: Trauma Rate by Age and Type of Fall (Unique Traumas)

Age Group	Type of Fall					
	Unspecified		From Same Level (tripping, slipping, stumbling)		From Furniture (bed, chair, etc.)	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	5	0.7 (0.1-1.3)	58	8.0 (5.9-10.0)	51	7.0 (5.1-8.9)
Adult 18-64	86	4.5 (3.5-5.4)	683	35.6 (32.9-38.3)	57	3.0 (2.2-3.7)
Geriatric >64	204	44.9 (38.7-51.1)	2,034	447.8 (428.3-467.3)	195	42.9 (36.9-49.0)
Total	**295**	**9.5 (8.4-10.6)**	**2,775**	**89.5 (86.1-92.8)**	**303**	**9.8 (8.7-10.9)**