



2021

# Annual Trauma Registry Report

**NEVADA**

BUREAU OF HEALTH PROTECTION AND PREPAREDNESS

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Helping People. It's Who We Are and What We Do.

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## PURPOSE OF REPORT

This report aims to provide a picture of trauma occurrence within the state of Nevada based on data submitted by hospitals to the Nevada Trauma Registry (NTR). This report presents data in a usable format for local health authorities, healthcare providers, the media, and the public. Nevada regulations require the Nevada Division of Public and Behavioral Health (DPBH) to prepare an Annual Trauma Report in accordance with [Nevada Administrative Code \(NAC\) 450B.768](#). This annual report's data is based on the calendar year and summarizes data submitted by Nevada hospitals regarding reported traumas handled by each facility.

It should be noted that the data depicted in this report reflects only data entered and reported to the NTR. Therefore, if a facility fails to report trauma data to the registry, it is not reflected in this report. In addition, ongoing staffing challenges during the pandemic contributed to challenges in reporting.

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 violence. The NTR data is collected from all licensed acute care hospitals and trauma centers in Nevada.

For the 2021 Annual Trauma Report, ICD-10 codes were utilized. Per *National Trauma Data Bank* criteria, for an injury to be reported as trauma, it must have at least one ICD-10 code from the following ranges: S00 - S99 (7<sup>th</sup> Character Modifier A, B, or C), T07, T14, T20-T28 (7<sup>th</sup> Character modifier A), T30-32, and T79.A1-T79.A9 (7<sup>th</sup> character modifier A) and the patient must have either:

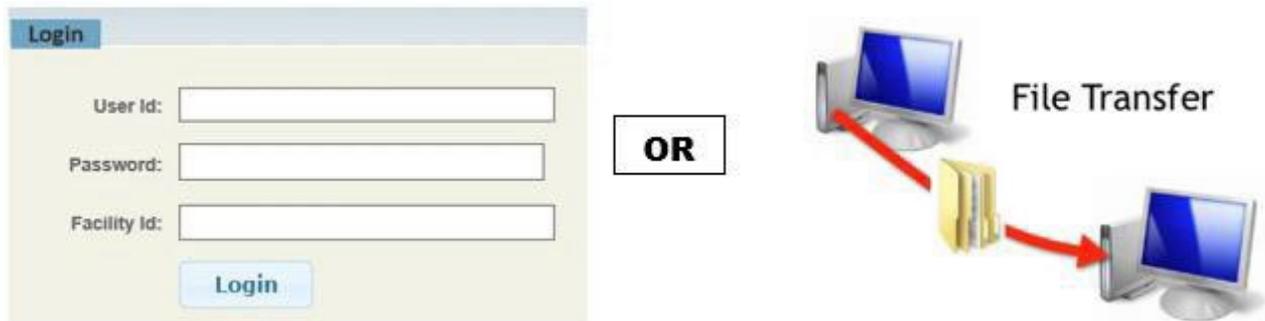
- been admitted to a facility for at least 24 hours;
- died following treatment or evaluation; **or**
- been transferred into or out of a facility.

The NTR currently collects required data points from the National Trauma Data Bank (NTDB) established by the *American College of Surgeons* and data points identified in [NAC 450B.766](#) and [NAC 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 provides information on the incidence, prevalence, morbidity, and mortality of injuries reported in Nevada. Data can be broken down to a specific county, hospital, race, or 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 and initiate health education programs. Additionally, these data are provided to the Local Health Authorities for data analysis, surveillance, and improving public health outcomes.

The 2021 Annual Trauma Report is based upon data submitted to the NTR by Nevada’s four designated trauma centers and 38 non-trauma center hospitals, for a total of 42 facilities that operated during calendar 2021. To comply with [NAC 450B.768](#), a hospital must enter all trauma records into the NTR or notify the State NTR Manager that no records meet the criteria to be submitted by the quarterly due date.

Non-trauma centers can 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 data from their software to the state NTR.



Per NAC 450B.768 – all trauma data from (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 the percentage per year of facilities compliant with submitting data to the NTR.

<b>YEAR</b>	<b>% of Non-Trauma Centers Compliant</b>	<b>% of Trauma Centers Compliant</b>
<b>2017</b>	<b>100%</b>	<b>100%</b>
<b>2018</b>	<b>98%</b>	<b>100%</b>
<b>2019</b>	<b>89%</b>	<b>75%</b>
<b>2020</b>	<b>88%</b>	<b>94%</b>
<b>2021</b>	<b>88%</b>	<b>100%</b>

In 2021, all trauma centers submitted the required data to the NTR. Although there were eighteen instances of non-compliance over the 12 months, with seven occurrences (not shown in the table) of repeated non-compliance, all were from non-trauma facilities.

State NTR staff continue to train personnel at non-trauma center hospitals to improve data accuracy.

**Preparation → Analysis (Mapping) → Development (Conversion) →  
Testing → Deployment**

Due to multiple changes in reporting throughout the years, it is advised not to compare the year-over-year data. For example, the 2017 year required facilities to transition from ICD-9 to ICD-10 coding. As a result, there are significant changes in the diagnosis detail within the ICD-10 coding, making a comparison between 2017 and previous years inaccurate. In addition, an additional facility was added in 2018, further reducing comparability to earlier reports. Finally, the hospitals submitted their 2020 and 2021 trauma data amid a global pandemic that impacted the incidence and prevalence of trauma incidents.

In addition to ongoing 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 data entry accuracy compared to their peer facilities' reports. 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 are critical to the Annual Trauma Registry Report.

Finally, collaborative relationships have continued 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, meet 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 training, delivering reminders about quarterly trauma data due dates, and revitalizing and developing relationships across the state, hospital data entry compliance has dramatically increased data submissions since 2016. As a result, the quantity and quality of data from hospitals continue to improve. This will result in strengthened detail and depth of future annual trauma reports.

## NEVADA TRAUMA REGISTRY BACKGROUND

The definition of a traumatic incident and the requirements for trauma reporting are outlined in the Nevada Revised Statutes and Nevada Administrative Code.

## 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 a 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 trauma treatment 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 collecting information concerning trauma treatment and carry out a system for managing 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 quarterly, 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 needed for 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 losses of facilities in the 2021 year of reporting, the COVID-19 global pandemic resulted in varying levels of facility reporting capabilities throughout the reporting year. Therefore, the data included in this report for 2021 is not directly comparable with 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. A series of criteria identified by the American College of Surgeons must be met to be classified as a trauma. 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:
  - The patient was hospitalized for at least 24 hours due to injuries.
  - The injury resulted in death; **or**
  - The patient was transferred between hospitals using a 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, prepared by the state, per [NAC 450B.768](#).

In 2021, the NTR captured **12,584** trauma cases. This report includes cases for patients with an Emergency Department/Hospital Arrival Date between January 1, 2021, and December 31, 2021. All data were 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 2021 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 an estimate's uncertainty and may be used to assess statistical significance. When comparing trauma rates within a table, if the range of the CIs for the two rates does 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 the 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, 2021, through December 31, 2021, a total of 12,584 traumas were recorded in the NTR by the 42 facilities in Nevada. In 2020, 11,325 traumas were recorded from 41 facilities in Nevada.

The following pages include 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.

## TRAUMA CENTER LEVELS

Outlined below are standard criteria for Trauma Centers verified by the ACS and designated by states and municipalities. Facilities are set/confirmed as an adult and/or Pediatric Trauma Centers. It is not uncommon for facilities to have different designations for each group (i.e., a Trauma Center may be a Level I Adult facility and a Level II Pediatric Facility).

### Level I

A Level I Trauma Center is a comprehensive regional resource, a tertiary care facility central to the trauma system. A Level I Trauma Center can provide total care for every aspect of injury – from prevention to rehabilitation.

#### *Elements of Level I Trauma Centers Include:*

- 24-hour in-house coverage by general surgeons and prompt availability of care in specialties such as orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology, internal medicine, plastic surgery, oral and maxillofacial, pediatric, and critical care.
- Referral resources for communities in nearby regions.
- Provides leadership in the prevention and public education to surrounding communities.
- Provides continuing education to the trauma team members.
- Incorporates a comprehensive quality assessment program.
- Operates an organized teaching and research effort to help direct innovations in trauma care.
- Program for substance abuse screening and patient intervention.
- Meets minimum requirement for annual volume of severely injured patients.

## **Level II**

A Level II Trauma Center can initiate definitive care for all injured patients.

### ***Elements of Level II Trauma Centers Include:***

- 24-hour immediate coverage by general surgeons and by the specialties of orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology, and critical care.
- Tertiary care needs such as cardiac surgery, hemodialysis, and microvascular surgery may be referred to a Level I Trauma Center.
- Provides trauma prevention and continuing education programs for staff.
- Incorporates a comprehensive quality assessment program.

## **Level III**

A Level III Trauma Center has demonstrated an ability to provide prompt assessment, resuscitation, surgery, intensive care, and stabilization of injured patients and emergency operations.

### ***Elements of Level III Trauma Centers Include:***

- 24-hour immediate coverage by emergency medicine physicians and the prompt availability of general surgeons and anesthesiologists.
- Incorporates a comprehensive quality assessment program.
- Has developed transfer agreements for patients requiring more comprehensive care at a Level I or Level II Trauma Center.
- Provides backup care for rural and community hospitals.
- Offers continued education of the nursing and allied health personnel or the trauma team.
- Involved with prevention efforts and must have an active outreach program for its referring communities.

## **Level IV**

A Level IV Trauma Center has demonstrated an ability to provide advanced trauma life support (ATLS) before transferring patients to a higher-level trauma center. In addition, it provides evaluation, stabilization, and diagnostic capabilities for injured patients.

### ***Elements of Level IV Trauma Centers Include:***

- Basic emergency department facilities to implement ATLS protocols and 24-hour laboratory coverage. Available trauma nurse(s) and physicians are available upon patient arrival.
- May provide surgery and critical-care services if available.
- Has developed transfer agreements for patients requiring more comprehensive care at a Level I or Level II Trauma Center.
- Incorporates a comprehensive quality assessment program.
- Involved with prevention efforts and must have an active outreach program for its referring communities.

## **Level V**

A Level V Trauma Center provides initial evaluation, stabilization, and diagnostic capabilities and prepares patients for transfer to higher levels of care.

### ***Elements of Level V Trauma Centers Include:***

- Basic emergency department facilities to implement ATLS protocols.
- Available trauma nurse(s) and physicians are available upon patient arrival.
- After-hours activation protocols if the facility is not open 24 hours a day.
- May provide surgery and critical-care services if available.
- Has developed transfer agreements for patients requiring more comprehensive care at Level I through III Trauma Centers.



**Table 1: Trauma Cases by Facility, 2021 (includes Nevada Residents and Non-Residents)**

County	Facility *Trauma Center	Unique Traumas	Trauma Patient%	Total Trauma Cases	
Clark County	Boulder City Hospital	49	0.4%	49	0.4%
	Centennial Hills Hospital	217	1.7%	221	1.6%
	Desert Springs Hospital Center	51	0.4%	51	0.4%
	Henderson ER at Green Valley Ranch	87	0.7%	87	0.6%
	Henderson Hospital	270	2.1%	272	2.0%
	Mesa View Regional Hospital	12	0.1%	12	0.1%
	Mike O'Callaghan Federal Medical Center	52	0.4%	52	0.4%
	Mountain View ER at Aliante	2	0.0%	2	0.0%
	Mountain View Hospital	766	6.1%	773	5.7%
	North Vista Hospital	143	1.1%	143	1.0%
	Southern Hills ER at the Lakes	0	0.0%	0	0.0%
	Southern Hills Hospital Medical Center	11	0.1%	11	0.1%
	Spring Valley ER at Blue Diamond	7	0.1%	7	0.1%
	Spring Valley Hospital Medical Center	615	4.9%	648	4.8%
	St. Rose Dominican Hospital Blue Diamond	28	0.2%	28	0.2%
	St. Rose Dominican Hospital De Lima Campus	106	0.8%	106	0.8%
	St. Rose Dominican Hospital North Las Vegas	47	0.4%	47	0.3%
	St. Rose Dominican Hospital San Martin Campus	115	0.9%	126	0.9%
	<b>*St. Rose Dominican Hospital Siena Campus</b>	333	2.6%	342	2.5%
	St. Rose Dominican Hospital West Flamingo	16	0.1%	16	0.1%
	St. Rose Dominican Hospital West Sahara	4	0.0%	4	0.0%
	Summerlin Hospital Medical Center	509	4.0%	531	3.9%
	<b>*Sunrise Hospital Medical Center</b>	2,988	23.7%	3,321	24.4%
<b>*University Medical Center</b>	3,402	27.0%	3,886	28.5%	
Valley Hospital Medical Center	36	0.3%	36	0.3%	
Washoe County	Incline Village Community Hospital	0	0.0%	0	0.0%
	Northern Nevada Medical Center	112	0.9%	112	0.8%
	<b>*Renown Regional Medical Center</b>	844	6.7%	977	7.2%
	Renown South Meadows Medical Center	207	1.6%	207	1.5%
	St. Mary's Regional Medical Center	102	0.8%	112	0.8%
All Other Counties	Banner Churchill Community Hospital	128	1.0%	128	0.9%
	Battle Mountain General Hospital	12	0.1%	13	0.1%
	Carson Tahoe Regional Medical Center	538	4.3%	539	4.0%
	Carson Valley Medical Center	151	1.2%	151	1.1%
	Desert View Hospital	261	2.1%	261	1.9%
	Grover C. Dils Medical Center	17	0.1%	17	0.1%
	Humboldt General Hospital	50	0.4%	50	0.4%
	Mt. Grant General Hospital	12	0.1%	12	0.1%
	Northeastern Nevada Regional Hospital	180	1.4%	180	1.3%
	Pershing General Hospital	26	0.2%	26	0.2%
	South Lyon Medical Center	20	0.2%	20	0.1%
Williams Bee Ririe Hospital	58	0.5%	58	0.4%	
<b>Nevada (Total)</b>		<b>12,584</b>	<b>100.0%</b>	<b>13,634</b>	<b>100.0%</b>

Out of all the facilities listed in Table 1, the designated trauma centers had the highest number of trauma cases treated. In 2021 there were 4 designated trauma centers in the State of Nevada. 1 trauma center is in Northern NV, and 3 are in Southern NV. The 4 trauma centers are Renown Regional Medical Center, Sunrise Hospital Medical Center, University Medical Center, and St Rose Dominican Hospital: Siena Campus. University Medical Center had the highest number of unique trauma cases at 3,402 (27%), followed by Sunrise Hospital Medical Center at 2,988 (23.7%), and Renown Medical Center at 844 cases.

Of the non-trauma centers, the facility with the highest number of trauma cases was Mountain View Medical Center at 766 cases (6.1%), followed by Spring Valley Hospital Medical Center at 615 cases (4.9%), and Carson Tahoe Regional Medical Center at 538 cases (4.3%).

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

Trauma Center designation	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Trauma Center level 1	3886	46.1%	255	6.6%
Trauma Center level 2	4297	51.0%	204	4.7%
Trauma Center Level 3	246	2.9%	4	1.6%
<b>Total</b>	<b>8429</b>	<b>100.0%</b>	<b>463</b>	<b>5.5%</b>

## DEMOGRAPHICS

Of 12,584 unique traumas recorded in the NTR between January 1, 2021, and December 31, 2021, 56.9% were in male patients, and 43.1% 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	7,156	56.9%	445.4 (435.0-455.7)
Female	5,419	43.1%	337.1 (328.1-346.1)
Sex Not Reported	9	0.1%	-
<b>Total</b>	<b>12,584</b>	<b>100%</b>	<b>391.5 (384.7-398.3)</b>

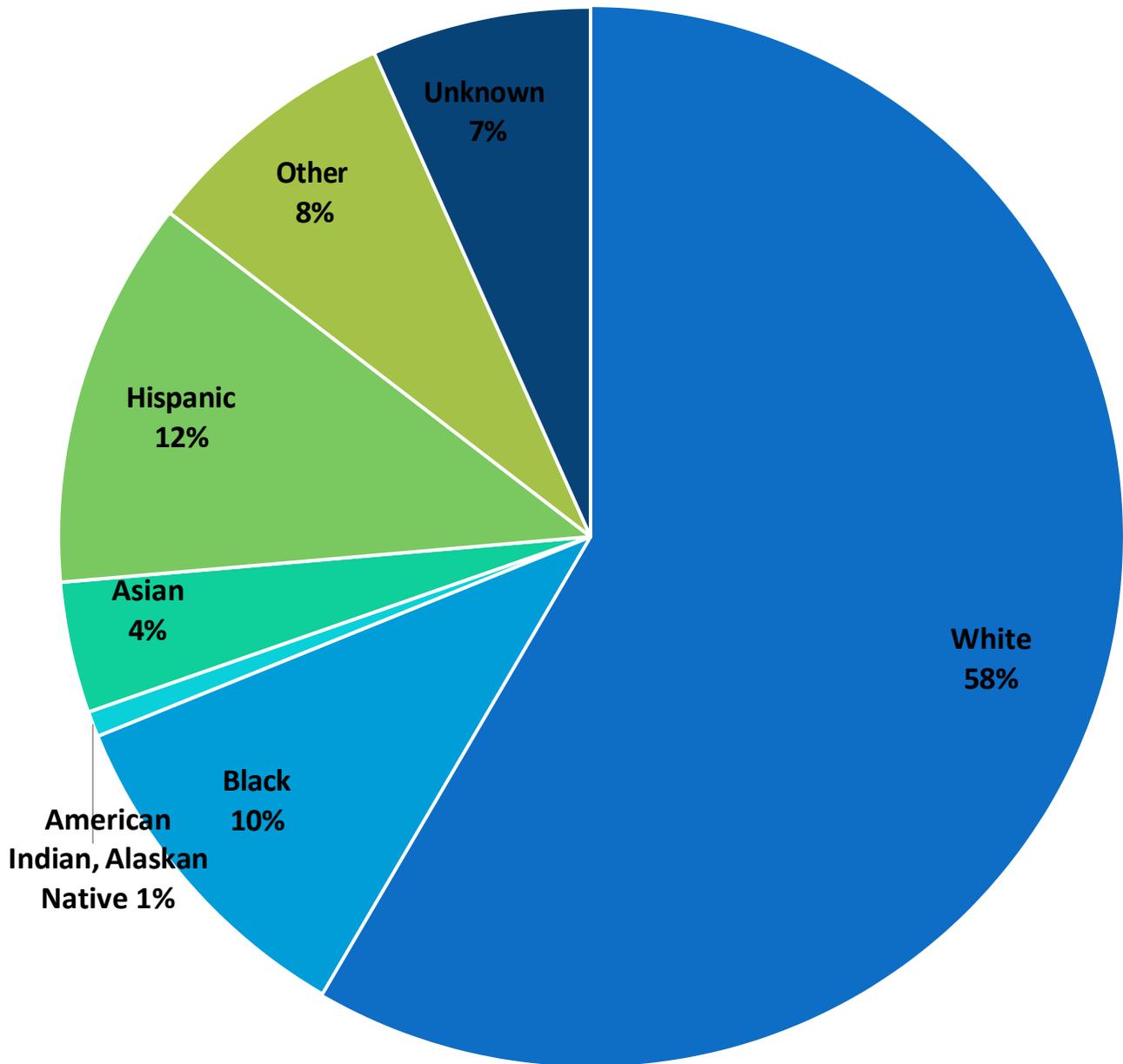
**Table 4: Nevada Trauma Cases by Race/Ethnicity (Unique Traumas)**

Race/Ethnicity	Count	Percent	Rate per 100,000 (95% CI)
White	7,350	58.4%	466.4 (455.7-477.1)
Black	1,314	10.4%	452.9 (428.4-477.4)
American Indian, Alaskan Native	98	0.8%	271.3 (217.6-325.0)
Asian	503	4.0%	154.5 (141.0-168.0)
Hispanic	1,491	11.8%	151.1 (143.5-158.8)
Other	989	7.9%	0.0 (0.0-0.0)
Unknown	839	6.7%	0.0 (0.0-0.0)
<b>Total</b>	<b>12,584</b>	<b>100.0%</b>	<b>391.5 (384.7-398.3)</b>

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: 2021 Nevada Census Race/Ethnicity**

Per the 2021 Nevada Census, the state’s most prominent races and ethnicities were White (58.4%), Hispanics (11.8%), and Blacks (10.4%). Approximately 1% of Nevada's population is American Indian and Alaskan Native. This minority group has the lowest trauma rate in the state (0.8%) due to its small population.



Due to Nevada having higher percentages of White, Hispanic, and Black populations over other races/ethnicities, the data reflects that higher trauma cases also occur in White, Hispanic, and Black ethnicities. However, neither race nor ethnicity appears to play a role in the prevalence of trauma.

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

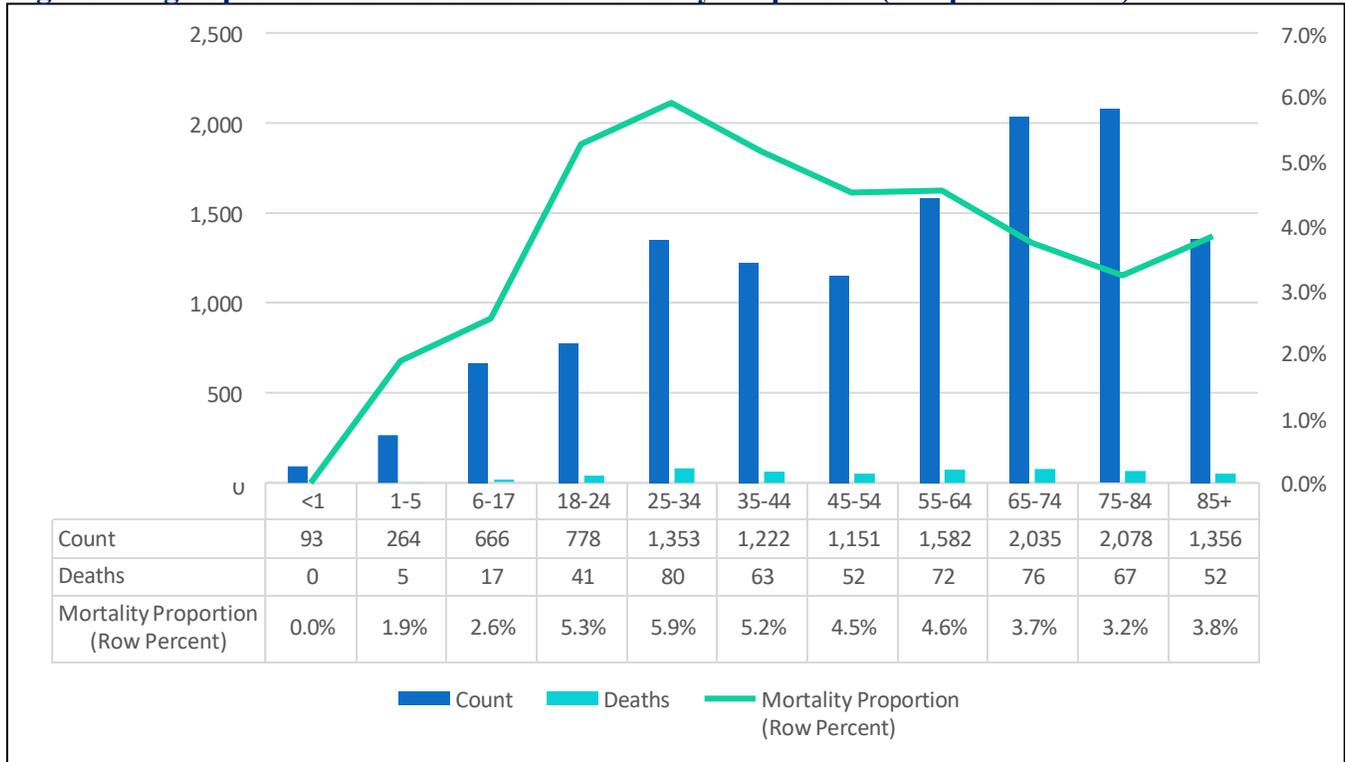
Age Groups	White	Black	American Indian, Alaskan Native	Asian	Hispanic	Other	Unknown	Total
<1	31	21	1	4	12	18	6	93
1-5	101	41	0	12	61	23	26	264
6-17	271	102	8	19	140	77	49	666
18-24	275	153	12	26	172	89	51	778
25-34	514	283	13	48	268	131	96	1,353
35-44	550	204	13	39	203	134	79	1,222
45-54	594	162	13	44	179	97	62	1,151
55-64	1,015	155	9	44	135	120	104	1,582
65-74	1,455	99	14	93	132	120	122	2,035
75-84	1,562	66	5	82	114	108	141	2,078
85+	982	28	10	92	75	72	97	1,356
Unknown	0	0	0	0	0	0	6	6
<b>Total</b>	<b>7,350</b>	<b>1,314</b>	<b>98</b>	<b>503</b>	<b>1,491</b>	<b>989</b>	<b>839</b>	<b>12,584</b>

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

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
<1	93	0.7%	0	0.0%
1-5	264	2.1%	5	1.9%
6-17	666	5.3%	17	2.6%
18-24	778	6.2%	41	5.3%
25-34	1,353	10.8%	80	5.9%
35-44	1,222	9.7%	63	5.2%
45-54	1,151	9.1%	52	4.5%
55-64	1,582	12.6%	72	4.6%
65-74	2,035	16.2%	76	3.7%
75-84	2,078	16.5%	67	3.2%
85+	1,356	10.8%	52	3.8%
<b>Total</b>	<b>12,584</b>	<b>100.0%</b>	<b>525</b>	<b>4.2%</b>

Tables 5 and 6 present the number of trauma cases according to age, death rate, and ethnic background. Among the 12,584 unique trauma cases in Nevada for 2021, 2,035 were in the 65-74 age group, 2,078 in the 75-84 age group, and 1,582 in the 55-64 age group. **Figure 2** illustrates that the age group of 25 to 34 has the highest percentage of deaths from trauma, with 5.9%, followed by 18 to 24 at 5.3%, 35 to 44 at 5.2%, and 55 to 64 at 4.6%.

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



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

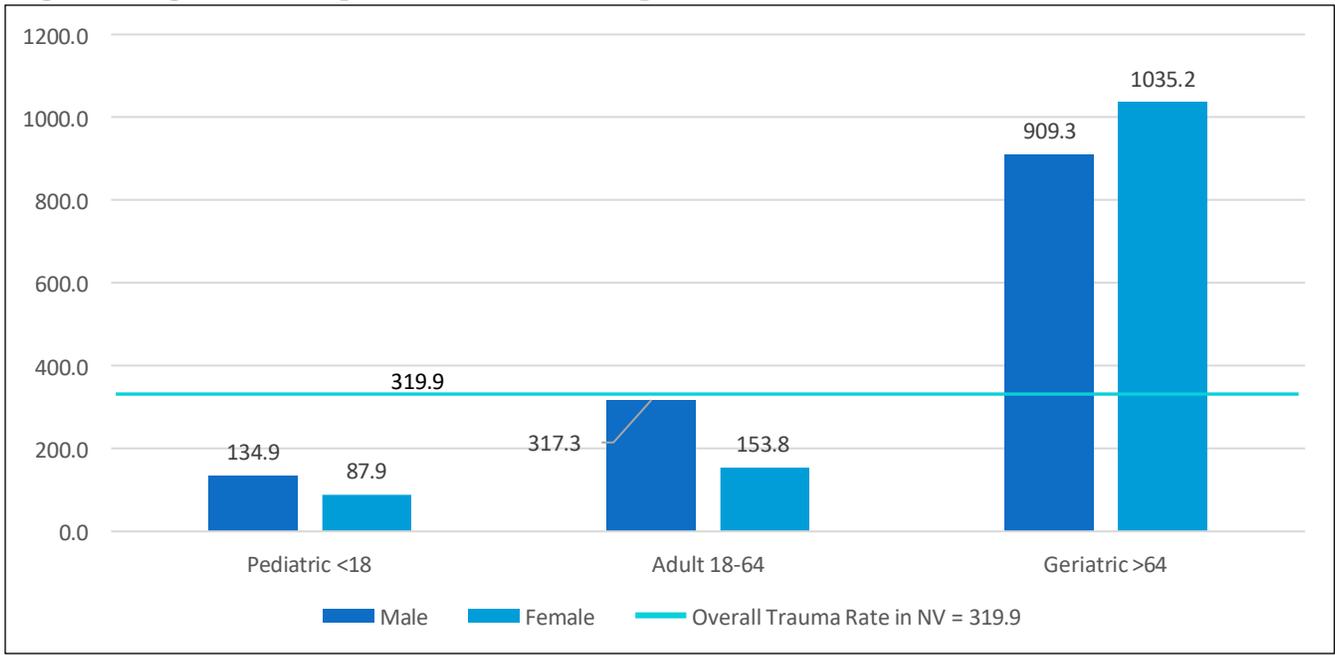
Age Group	Male		Female		Total	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	515	134.9 (123.3-146.6)	320	87.9 (78.3-97.5)	835	112.0 (104.4-119.6)
Adult 18-64	3,183	317.3 (306.3-328.3)	1,505	153.8 (146.0-161.5)	4,688	236.5 (229.8-243.3)
Geriatric >64	2,017	909.3 (869.6-949.0)	2,741	1035.2 (996.4-1073.9)	4,758	977.8 (950.0-1005.6)
<b>Total</b>	<b>5,715</b>	<b>355.7 (346.5-364.9)</b>	<b>4,566</b>	<b>284.0 (275.8-292.3)</b>	<b>10,281</b>	<b>319.9 (313.7-326.0)</b>

The overall number of trauma cases in Nevada residents is 56% male compared to 44% female based on the demographic breakdown. In addition, the highest percentage of trauma cases were in people over 64 years of age at 46%.

**Traumas per age and sex per 100,000 NV Residents**

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

**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 Churchill

See also [Table 8](#)

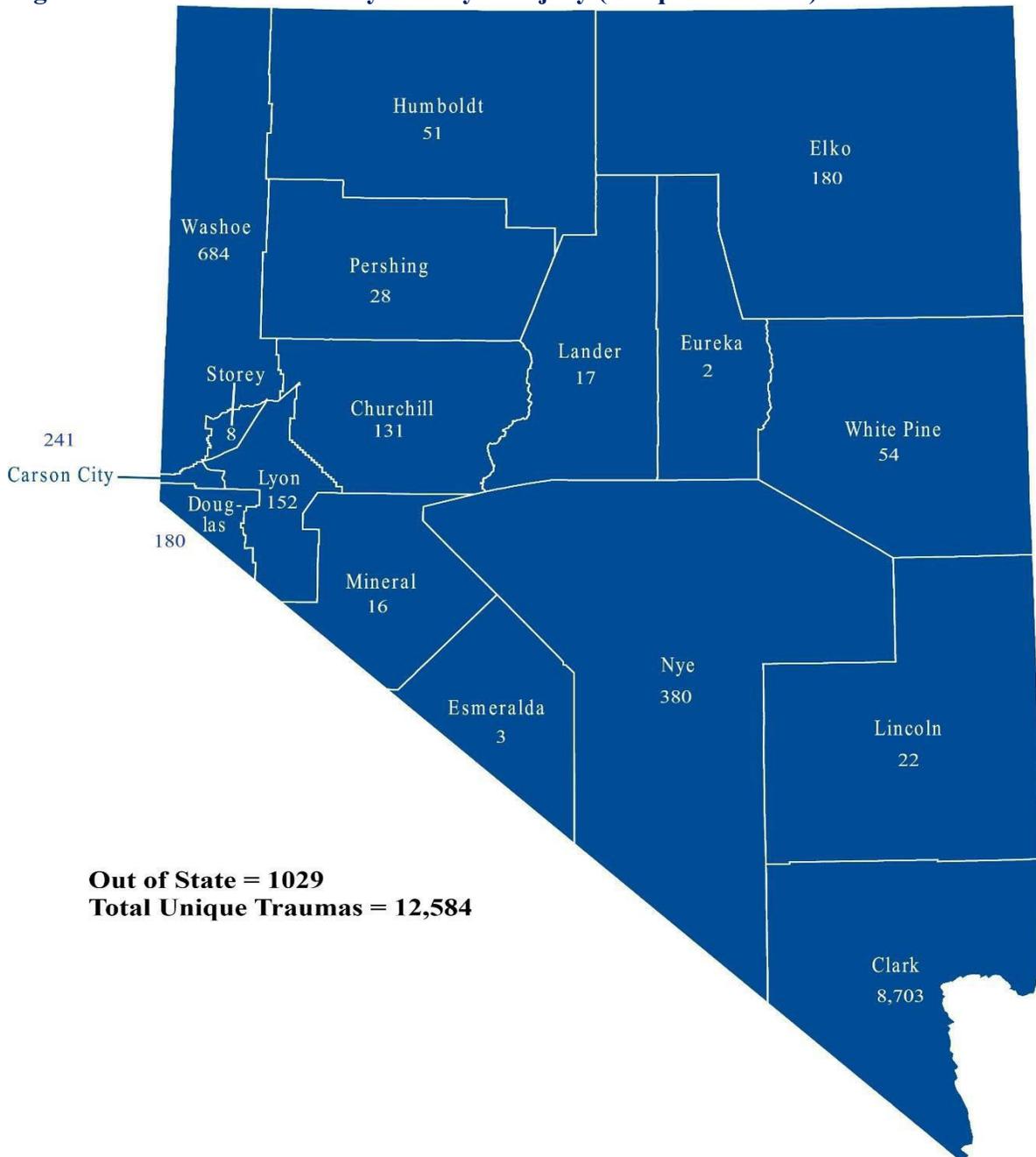
**Table 8: Nevada Trauma Cases by County of Injury (non-duplicated)**

County	Count	Rate per 100,000 (95% CI)
Carson City	241	421.2 (368.0-474.3)
Churchill	131	499.2 (413.7-584.7)
Clark	8,703	365.8 (358.2-373.5)
Douglas	180	363.5 (310.4-416.6)
Elko	180	333.1 (284.5-381.8)
Esmeralda	3	309.0 (-40.7-658.6)
Eureka	2	106.1 (-40.9-253.1)
Humboldt	51	301.8 (219.0-384.7)
Lander	17	283.7 (148.8-418.6)
Lincoln	22	425.0 (247.4-602.5)
Lyon	152	258.1 (217.0-299.1)
Mineral	16	339.3 (173.1-505.6)
Nye	380	757.6 (681.5-833.8)
Pershing	28	413.3 (260.2-566.4)
Storey	8	191.3 (58.7-323.9)
Washoe	684	141.9 (131.2-152.5)
White Pine	54	513.0 (376.2-649.8)
Out of State	1,029	-

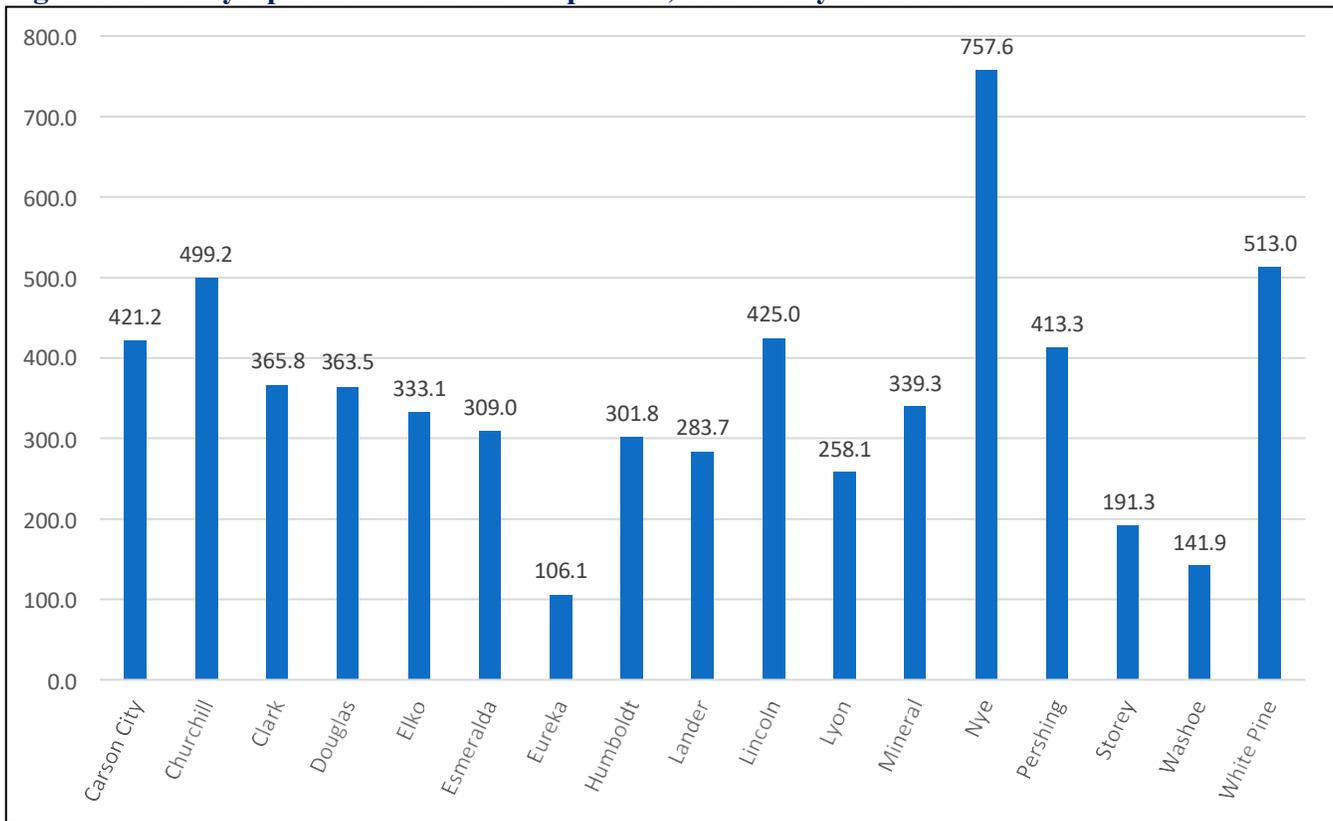
In cases of trauma per Federal Information Processing Standard (FIPS) code, Trauma Rates per county is based on ICD-10 diagnosis coding recorded by treating facilities and do not consider backgrounds, patient histories, or examinations.

**Highest Trauma Cases (Figure 4)**  
Utilizing FIPS codes of where an injury occurred:  
**#1) Clark County** recorded the highest number of trauma cases at 8,703 cases.  
**#2) Washoe** with 684 trauma cases.  
**#3) Nye County** with 380 trauma cases.  
However, there were 1,029 trauma cases that occurred out-of-state.

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



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



According to this analysis, Nye County had the highest rate of trauma cases per 100,000 people, with 757.6. White Pine followed this with 513.0 and Churchill with 499.2.

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

Age Group	Count	Percent	Deaths	Mortality Proportion (Row Percent)
Pediatric <18	250	10.8%	16	6.4%
Adult 18-64	1,052	45.5%	109	10.4%
Geriatric >64	1,008	43.6%	90	8.9%
<b>Total</b>	<b>2,310</b>	<b>100.0%</b>	<b>215</b>	<b>9.3%</b>

*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*



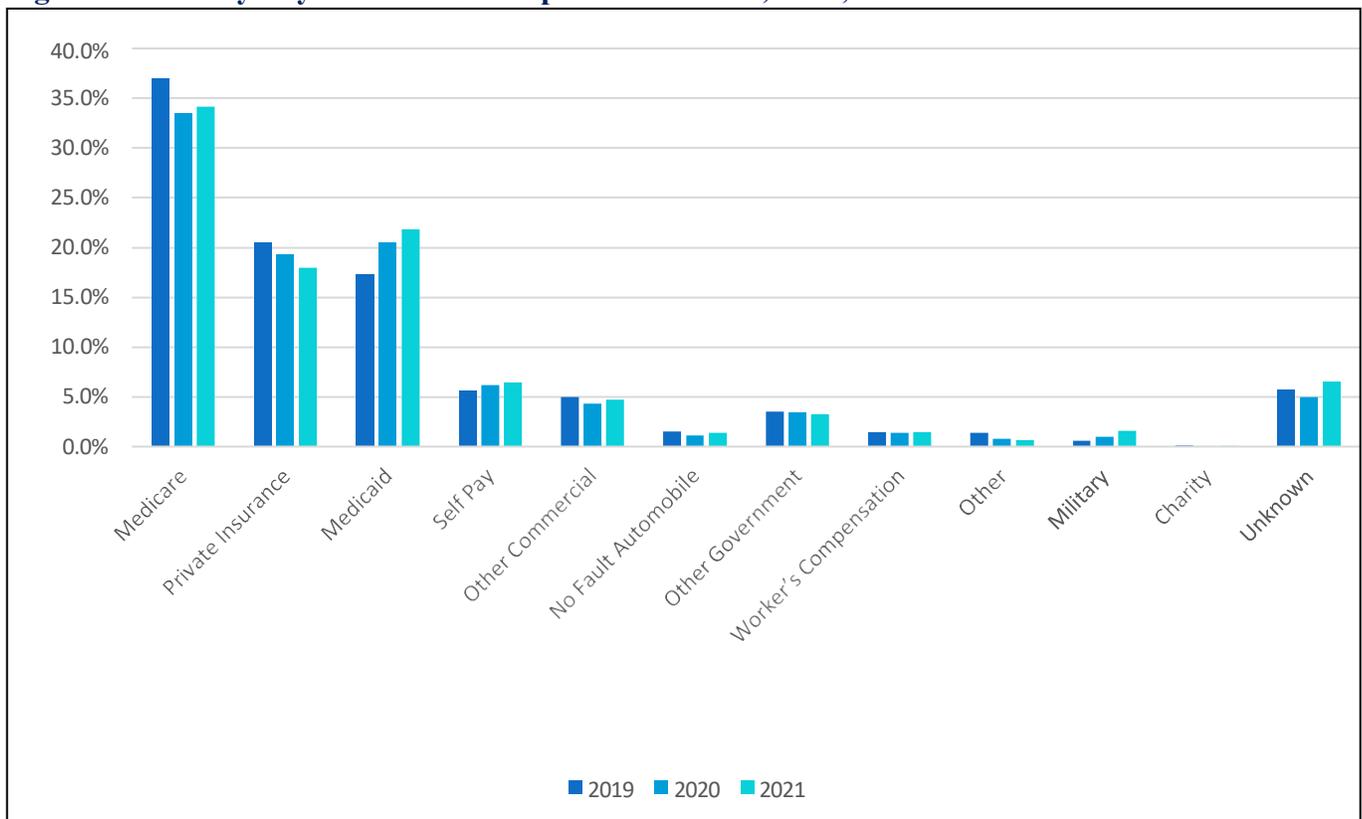
**Table 11: Primary Payment Source Proportion for 2019, 2020, 2021 Traumas in Nevada**

Primary Source of Payment	2019	2020	2021
Medicare	37.0%	33.5%	34.2%
Private Insurance	20.6%	19.4%	18.0%
Medicaid	17.4%	20.6%	21.8%
Self-Pay	5.7%	6.2%	6.4%
Other Commercial	5.0%	4.3%	4.7%
No-Fault Automobile	1.5%	1.1%	1.4%
Other Government	3.5%	3.4%	3.2%
Worker's Compensation	1.5%	1.4%	1.5%
Other	1.4%	0.8%	0.6%
Military	0.6%	1.0%	1.6%
Charity	0.1%	0.1%	0.0%
Unknown	5.7%	5.0%	6.6%

*\*\*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 2019, 2020, 2021 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	5,696	45.26%
Street	3,314	26.34%
Trade and Service Area	782	6.21%
Recreation area	322	2.56%
Sports Area	170	1.35%
Wilderness	271	2.15%
Other Specified	121	0.96%
School or Public Area	109	0.87%
Industrial and Construction	118	0.94%
Farm	23	0.18%
Transport Vehicle as Place	82	0.65%
Military Training Ground	2	0.02%
Railroad Track	6	0.05%
Unknown/Unspecified	1,568	12.46%
<b>Total</b>	<b>12,584</b>	<b>100%</b>

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

<b>Mechanism</b>	<b>Count</b>	<b>Percent</b>	<b>Deaths</b>	<b>Mortality Proportion (Row Percent)</b>
Falls	6,800	54.0%	186	2.7%
Motor Vehicle Traffic	2,257	17.9%	173	7.7%
Struck by/Against	819	6.5%	10	1.2%
Firearm	505	4.0%	111	22.2%
Cut/Pierce	520	4.1%	15	2.9%
Motor Vehicle Non-Traffic	156	1.2%	2	1.3%
Other Transport (Land, Sea, Sky)	173	1.4%	4	2.3%
Other Specified	296	2.4%	7	2.4%
Pedal Cyclist, Other	207	1.6%	0	0.0%
Natural/Environmental	165	1.3%	0	0.0%
Pedestrian, Other	83	0.7%	6	7.2%
Unspecified	62	0.5%	2	3.2%
Fire/Burn	66	0.5%	1	1.5%
Unknown	102	0.8%	2	2.0%
Machinery	73	0.6%	0	0.0%
Overexertion	63	0.5%	1	1.6%
Suffocation	237	1.9%	5	2.1%
<b>Total</b>	<b>12,584</b>	<b>100.0%</b>	<b>525</b>	<b>4.2%</b>

The top three causes of traumatic injury in the state of Nevada by 2021 were Falls (54%), Traffic-Related Accidents (17.9%), and Being Struck by/Against (6.5%). The highest proportions of deaths in total trauma cases originated from Firearm incidents (22%), Motor Vehicle Traffic (7.7%), and Pedestrian incidents (7.2%).

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)**

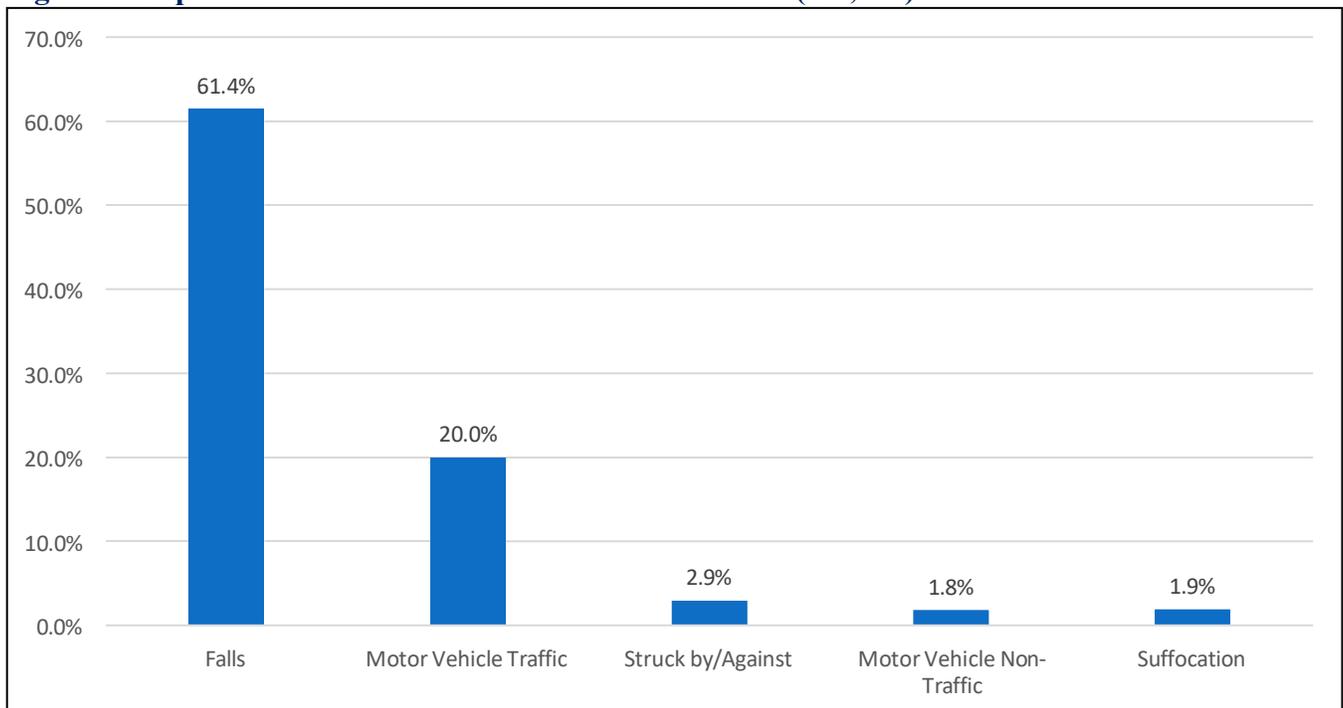
Age Group	Falls		Struck by/Against		Motor Vehicle Traffic	
	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)	n	Rate per 100,000 (95% CI)
Pediatric <18	369	49.5 (44.4-54.5)	101	13.5 (10.9-16.2)	151	20.2 (17.0-23.5)
Adult 18-64	1,804	91.0 (86.8-95.2)	608	30.7 (28.2-33.1)	1,687	85.1 (81.1-89.2)
Geriatric >64	4,611	947.6 (920.2-974.9)	115	23.6 (19.3-28.0)	387	79.5 (71.6-87.5)
<b>Total</b>	<b>6,784</b>	<b>211.1 (206.0-216.1)</b>	<b>824</b>	<b>25.6 (23.9-27.4)</b>	<b>2,225</b>	<b>69.2 (66.3-72.1)</b>

Table 14 outlines the top three mechanisms for injury by age. The number one trauma injury per all age groups in 2021 was Falls.



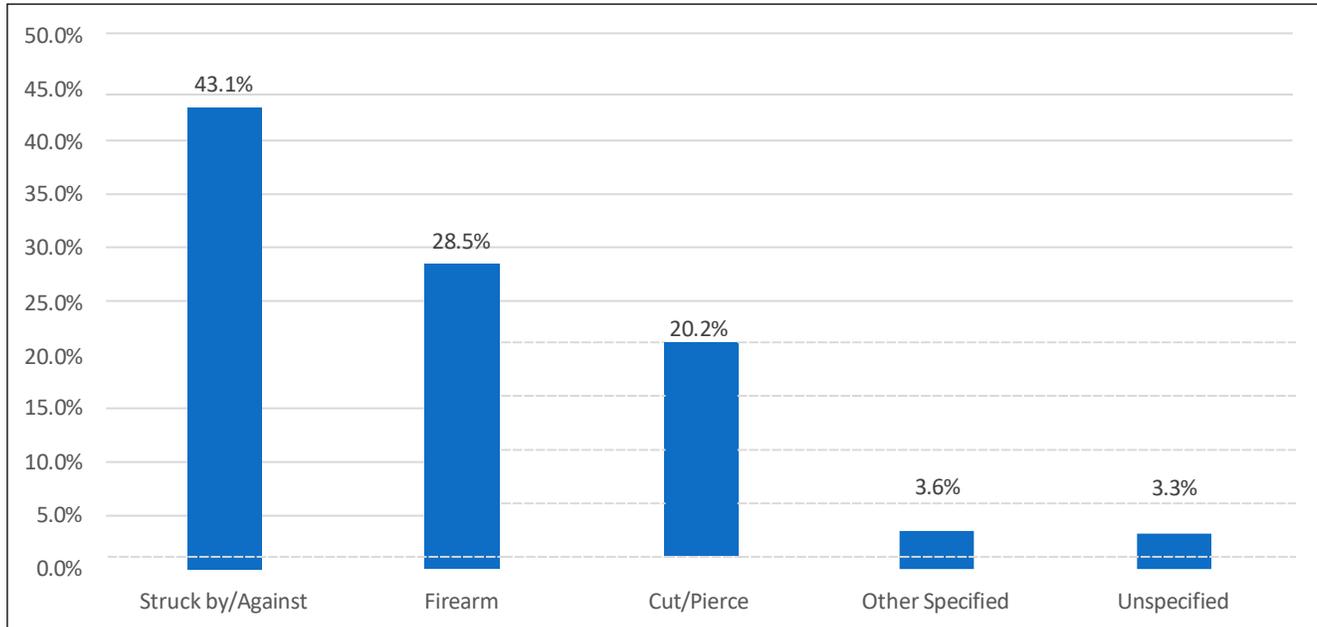
**FALLS**  
#1 cause of unintentional trauma

**Figure 7: Top Five Mechanisms of Unintentional Trauma (n=9,386)**



**Homicide/Assault**  
**#1 Struck by/Against**  
**#2 Firearm**  
**#3 Cut/Pierce**

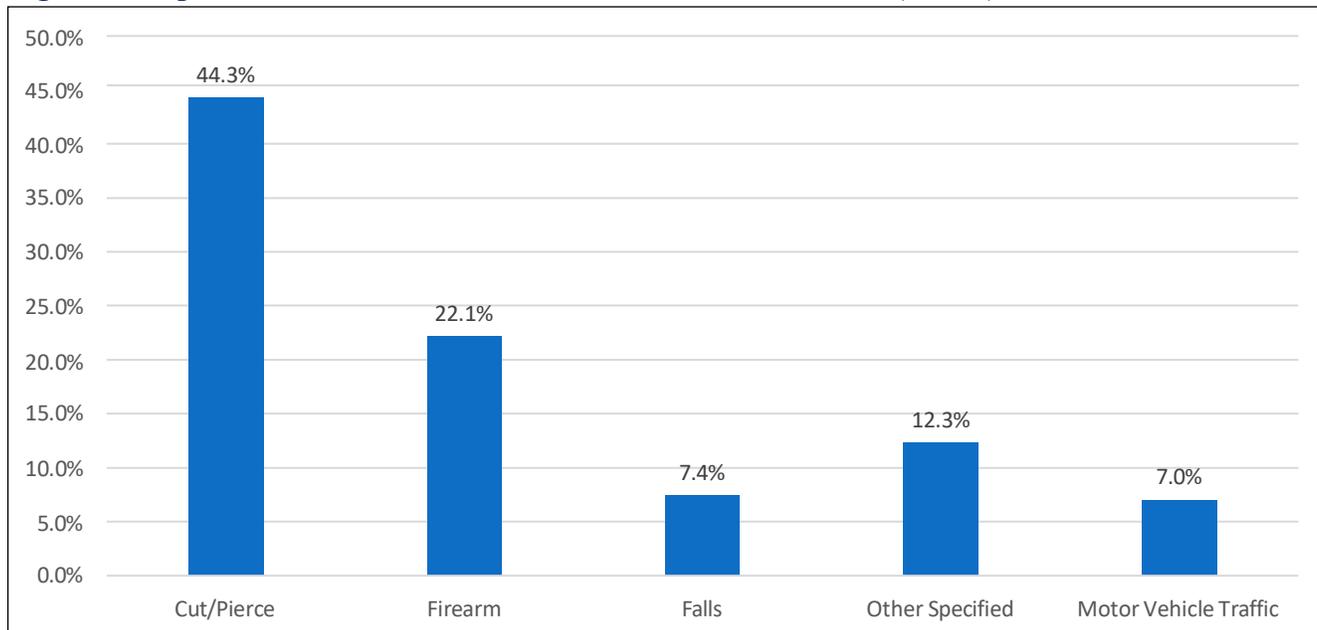
**Figure 8: Top Five Mechanisms of Homicide/Assault-Related Trauma (n=1,108)**



**Suicide/Self-Inflicted**

- #1 Cut/Pierce**  
**#2 Firearm**  
**#3 Falls**

**Figure 9: Top Five Mechanisms of Suicide/Self-Inflicted Trauma (n=227)**



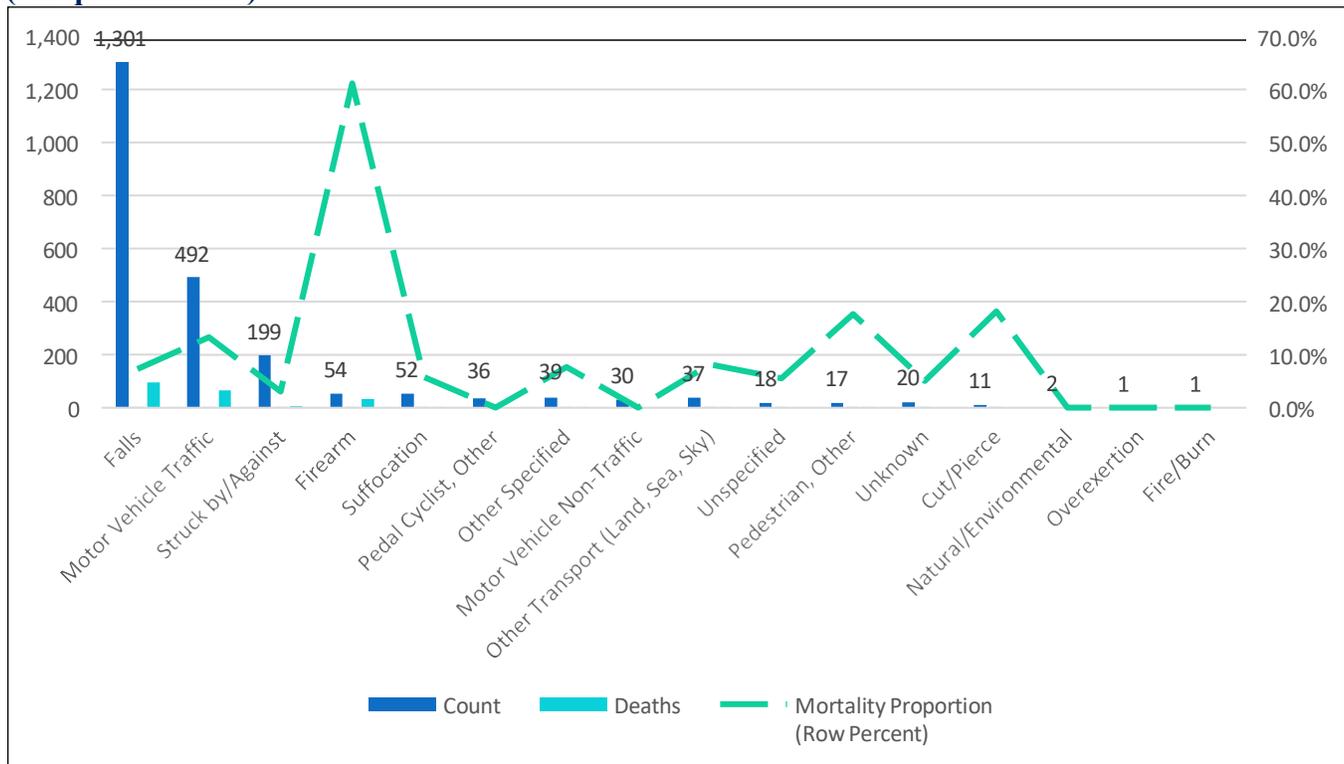
**Table 15: Traumatic Brain Injury Incidence and Mortality by Mechanism of Injury**

Mechanism	Count	Percent	Deaths	Mortality Proportion (Row Percent)
Falls	1,301	56.3%	95	7.3%
Motor Vehicle Traffic	492	21.3%	65	13.2%
Struck by/Against	199	8.6%	6	3.0%
Firearm	54	2.3%	33	61.1%
Suffocation	52	2.3%	3	5.8%
Pedal Cyclist, Other	36	1.6%	0	0.0%
Other Specified	39	1.7%	3	7.7%
Motor Vehicle Non-Traffic	30	1.3%	0	0.0%
Other Transport (Land, Sea, Sky)	37	1.6%	3	8.1%
Unspecified	18	0.8%	1	5.6%
Pedestrian, Other	17	0.7%	3	17.6%
Unknown	20	0.9%	1	5.0%
Cut/Pierce	11	0.5%	2	18.2%
Natural/Environmental	2	0.1%	0	0.0%
Overexertion	1	0.0%	0	0.0%
Fire/Burn	1	0.0%	0	0.0%
<b>Total</b>	<b>2,310</b>	<b>100.0%</b>	<b>215</b>	<b>9.3%</b>

**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)**

<b>Injury Severity Score</b>	<b>Count</b>	<b>Percent</b>	<b>Deaths</b>	<b>Mortality Proportion (Row Percent)</b>
Minor, 1-8	5,845	46.4%	53	0.9%
Moderate, 9-15	4,838	38.4%	93	1.9%
Serious, 16-24	1,046	8.3%	94	9.0%
Severe, 25-75	831	6.6%	285	34.3%
Missing/NA/ND	24	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 2021, with 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. Conversely, an increasing score indicates a greater likelihood of death.

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

<b>Injury Severity Score</b>	<b>Count</b>	<b>Column Percent</b>	<b>Deaths</b>	<b>Mortality Proportion (Row Percent)</b>
Minor, 1-8	464	20.1%	2	0.4%
Moderate, 9-15	914	39.6%	24	2.6%
Serious, 16-24	446	19.3%	25	5.6%
Severe, 25-75	485	21.0%	164	33.8%
Unknown	0	0.0%	0	0.0%
<b>Total</b>	<b>2,310</b>	<b>100.0%</b>	<b>215</b>	<b>9.3%</b>

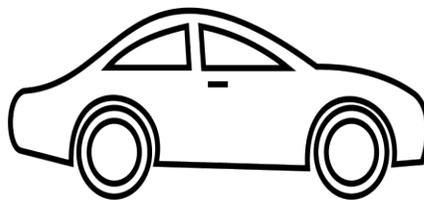
**Table 18: Injury to ED arrival time for a patient with an injury severity score >15 by Injury Location; Rural, Urban, Statewide**

County	<1 hour	1-3 hours	3-6 hours	6-9 hours	9-12 hours	>12 hours
Carson City	9	1	0	0	1	0
Churchill	7	2	0	0	0	0
Clark	1,120	126	34	21	10	45
Douglas	6	4	2	0	0	1
Elko	9	0	1	0	0	0
Esmeralda	1	0	0	0	0	0
Eureka	0	0	0	0	0	0
Humboldt	3	2	2	1	0	0
Lander	2	0	1	0	0	0
Lincoln	2	2	0	0	0	0
Lyon	10	11	1	0	0	0
Mineral	3	0	0	0	0	0
Nye	24	5	5	0	0	0
Pershing	5	0	0	0	0	0
Storey	2	2	0	0	0	0
Unknown	57	10	11	5	2	0
Washoe	99	15	4	0	1	0
White Pine	7	0	2	1	0	0
Out of State	141	60	33	20	5	6
<b>Total</b>	<b>1,507</b>	<b>240</b>	<b>96</b>	<b>48</b>	<b>19</b>	<b>52</b>

### **PATIENT TRANSPORTATION**

There are many ways for patients to reach a hospital. Ground ambulances predominated over private vehicles and walk-ins among the trauma patients in Nevada in 2021. (Table 19)

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



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

Mode of Arrival	Trauma Count	Percent
Ground Ambulance	8,793	69.87%
Private Vehicle or Walk-in	2,759	21.92%
Helicopter Ambulance	922	7.33%
Fixed-Wing Ambulance	58	0.46%
Unknown	0	0.00%
Police	38	0.30%
Other	3	0.02%
Missing	11	0.09%
<b>Total</b>	<b>12,584</b>	<b>100%</b>

It may be of value to community stakeholders, in addition to reviewing the data per the mode of patient arrival, to examine patient methods 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	3,815	3,601	738	632	7
Private Vehicle or Walk-in	1,705	777	183	76	18
Helicopter Ambulance	248	363	172	138	1
Fixed-Wing Ambulance	21	19	12	6	0
Unknown	0	0	0	0	0
Police	29	4	2	3	0
Other	0	3	0	0	0
Public Safety	0	0	0	0	0
Missing	3	1	0	0	7
<b>Total</b>	<b>5,821</b>	<b>4,768</b>	<b>1,107</b>	<b>855</b>	<b>33</b>

## **PATIENT DISCHARGE AND TRANSFER**

1,371 of the 12,584 trauma cases in Nevada during 2021 were transferred to trauma centers. Patients from other facilities were transferred to University Medical Center. St. Rose Dominican Hospital Siena Campus had the lowest average ISS among the trauma centers. See [Table 21](#).

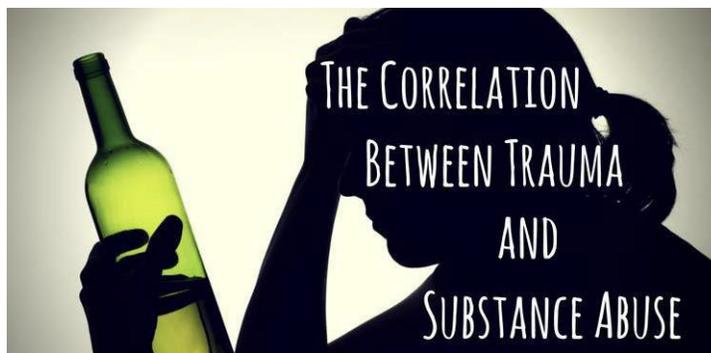
**Table 21: Patient Transfer to Nevada Trauma Centers by Injury Severity Score**

Facility Patient Transferred To	Injury Severity Score Range			
	Trauma Cases	Mean ISS	Standard Deviation	ISS Range
Renown Regional Medical Center	388	8.2	4.1	1 - 29
St. Rose Dominican Hospital Siena Campus	46	7.4	11.3	1 - 75
Sunrise Hospital Medical Center	328	7.9	7.7	1 - 48
University Medical Center	609	8.6	7.8	1 - 57

*“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**

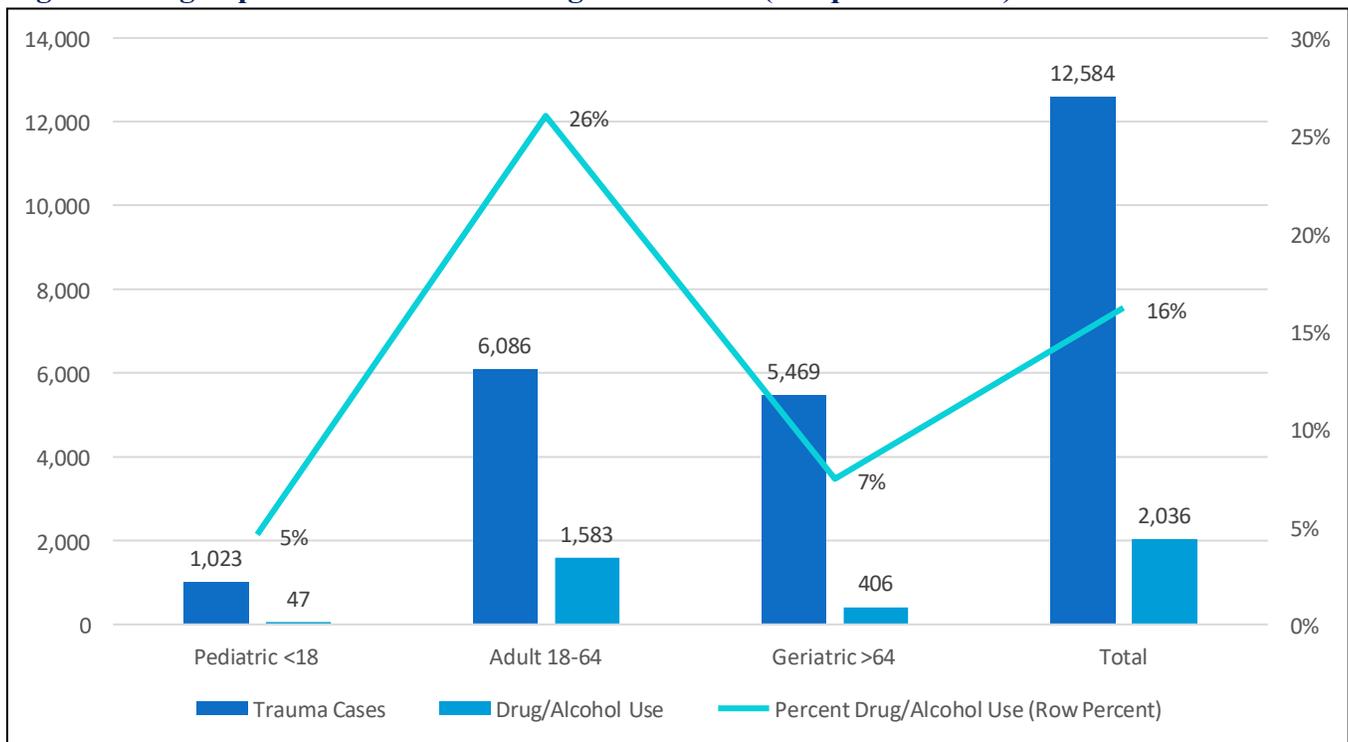
Drug/Alcohol Use was involved in 2,036 (16%) of the 12,584 unique traumas recorded in the NTR for 2021. Drug or alcohol use was also present in 14% of unintentional trauma injuries and 32% of homicides and assaults.



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

Injury Intent	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Unintentional	10,989	1,536	14%
Suicide	244	106	43%
Homicide/Assault	1,124	355	32%
Legal Intervention	23	11	48%
Undetermined (accidental/intentional)	98	19	19%
Missing	104	9	9%
Unknown	2	0	0%
<b>Total</b>	<b>12,584</b>	<b>2,036</b>	<b>16%</b>

**Figure 11: Age-Specific Trauma and Drug/Alcohol Use (Unique Traumas)**



The population most affected by positive/high levels of Blood Alcohol Content (BAC) at the time of the reported trauma incident were adults aged 18 to 64. 1,583 cases of the 6,086 unique traumas (26%) were found to have positive levels of BAC.

**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	0	93	5	98
Seatbelt – Lap & Shoulder	1	85	7	93
Seatbelt – Lap Only	0	3	0	3
Seatbelt – Shoulder Only	0	0	0	0
Seatbelt – NFS	0	6	1	7
Unknown	0	30	1	31
<b>Total</b>	<b>1</b>	<b>217</b>	<b>14</b>	<b>232</b>

**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	2	144	7	153
Seatbelt – Lap & Shoulder	5	145	19	169
Seatbelt – Lap Only	0	7	1	8
Seatbelt – NFS	0	15	1	16
Child Booster Seat	1	0	0	1
Unknown	1	42	2	45
<b>Total</b>	<b>9</b>	<b>353</b>	<b>30</b>	<b>392</b>

In 153 of the 2,036 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**

<b>Mechanism</b>	<b>Trauma Cases</b>	<b>Drug/Alcohol Use</b>	<b>Percent Drug/Alcohol Use (Row Percent)</b>
Falls	6,784	698	10%
Motor Vehicle Traffic	2,225	654	29%
Struck by/Against	824	172	21%
Cut/Pierce	522	155	30%
Firearm	506	142	28%
Other Specified	296	43	15%
Suffocation	219	47	21%
Pedal Cyclist, Other	210	17	8%
Motor Vehicle Non-Traffic	203	27	13%
Natural/Environmental	168	6	4%
Other Transport (Land, Sea, Sky)	168	19	11%
Unknown	118	11	9%
Pedestrian, Other	83	20	24%
Machinery	69	1	1%
Fire/Burn	66	1	2%
Overexertion	64	2	3%
Unspecified	58	21	36%
Drowning	1	0	0%
<b>Total</b>	<b>12,584</b>	<b>2,036</b>	<b>16%</b>

Drug/alcohol use was reported in the highest numbers in the following unique traumas: Cut/Pierce (30%), Motor Vehicle Traffic (27%), and Firearm (28%). In 36% of incidents, no mechanism of injury was identified.

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

<b>Mechanism</b>	<b>&lt;0.08</b>	<b>0.08 to 1</b>	<b>2 to 20</b>	<b>21 to 50</b>	<b>51 to 100</b>	<b>101 to 200</b>	<b>more than 200</b>	<b>Unknown</b>	<b>Total</b>
Falls	9	17	59	30	37	93	171	6,368	6,784
Motor Vehicle Traffic	0	2	19	28	49	122	148	1,857	2,225
Struck by/Against	0	1	4	7	12	28	42	730	824
Cut/Pierce	0	5	4	6	11	33	28	435	522
Firearm	1	1	8	10	12	24	22	428	506
Other Specified	1	1	4	1	0	5	9	275	296
Suffocation	0	0	0	4	5	14	7	189	219
Motor Vehicle Non-Traffic	1	1	3	1	3	6	7	181	203
Pedal Cyclist, Other	0	2	1	1	1	3	1	201	210
Natural/Environmental	0	0	0	0	1	0	2	165	168
Other Transport (Land, Sea, Sky)	0	0	3	1	1	2	5	156	168
Unknown	1	1	1	1	2	2	2	108	118
Pedestrian, Other	0	0	1	1	0	3	6	72	83
Fire/Burn	0	0	0	0	0	0	0	66	66
Unspecified	0	1	2	1	1	6	4	43	58
Overexertion	0	0	0	0	0	0	0	64	64
Machinery	0	0	0	0	0	0	0	69	69
Drowning	0	0	0	0	0	0	0	1	1
<b>Total</b>	<b>13</b>	<b>32</b>	<b>109</b>	<b>92</b>	<b>135</b>	<b>341</b>	<b>454</b>	<b>11,408</b>	<b>12,584</b>

The legal BAC level 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	1	0	8	17	19	32	27	925	1,029
Carson City	3	9	1	1	1	3	3	220	241
Churchill	0	0	0	0	2	5	8	116	131
Clark	5	6	79	59	89	220	320	7,925	8,703
Douglas	0	4	3	0	1	5	2	165	180
Elko	0	0	0	0	4	4	11	161	180
Esmeralda	0	0	0	0	0	0	0	3	3
Eureka	0	0	0	0	0	0	0	2	2
Humboldt	0	0	1	1	0	0	1	48	51
Lander	0	0	0	0	0	0	1	16	17
Lincoln	0	0	0	1	0	0	0	21	22
Lyon	2	1	1	1	1	4	4	138	152
Mineral	0	0	0	0	0	1	0	15	16
Nye	0	0	0	3	1	8	4	364	380
Pershing	0	0	0	0	0	0	0	28	28
Storey	0	0	0	0	1	0	2	5	8
Washoe	0	2	7	4	7	37	52	575	684
White Pine	0	0	0	0	0	1	2	51	54
Unknown	2	10	9	5	9	21	17	630	703
<b>Total</b>	<b>13</b>	<b>32</b>	<b>109</b>	<b>92</b>	<b>135</b>	<b>341</b>	<b>454</b>	<b>11,408</b>	<b>12,584</b>

**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	1,029	214	21%
Carson City	241	35	15%
Churchill	131	17	13%
Clark	8,703	1,428	16%
Douglas	180	17	9%
Elko	180	22	12%
Esmeralda	3	0	0%
Eureka	2	0	0%
Humboldt	51	4	8%
Lander	17	2	12%
Lincoln	22	2	9%
Lyon	152	18	12%
Mineral	16	1	6%
Nye	380	28	7%
Pershing	28	2	7%
Storey	8	3	38%
Washoe	684	130	19%
White Pine	54	6	11%
Unknown	703	107	15%
<b>Total</b>	<b>12,584</b>	<b>2,036</b>	<b>16%</b>

Mechanism	Direct	Acceleration/ Deceleration/ Shearing Force	Compression	Blast
Injuries	<ul style="list-style-type: none"> <li>• Cardiac and Pulmonary Contusion</li> <li>• Rib Fractures with or without Flail</li> </ul>	<ul style="list-style-type: none"> <li>• Aortic Disruption</li> <li>• Airway Injury</li> <li>• Diaphragmatic Rupture</li> </ul>	<ul style="list-style-type: none"> <li>• Cardiac and Pulmonary Contusion</li> <li>• Rib Fractures with or without Flail</li> </ul>	<ul style="list-style-type: none"> <li>• Pulmonary Contusion</li> <li>• Disruption of any intrathoracic Organ</li> </ul>

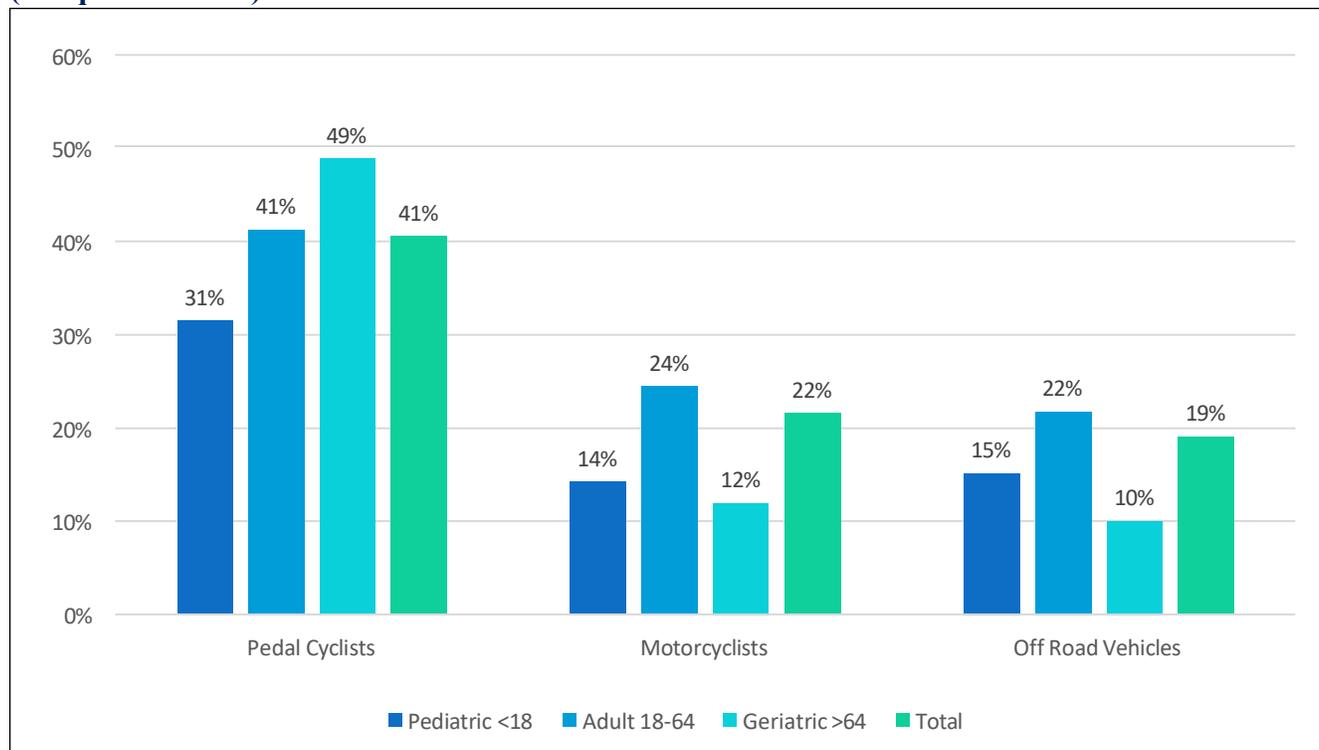
## SAFETY EQUIPMENT

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 when laws require that they do so. In total, 41% of trauma victims on a bicycle, 22% on a motorcycle, and 19% while driving an off-road vehicle wore helmets—[Figure 12](#).



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 12: 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	41	612	207	860
Child or Infant booster/car seat	10	0	0	10
None	29	287	42	358
Unknown	7	82	30	119
<b>Total</b>	<b>87</b>	<b>981</b>	<b>279</b>	<b>1,347</b>

Of the 2,257 motor vehicle incidents, 1,228 persons who suffered trauma in Nevada reported 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 2021, indicating that they are aware of its life-saving value. Of the 23,824 passenger vehicle occupants killed nationwide in 2020, 51% were not wearing seat belts — a 4% increase from 2019. Seat belts saved an estimated 14,955 lives and could have saved an additional 2,549 people if they had been wearing seat belts in 2017 alone. 47% of the 22,215 occupants of passenger vehicles killed in 2020 did not wear a seatbelt. In 2020, 58% of those killed at night were unrestrained. In a report on injury reduction, 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 57% fatality rate among 13-to-14-year-old occupants of unrestrained passenger vehicles in 2020. The NHTSA emphasizes the importance of using the correct type of restraint. Injuries to children are significantly higher when their seat belts are loose or improperly positioned.

**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	47.1%	62.4%	74.2%	63.8%
Child or Infant booster/car seat	11.5%	0.0%	0.0%	0.7%
None	33.3%	29.3%	15.1%	26.6%
Unknown	8.0%	8.4%	10.8%	8.8%
<b>Total Age-Specific Proportion</b>	<b>6.5%</b>	<b>72.8%</b>	<b>20.7%</b>	<b>100.0%</b>

- Among Motor vehicle occupants: 6.5% are <18, 72.8% are 18-64 and 20.7% are >64years.
- Among Motor vehicle occupants, 63.8% used a seatbelt, 0.7% used a Child booster/car seat, and 26.6% used no restraint. In addition, 8.8% of motor vehicle occupants have unknown restraint information.
- Among motor vehicle traffic occupants, 47.1% used seatbelts and are < 18 years, etc.



**Figure 13: Age-Specific Proportion of Restraint Use Among Motor-Vehicle Traffic Occupants**

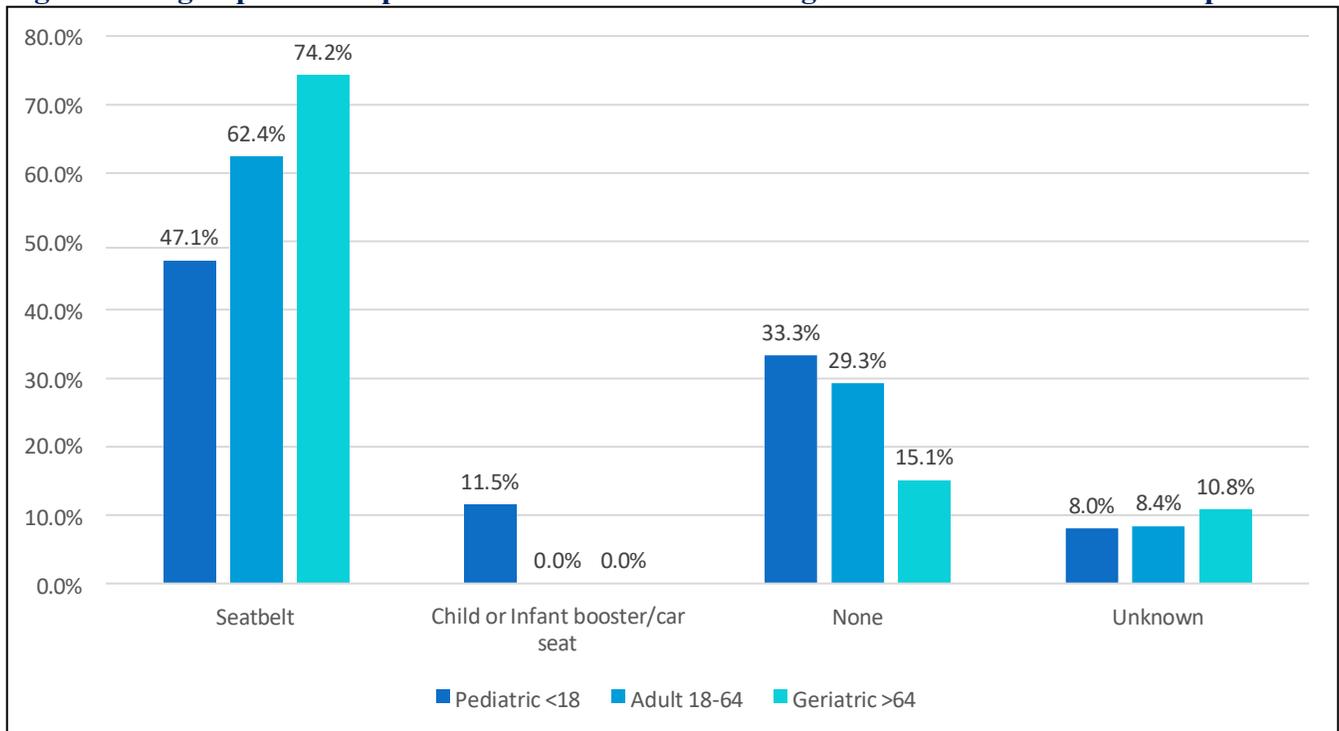


Table 30 and Figure 13 show that a seat belt adequately restrained 47.1% of pediatric occupants. The geriatric population over the age of 64 reported 74.2% wearing a seatbelt, while 62.4% of adult drivers reported wearing a seatbelt. Not all those involved in a Motor Vehicle Accident resulting in trauma were willing to provide information regarding restraint use at the time of the accident. Additionally, it is essential to note that [Figure 13](#) above refers to the populations in that age group that was reported to be adequately restrained using the correct type of safety restraint.

## FALLS – BY LAST TRANSFER FACILITY

In 2021, falls were Nevada's leading cause of trauma. In line with this, most traumas occur at home (Table 12). In analyzing the falls by sex, females experienced more trauma than males by 513 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	3,746	233.0 (214.8-251.2)
Male	3,233	201.2 (181.9-220.6)
<b>Total</b>	<b>6,979</b>	<b>217.1 (212.0-222.2)</b>

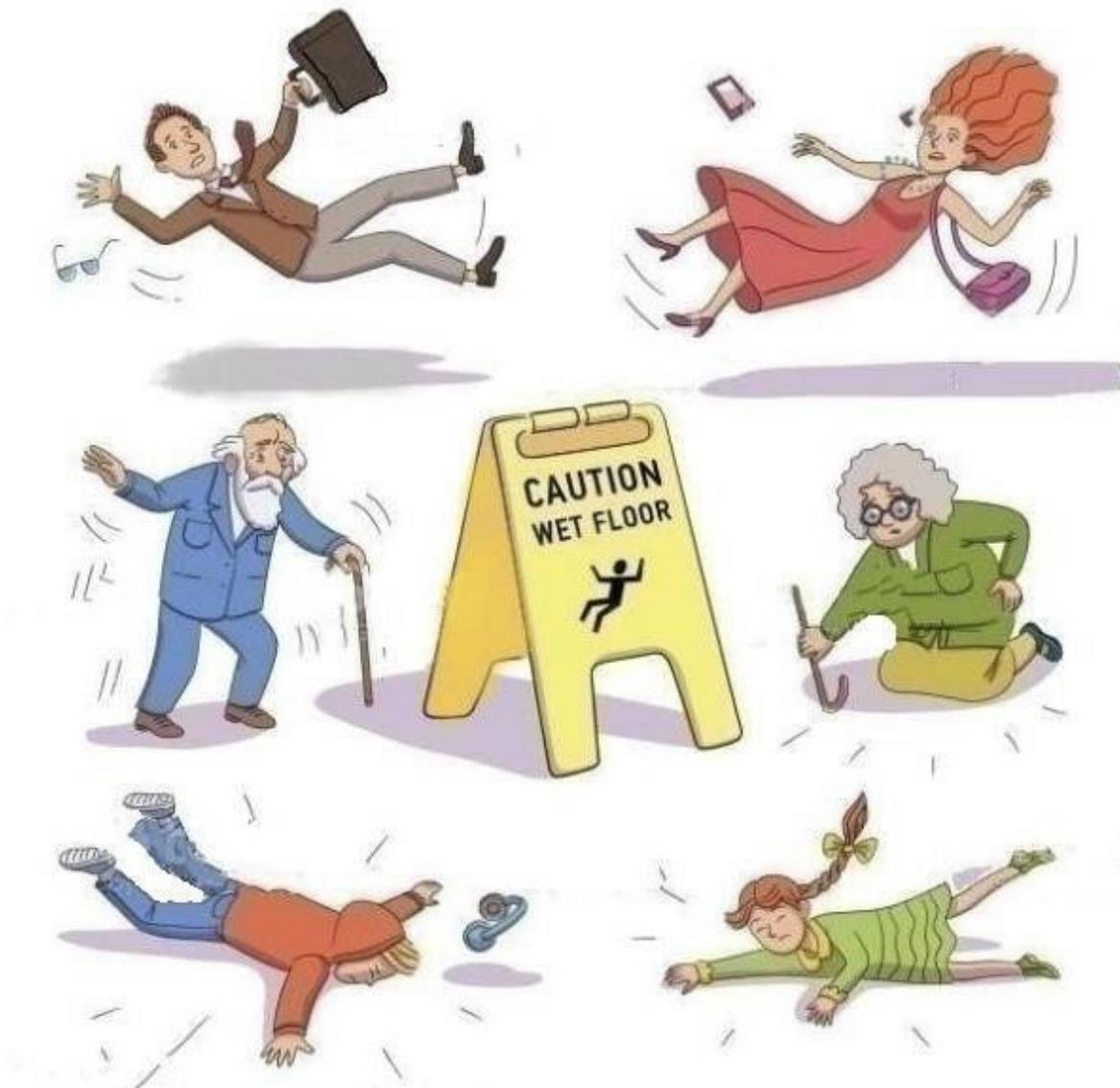
**Table 32: Incidence and Mortality Proportion by Type of Fall (Unique Traumas)**

Type of Falls	Count	Percent of Falls (Column Percent)	Deaths	Mortality Proportion (Row Percent)
Same Level (Slipping, Tripping, Stumbling)	4,543	65.1%	104	2.3%
Unspecified	534	7.7%	27	5.1%
From Furniture	527	7.6%	20	3.8%
Steps	385	5.5%	18	4.7%
Multi-Level: Cliff, Tree, Water, etc.	245	3.5%	3	1.2%
On or From Ladder/Scaffolding	189	2.7%	5	2.6%
Pedestrian Conveyance Accident	277	4.0%	3	1.1%
Out of Building or Structure	85	1.2%	3	3.5%
Collision, Push or Shove By, or Other Person	45	0.6%	0	0.0%
Playground Equipment	47	0.7%	0	0.0%
Suicide-Related	33	0.5%	11	33.3%
Fall Due to Environmental Factors	56	0.8%	1	1.8%
Undetermined Fall from High Place	7	0.1%	1	14.3%
Assault Related	6	0.1%	0	0.0%
<b>Total</b>	<b>6,979</b>	<b>100.0%</b>	<b>196</b>	<b>2.8%</b>

*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	12	1.6 (0.7-2.5)	90	12.1 (9.6-14.6)	81	10.9 (8.5-13.2)
Adult 18-64	142	7.2 (6.0-8.3)	1,001	50.5 (47.4-53.6)	92	4.6 (3.7-5.6)
Geriatric >64	231	47.5 (41.4-53.6)	3,452	709.4 (685.7-733.1)	354	72.7 (65.2-80.3)
<b>Total</b>	<b>534</b>	<b>12.0 (10.8-13.2)</b>	<b>4,543</b>	<b>141.3 (137.2-145.4)</b>	<b>527</b>	<b>16.4 (15.0-17.8)</b>



## **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 enter data into the NTR accurately. 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 complete historical data for Nevada's trauma centers. Additionally, through ongoing partnerships to improve the amount and quality of the information in the NTR, these data and subsequent reports become more valuable to the various NTR community stakeholders.

## **CITATIONS**

American College of Surgeons. National Trauma Data Bank 2016 Annual Report. Available at: <https://www.facs.org/~media/files/quality%20programs/trauma/ntdb/ntdb%20annual%20report%202016.ashx>

Nevada State Demographer's Office. 2001-2021 ASRHO Estimates and Projections. Division of Public and Behavioral Health edition. Vintage 2021. [https://tax.nv.gov/Publications/Population\\_Statistics\\_and\\_Reports/](https://tax.nv.gov/Publications/Population_Statistics_and_Reports/)

Nevada Revised Statutes. Treatment of Trauma. NRS 450B.105, 450B.236 – 450B.239. Available at: <http://www.leg.state.nv.us/NRS/NRS-450B.html#NRS450BSec236>

Nevada Administrative Code. Treatment of Trauma. Initial Procedures and Collection of Information. NRS 450B.760 – 450B.774. Available at: <http://www.leg.state.nv.us/nac/NAC-450B.html#NAC450BSec760>

## **ADDITIONAL INFORMATION**

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## **RECOMMENDED CITATION**

Division of Public and Behavioral Health. *2021 Annual Trauma Registry Report*. Carson City, Nevada. e 1.0, June 2022. (Division of Public and Behavioral Health, 2021)

# 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 *Trauma Center	Unique Traumas Trauma Patients		Total Trauma Cases	
Clark County	Boulder City Hospital	0	0.0%	0	0.0%
	Centennial Hills Hospital	0	0.0%	0	0.0%
	Desert Springs Hospital Center	0	0.0%	0	0.0%
	Henderson ER at Green Valley Ranch	0	0.0%	0	0.0%
	Henderson Hospital	0	0.0%	0	0.0%
	Mesa View Regional Hospital	0	0.0%	0	0.0%
	Mike O'Callaghan Federal Medical Center	0	0.0%	0	0.0%
	Mountain View ER at Aliante	0	0.0%	0	0.0%
	Mountain View Hospital	0	0.0%	0	0.0%
	North Vista Hospital	0	0.0%	0	0.0%
	Southern Hills ER at the Lakes	0	0.0%	0	0.0%
	Southern Hills Hospital Medical Center	0	0.0%	0	0.0%
	Spring Valley ER at Blue Diamond	0	0.0%	0	0.0%
	Spring Valley Hospital Medical Center	0	0.0%	0	0.0%
	St. Rose Dominican Hospital Blue Diamond	0	0.0%	0	0.0%
	St. Rose Dominican Hospital De Lima Campus	0	0.0%	0	0.0%
	St. Rose Dominican Hospital North Las Vegas	0	0.0%	0	0.0%
	St. Rose Dominican Hospital San Martin Campus	0	0.0%	0	0.0%
	<b>*St. Rose Dominican Hospital Siena Campus</b>	1	0.4%	1	0.4%
	St. Rose Dominican Hospital West Flamingo	0	0.0%	0	0.0%
St. Rose Dominican Hospital West Sahara	0	0.0%	0	0.0%	
Summerlin Hospital Medical Center	0	0.0%	0	0.0%	
<b>*Sunrise Hospital Medical Center</b>	1	0.4%	1	0.4%	
<b>*University Medical Center</b>	0	0.0%	0	0.0%	
Valley Hospital Medical Center	1	0.4%	1	0.4%	
Washoe County	Incline Village Community Hospital	0	0.0%	0	0.0%
	Northern Nevada Medical Center	0	0.0%	0	0.0%
	<b>*Renown Regional Medical Center</b>	30	12.3%	49	18.6%
	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	103	42.4%	104	39.5%
	Carson Valley Medical Center	106	43.6%	106	40.3%
	Desert View Hospital	0	0.0%	0	0.0%
	Grover C. Dils Medical Center	0	0.0%	0	0.0%
	Humboldt General Hospital	0	0.0%	0	0.0%
	Mt. Grant General Hospital	1	0.4%	1	0.4%
	Northeastern Nevada Regional Hospital	0	0.0%	0	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	0	0.0%	0	0.0%	
<b>Nevada (Total)</b>		243	100.0%	263	100.0%

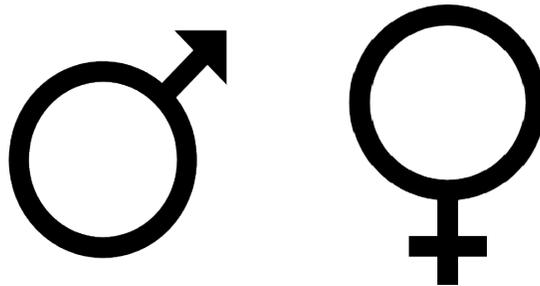
**Table 35: Trauma Incidence and Mortality Proportion by Trauma Center Designation for Trauma Center Levels 1-3**

Trauma Center designation	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Trauma Center level 1	1	1.9%	0	0.0%
Trauma Center level 2	50	96.2%	3	6.0%
Trauma Center Level 3	1	1.9%	0	0.0%
<b>Total</b>	<b>52</b>	<b>100.0%</b>	<b>3</b>	<b>5.8%</b>

**APPENDIX A: DEMOGRAPHICS**

**Table 36: Douglas County Trauma Cases by Sex (Unique Traumas)**

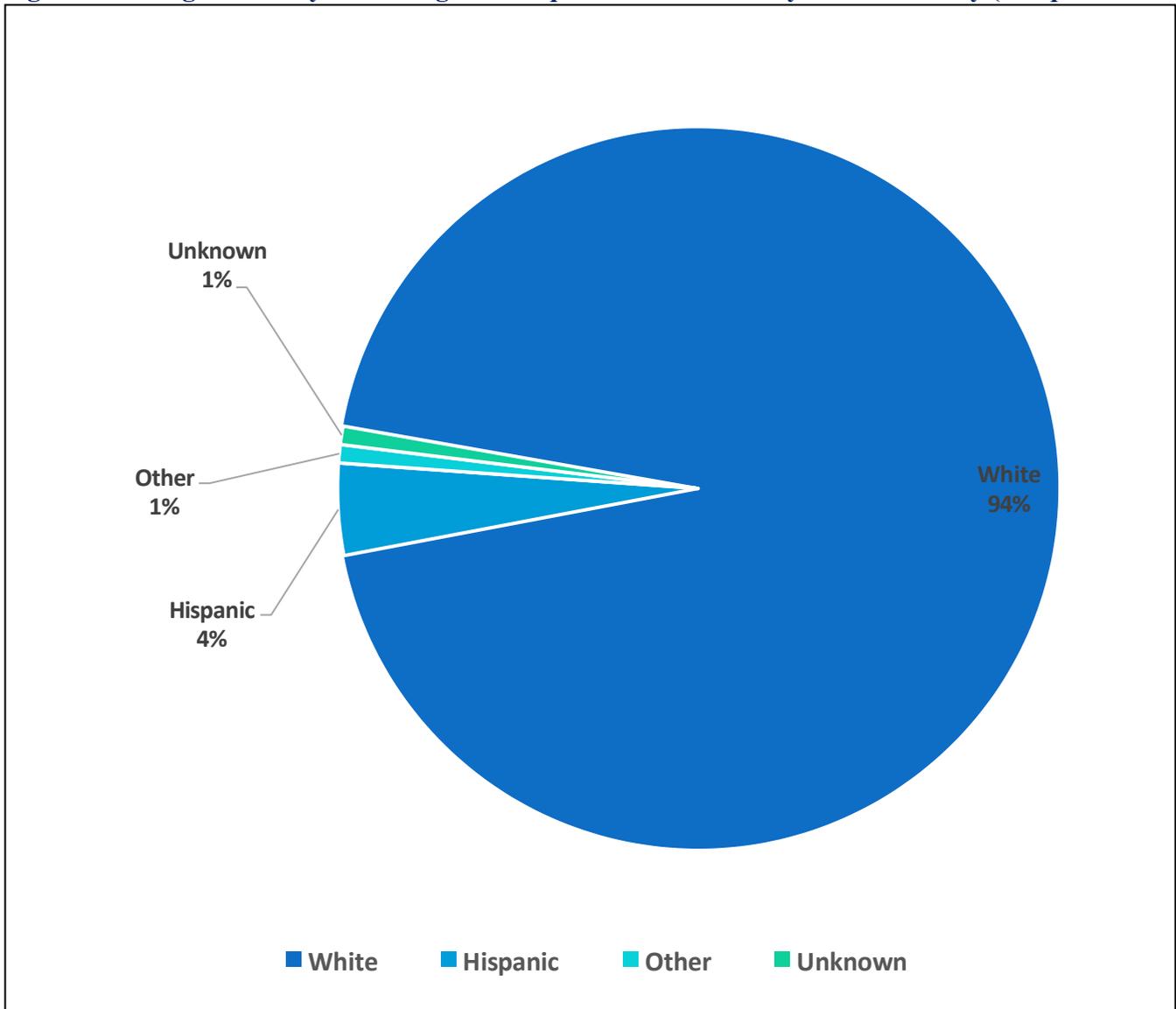
Sex	Count	Column Percent	Rate per 100,000 (95% CI)
Male	117	48.1%	7.3 (6.0-8.6)
Female	126	51.9%	7.8 (6.5-9.2)
<b>Total</b>	<b>243</b>	<b>100.0%</b>	<b>7.6 (6.6-8.5)</b>



**Table 37: Douglas County Trauma Cases by Race/Ethnicity (Unique Traumas)**

Race/Ethnicity	Count	Column Percent	Rate per 100,000 (95% CI)
White	229	94.2%	14.5 (12.6-16.4)
Hispanic	10	4.1%	1.0 (0.4-1.6)
Other	2	0.8%	. (-.)
Unknown	2	0.8%	. (-.)
<b>Total</b>	<b>243</b>	<b>100.0%</b>	<b>7.6 (6.6-8.5)</b>

**Figure 14: Douglas County Percentage of Unique Trauma Cases by Race/Ethnicity (Unique Traumas)**

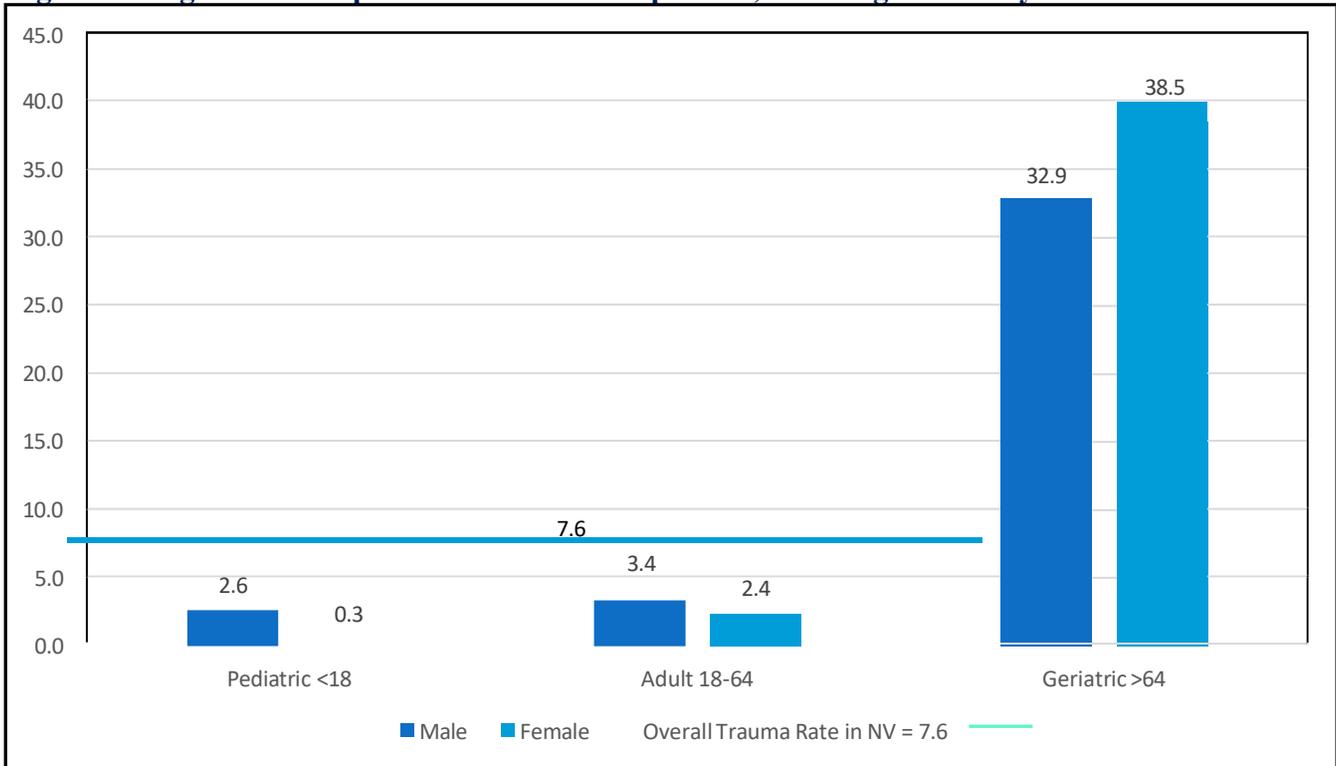


**Table 38: Douglas County Age-Specific Trauma Cases by Race/Ethnicity (Unique Traumas)**

Age Groups	White	Black	American Indian, Alaskan Native	Asian	Hispanic	Other	Unknown	Total
<1	0	0	0	0	0	0	1	1
1-5	3	0	0	0	0	0	0	3
6-17	6	0	0	0	1	0	0	7
18-24	8	0	0	0	1	0	0	9
25-34	7	0	0	0	3	0	0	10
35-44	4	0	0	0	2	0	1	7
45-54	8	0	0	0	0	0	0	8
55-64	23	0	0	0	0	0	0	23
65-74	42	0	0	0	3	1	0	46
75-84	67	0	0	0	0	1	0	68
85+	61	0	0	0	0	0	0	61
<b>Total</b>	<b>229</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>243</b>



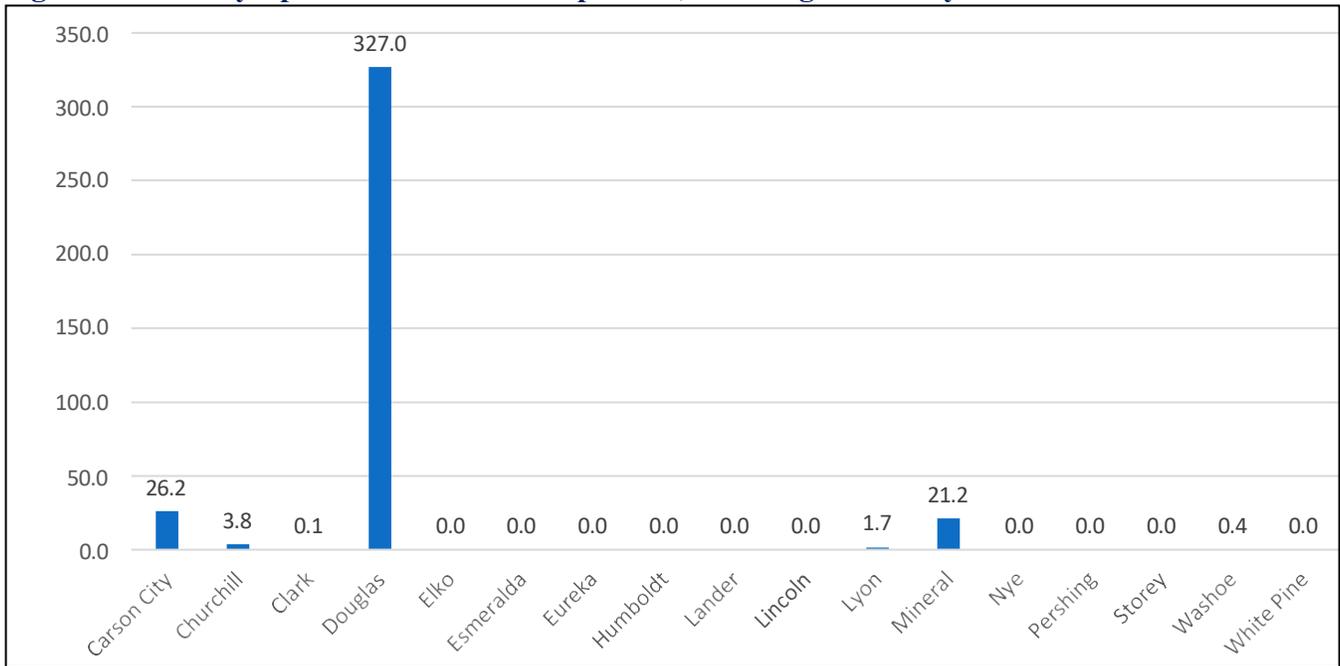
**Figure 15: Age and Sex-Specific Trauma Rates per 100,000 Douglas County Residents**



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

County	Count	Rate per 100,000 (95% CI)
Carson City	15	26.2 (12.9-39.5)
Churchill	1	3.8 (0.0-11.3)
Clark	2	0.1 (0.0-0.2)
Douglas	162	327.0 (276.7-377.4)
Elko	0	. (-.)
Esmeralda	0	. (-.)
Eureka	0	. (-.)
Humboldt	0	. (-.)
Lander	0	. (-.)
Lincoln	0	. (-.)
Lyon	1	1.7 (0.0-5.0)
Mineral	1	21.2 (0.0-62.8)
Nye	0	. (-.)
Pershing	0	. (-.)
Storey	0	. (-.)
Washoe	2	0.4 (0.0-1.0)
White Pine	0	. (-.)
Out of State	0	.
<b>Total</b>	<b>184</b>	<b>5.7 (4.9-6.6)</b>

**Figure 16: County-Specific Trauma Rates per 100,000 Douglas County Residents**



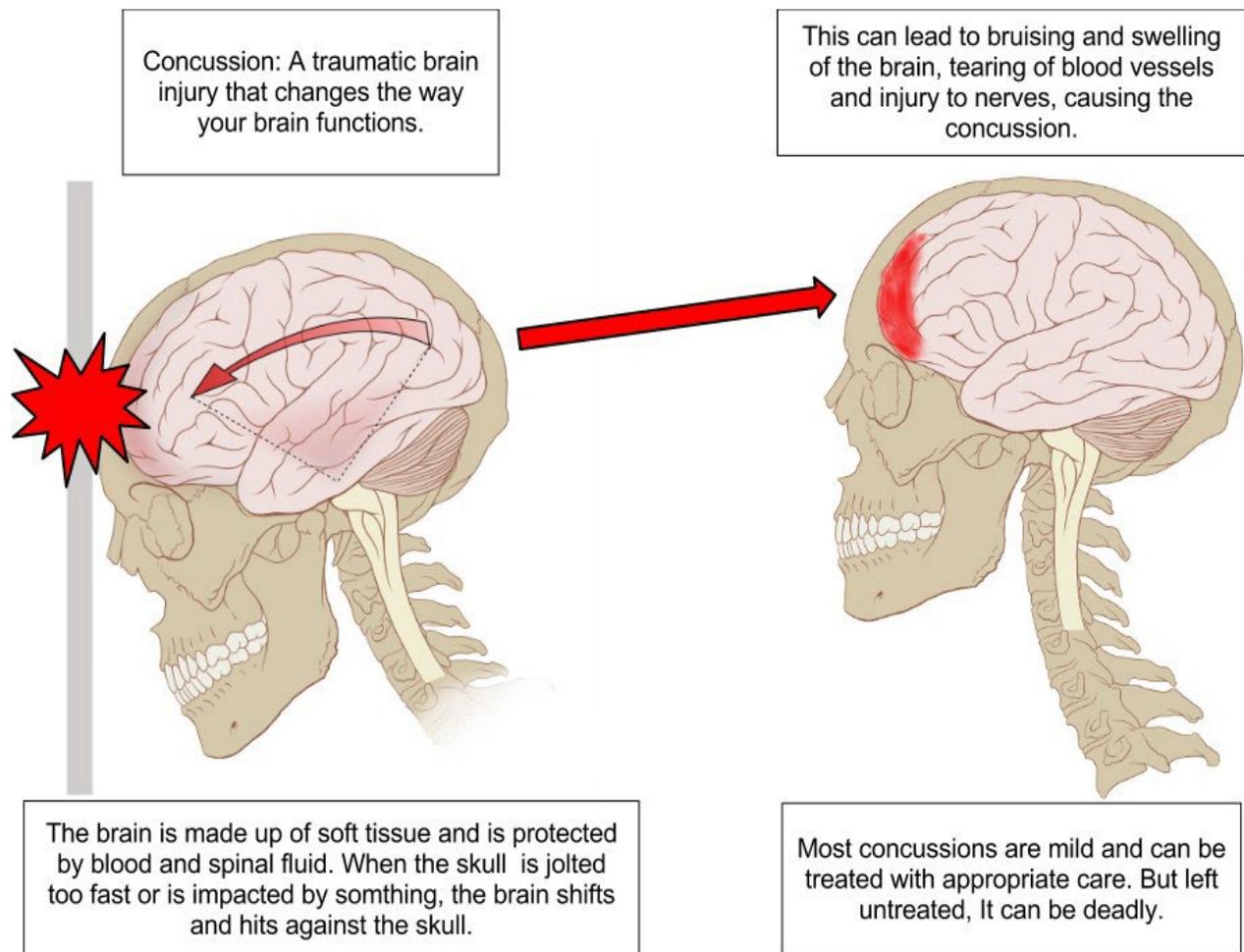
**Table 42: Douglas County Age-Specific Traumatic Brain Injury and Mortality Proportion (Unique Traumas)**

Age Group	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Pediatric <18	4	8.0%	0	0.0%
Adult 18-64	11	22.0%	0	0.0%
Geriatric >64	35	70.0%	3	8.6%
<b>Total</b>	<b>50</b>	<b>100.0%</b>	<b>3</b>	<b>6.0%</b>

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: Douglas County Age-Specific Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas)**

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
<1	1	2%	0	0%
1-5	1	2%	0	0%
6-17	2	4%	0	0%
18-24	2	4%	0	0%
25-34	2	4%	0	0%
35-44	1	2%	0	0%
45-54	2	4%	0	0%
55-64	4	8%	0	0%
65-74	12	24%	1	8%
75-84	12	24%	1	8%
85+	11	22%	1	9%
<b>Total</b>	<b>50</b>	<b>100%</b>	<b>3</b>	<b>6%</b>

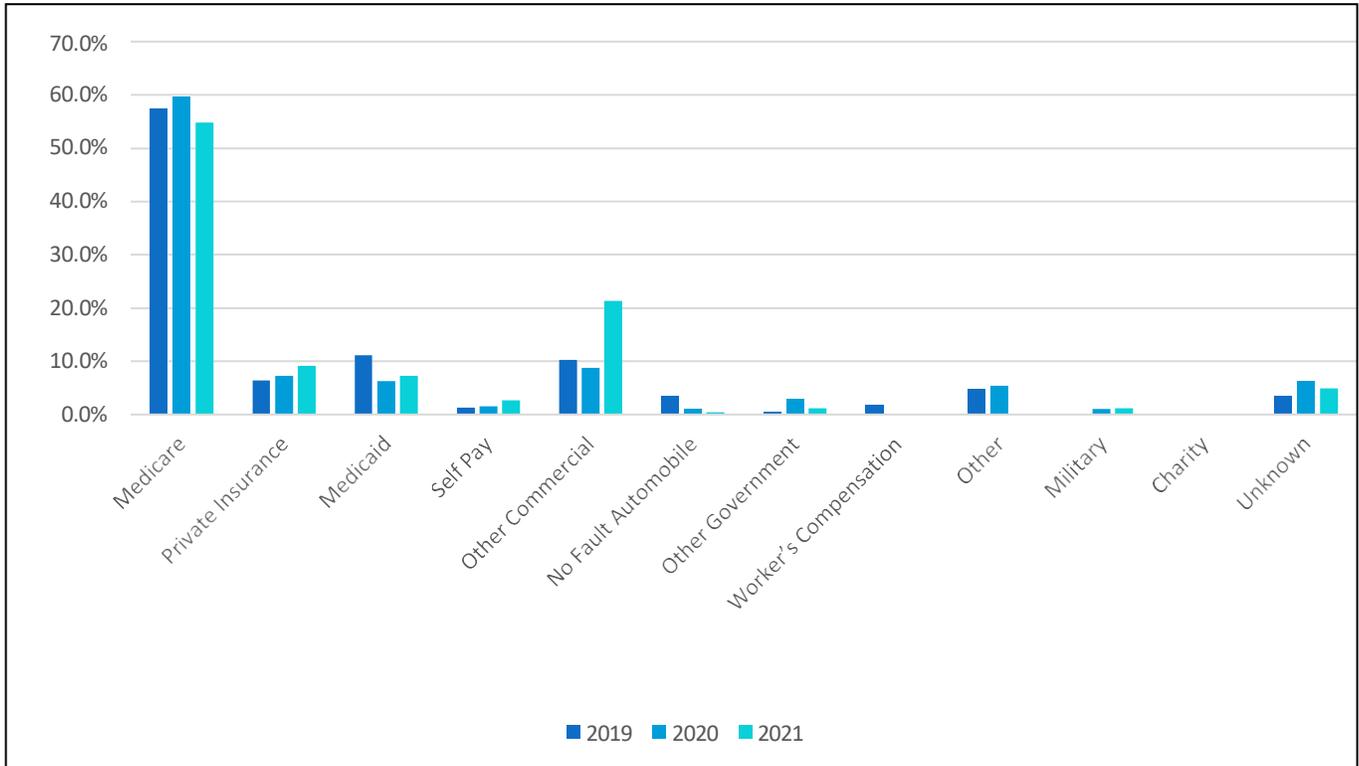


**Table 44: Douglas County Primary Payment Source Proportion for 2019-2021**

Primary Source of Payment	2019	2020	2021
Medicare	57.3%	59.5%	54.8%
Private Insurance	6.4%	7.3%	9.1%
Medicaid	11.1%	6.3%	7.2%
Self-Pay	1.3%	1.5%	2.7%
Other Commercial	10.3%	8.8%	21.3%
No-Fault Automobile	3.4%	1.0%	0.4%
Other Government	0.4%	2.9%	1.1%
Worker's Compensation	1.7%	0.0%	0.0%
Other	4.7%	5.4%	0.0%
Military	0.0%	1.0%	1.1%
Charity	0.0%	0.0%	0.0%
Unknown	3.4%	6.3%	4.9%

*Note: 2019 was the first year compared.*

**Figure 17: Douglas County Primary Payment Source Proportion for 2019, 2020, 2021 All Trauma Cases**



**APPENDIX A: PLACE AND MECHANISM OF INJURY**

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

Place of Injury	Trauma Count	Column Percent
Residential	150	61.7%
Street	21	8.6%
Unknown/Unspecified	13	5.3%
Other Specified	9	3.7%
Trade and Service Area	7	2.9%
Recreation area	6	2.5%
Wilderness	6	2.5%
Sports Area	5	2.1%
Farm	2	0.8%
<b>Total</b>	<b>243</b>	<b>100.0%</b>

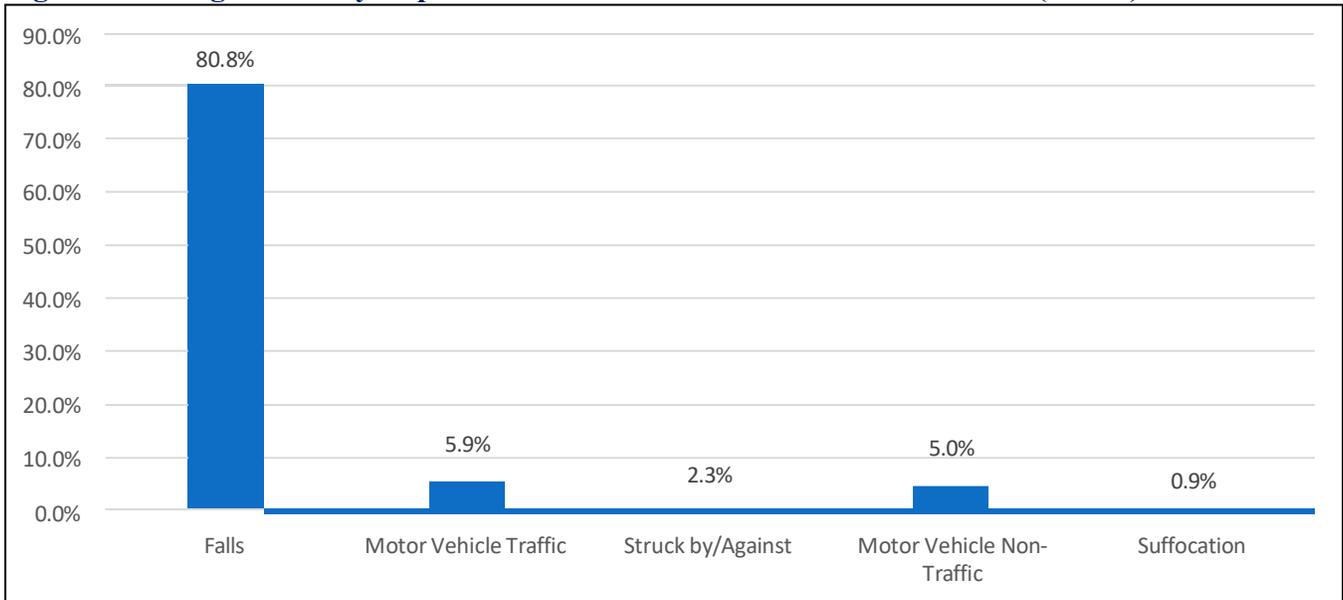
**Table 46: Douglas County Trauma Incidence and Mortality by Mechanism of Injury (Unique Traumas)**

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	169	72.2%	6	3.6%
Motor Vehicle Traffic	13	5.6%	0	0.0%
Cut/Pierce	9	3.8%	0	0.0%
Motor Vehicle Non-Traffic	8	3.4%	0	0.0%
Struck by/Against	8	3.4%	0	0.0%
Other Specified	5	2.1%	0	0.0%
Unknown	5	2.1%	0	0.0%
Suffocation	4	1.7%	0	0.0%
Other Transport (Land, Sea, Sky)	3	1.3%	0	0.0%
Unspecified	3	1.3%	0	0.0%
Firearm	2	0.9%	0	0.0%
Natural/Environmental	2	0.9%	0	0.0%
Pedal Cyclist, Other	2	0.9%	0	0.0%
Fire/Burn	1	0.4%	0	0.0%
<b>Total</b>	<b>234</b>	<b>100.0%</b>	<b>6</b>	<b>2.6%</b>

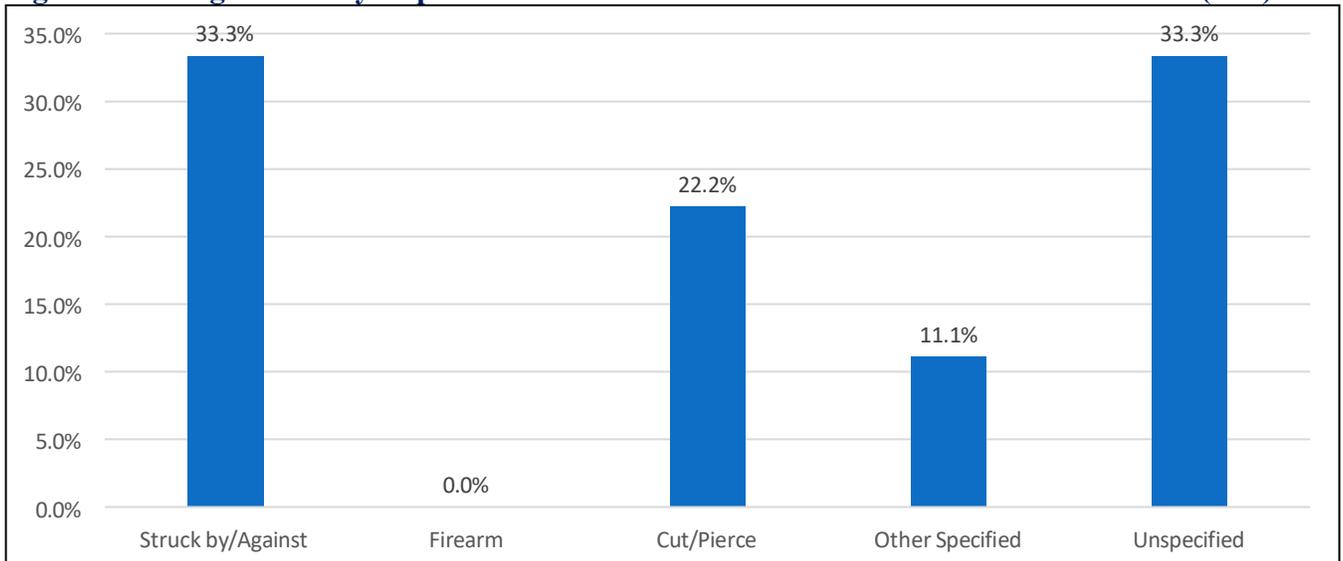
**Table 47: Douglas County Trauma Rates for Top Three Mechanisms of Injury by Age (Unique Traumas)**

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	3	0.4 (0.0-0.9)	2	0.3 (0.0-0.6)	3	0.4 (0.0-0.9)
Adult 18-64	19	1.0 (0.5-1.4)	3	0.2 (0.0-0.3)	7	0.4 (0.1-0.6)
Geriatric >64	155	31.9 (26.8-36.9)	4	0.8 (0.0-1.6)	3	0.6 (0.0-1.3)
<b>Total</b>	<b>177</b>	<b>5.5 (4.7-6.3)</b>	<b>9</b>	<b>0.3 (0.1-0.5)</b>	<b>13</b>	<b>0.4 (0.2-0.6)</b>

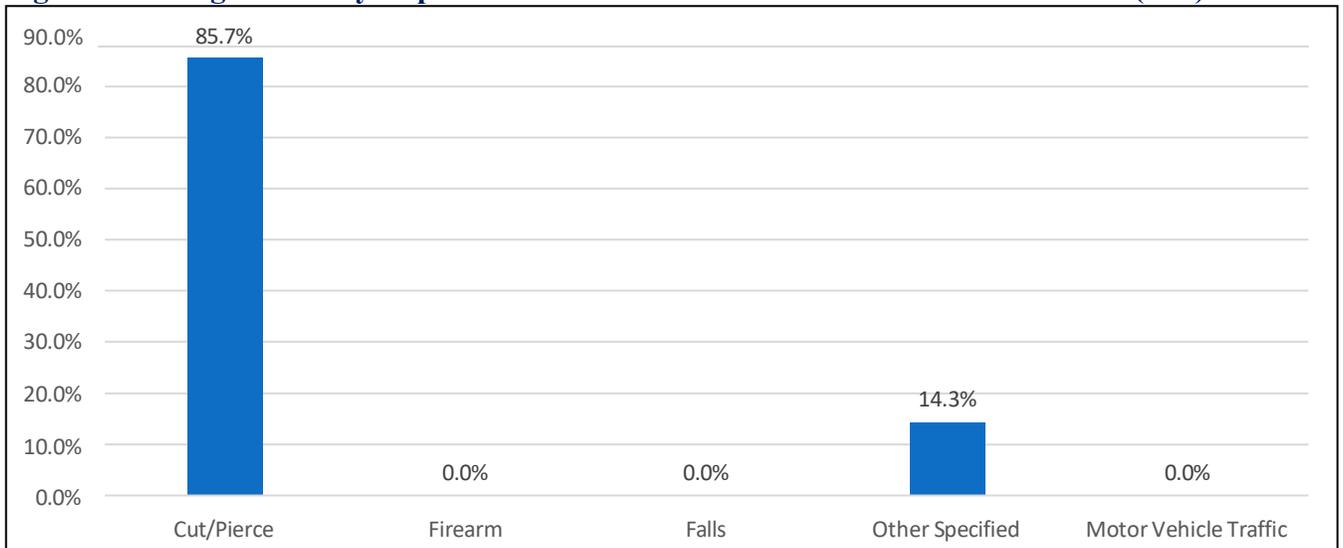
**Figure 18: Douglas County Top Five Mechanisms of Unintentional Trauma (n=208)**



**Figure 19: Douglas County Top Five Mechanisms of Homicide/Assault Related Trauma (n=9)**



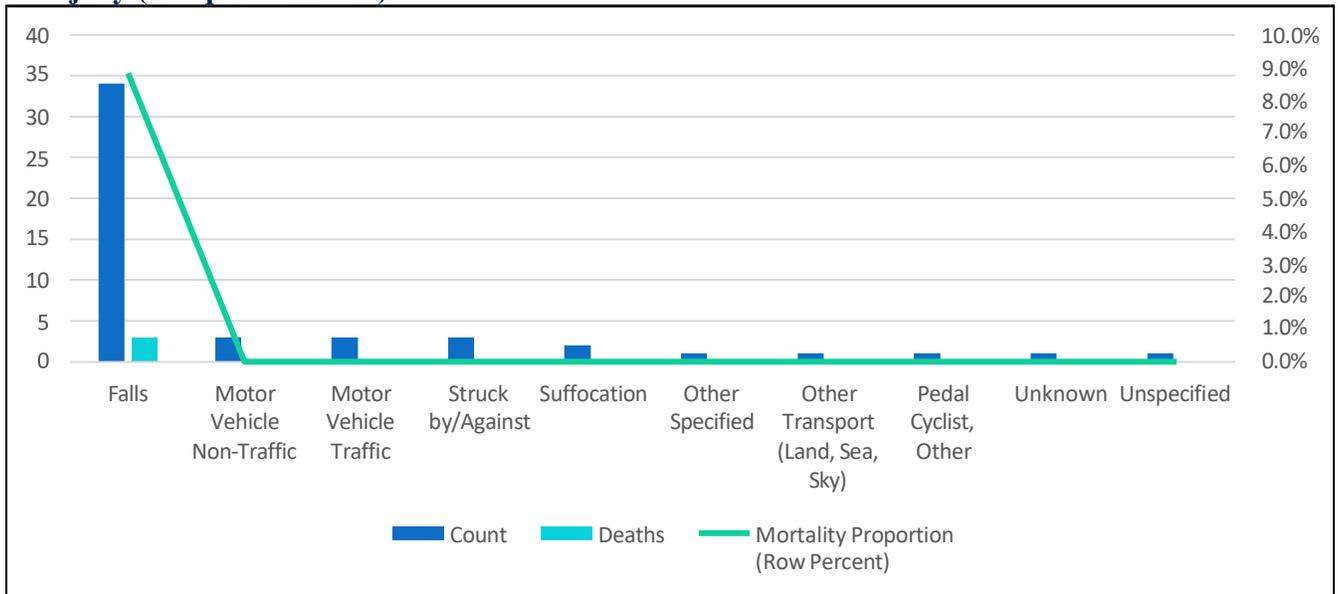
**Figure 20: Douglas County Top Five Mechanisms of Suicide/Self-Inflicted Trauma (n=7)**



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

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	34	68.0%	3	8.8%
Motor Vehicle Non-Traffic	3	6.0%	0	0.0%
Motor Vehicle Traffic	3	6.0%	0	0.0%
Struck by/Against	3	6.0%	0	0.0%
Suffocation	2	4.0%	0	0.0%
Other Specified	1	2.0%	0	0.0%
Other Transport (Land, Sea, Sky)	1	2.0%	0	0.0%
Pedal Cyclist, Other	1	2.0%	0	0.0%
Unknown	1	2.0%	0	0.0%
Unspecified	1	2.0%	0	0.0%
<b>Total</b>	<b>50</b>	<b>100.0%</b>	<b>3</b>	<b>6.0%</b>

**Figure 21: Douglas County Mortality Proportion of Traumatic Brain Injury Incidence by Mechanism of Injury (Unique Traumas)**



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

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

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Moderate, 9-15	119	49.6%	5	4.2%
Serious, 16-24	13	5.4%	0	0.0%
Severe, 25-75	5	2.1%	1	20.0%
<b>Total</b>	<b>240</b>	<b>100.0%</b>	<b>6</b>	<b>2.5%</b>

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

**Table 50: Douglas County 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	9	18.0%	0	0.0%
Moderate, 9-15	29	58.0%	2	6.9%
Serious, 16-24	9	18.0%	0	0.0%
Severe, 25-75	3	6.0%	1	33.3%
<b>Total</b>	<b>50</b>	<b>100.0%</b>	<b>3</b>	<b>0.0%</b>

*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	0	0	0	0	1
Douglas	2	0	1	0	1	4
Lyon	1	0	0	0	0	1
Unknown	2	1	1	0	0	4
Washoe	1	0	0	0	0	1
<b>Total</b>	<b>7</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>11</b>



## APPENDIX A: PATIENT TRANSPORTATION

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

Mode of Arrival	Trauma Count	Column Percent
Ground Ambulance	163	67.08%
Private Vehicle or Walk-in	62	25.51%
Helicopter Ambulance	12	4.94%
Police	5	2.06%
Fixed-Wing Ambulance	1	0.41%
<b>Total</b>	<b>243</b>	<b>100.00%</b>

**Table 53: Douglas County 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	64	93	6	0	0
Private Vehicle or Walk-in	34	27	1	0	0
Helicopter Ambulance	3	5	3	1	0
Police	5	0	0	0	0
Fixed-Wing Ambulance	0	1	0	0	0
<b>Total</b>	<b>106</b>	<b>126</b>	<b>10</b>	<b>1</b>	<b>0</b>

## APPENDIX A: PATIENT DISCHARGE AND TRANSFER

**Table 54: Douglas County 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	1.0	.	1 - 1
St. Rose Dominican Hospital Siena Campus	52	8.0	3.5	1 - 20
Sunrise Hospital Medical Center	2	9.0	0.0	9 - 9
University Medical Center	1	9.0	.	9 - 9

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

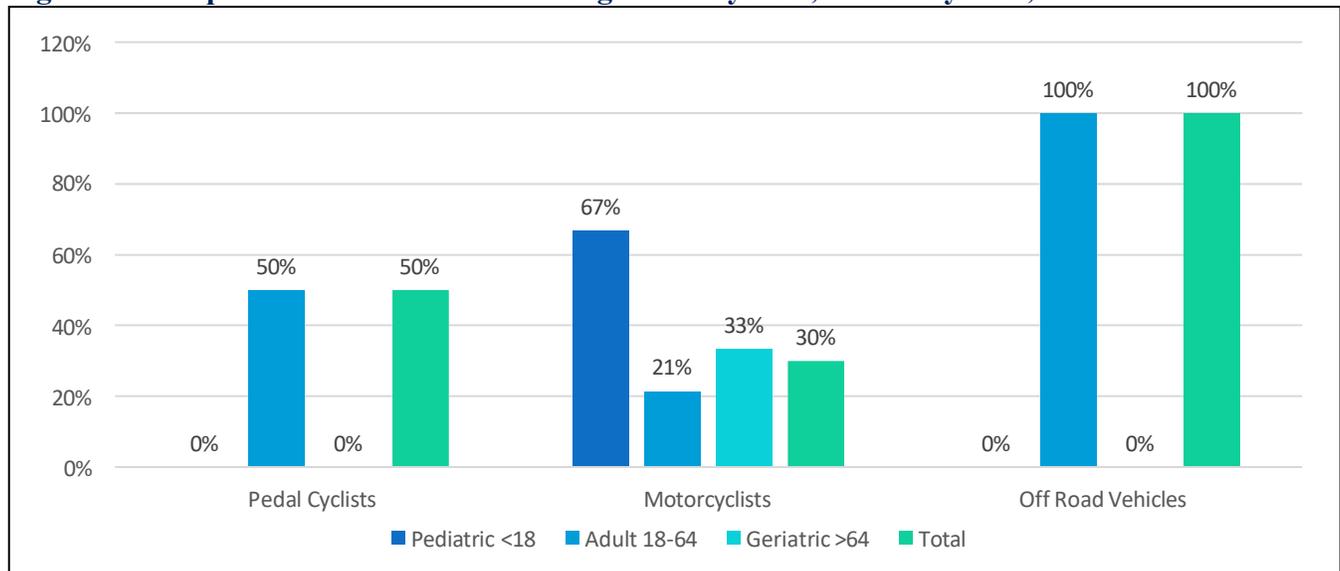
## APPENDIX A: RISK FACTORS: DRUG/ALCOHOL USE

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

Injury Intent	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Unintentional	219	16	7%
Suicide	7	3	43%
Homicide/Assault	9	5	56%
Legal Intervention	1	0	0%
Undetermined (accidental/intentional)	2	0	0%
Missing	5	1	20%
<b>Total</b>	<b>243</b>	<b>25</b>	<b>10%</b>

## APPENDIX A: SAFETY EQUIPMENT

Figure 22: Proportion of Helmet Use Among Pedal Cyclists, Motor Cyclists, and Off-Road Users



### (Unique Traumas)

Table 56: Douglas County Age-Specific Restraint Use Among Motor Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total
Seatbelt	0	3	1	4
Unknown	1	2	0	3
<b>Total</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>7</b>

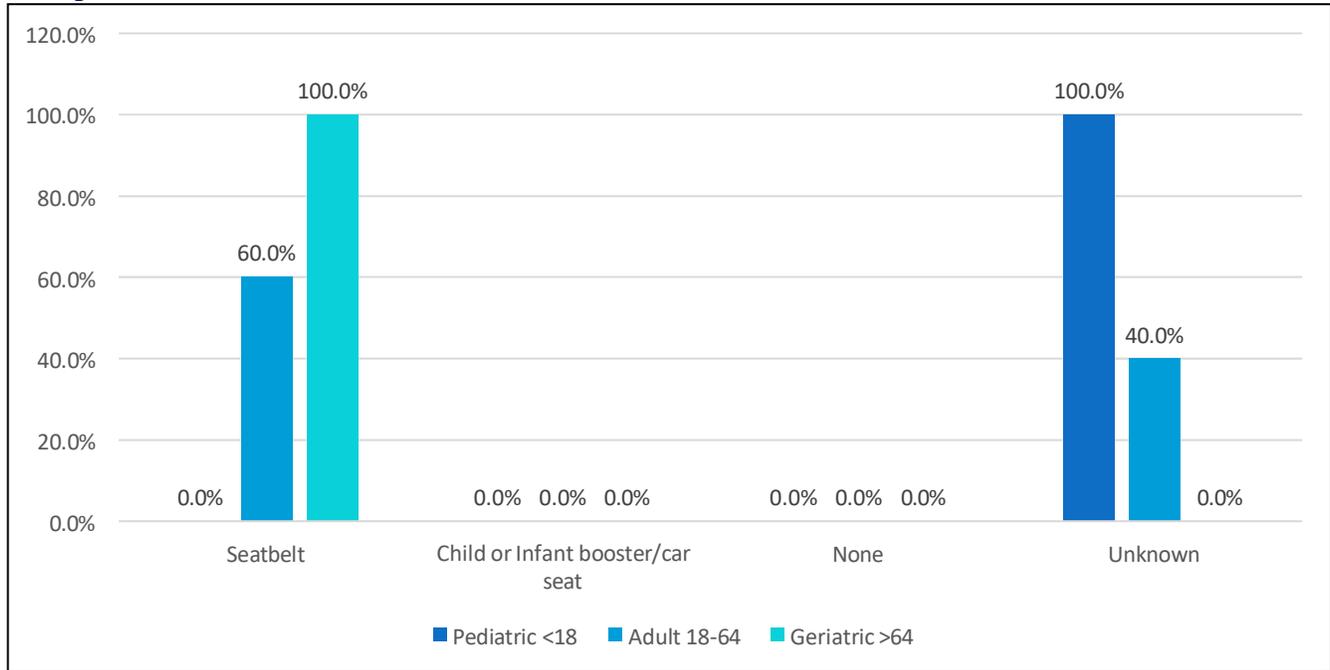
Table 57: Douglas County Age-Specific Proportion of Restraint Use Among Motor-Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total (column percent)
Seatbelt	0.0%	60.0%	100.0%	57.1%
Child or Infant booster/car seat	0.0%	0.0%	0.0%	0.0%
None	0.0%	0.0%	0.0%	0.0%
Unknown	100.0%	40.0%	0.0%	42.9%
<b>Total Age-Specific Proportion</b>	<b>14.3%</b>	<b>71.4%</b>	<b>14.3%</b>	<b>100.0%</b>

1. Among Motor vehicle occupants: 14.3% are <18, 71.4% are 18-64 and 14.3% are >64years.
2. Among Motor vehicle occupants, 57.1% used seatbelts, 0% used Child boosters/car seats, and 0% used no restraint. 42.9% of motor vehicle occupants have unknown restraint information.
3. Among all motor vehicle traffic occupants <18 years, 0% used seatbelts.



**Figure 23: Douglas County Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants**



**APPENDIX A: FALLS – BY LAST TRANSFER FACILITY**

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

Sex	n	Rate per 100,000 (95% CI)
Female	103	6.4 (5.2-7.6)
Male	23	4.6 (3.6-5.7)
<b>Total</b>	<b>126</b>	<b>5.5 (4.7-6.3)</b>

**Table 59: Douglas County 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)	97	54.8%	3	3.1%
Unspecified	47	26.6%	1	2.1%
From Furniture	12	6.8%	1	8.3%
Fall Due to Environmental Factors	6	3.4%	0	0.0%
Multi-Level: Cliff, Tree, Water, etc.	5	2.8%	0	0.0%
Steps	5	2.8%	1	20.0%
On or From Ladder/Scaffolding	4	2.3%	0	0.0%
Pedestrian Conveyance Accident	1	0.6%	0	0.0%
<b>Total</b>	<b>177</b>	<b>100.0%</b>	<b>6</b>	<b>3.4%</b>

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: Douglas County 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	.	1	0.5 (0.2-0.8)	0	.
Adult 18-64	0	.	10	17.7 (13.9-21.4)	0	.
Geriatric >64	5	1.0 (0.1-1.9)	86	17.7 (13.9-21.4)	12	17.7 (13.9-21.4)
<b>Total</b>	<b>5</b>	<b>0.2 (0.0-0.3)</b>	<b>97</b>	<b>3.0 (2.4-3.6)</b>	<b>12</b>	<b>0.4 (0.2-0.6)</b>



# 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 *Trauma Center	Unique Traumas Trauma Patients^		Total Trauma Cases*	
Clark County	Boulder City Hospital	1	0.1%	1	0.1%
	Centennial Hills Hospital	1	0.1%	1	0.1%
	Desert Springs Hospital Center	0	0.0%	0	0.0%
	Henderson ER at Green Valley Ranch	0	0.0%	0	0.0%
	Henderson Hospital	0	0.0%	0	0.0%
	Mesa View Regional Hospital	0	0.0%	0	0.0%
	Mike O'Callaghan Federal Medical Center	0	0.0%	0	0.0%
	Mountain View ER at Aliante	0	0.0%	0	0.0%
	Mountain View Hospital	0	0.0%	0	0.0%
	North Vista Hospital	1	0.1%	1	0.1%
	Southern Hills ER at the Lakes	0	0.0%	0	0.0%
	Southern Hills Hospital Medical Center	0	0.0%	0	0.0%
	Spring Valley ER at Blue Diamond	0	0.0%	0	0.0%
	Spring Valley Hospital Medical Center	0	0.0%	0	0.0%
	St. Rose Dominican Hospital Blue Diamond	0	0.0%	0	0.0%
	St. Rose Dominican Hospital De Lima Campus	1	0.1%	1	0.1%
	St. Rose Dominican Hospital North Las Vegas	0	0.0%	0	0.0%
	St. Rose Dominican Hospital San Martin Campus	0	0.0%	0	0.0%
	<b>*St. Rose Dominican Hospital Siena Campus</b>	0	0.0%	0	0.0%
	St. Rose Dominican Hospital West Flamingo	0	0.0%	0	0.0%
	St. Rose Dominican Hospital West Sahara	0	0.0%	0	0.0%
Summerlin Hospital Medical Center	0	0.0%	0	0.0%	
<b>*Sunrise Hospital Medical Center</b>	4	0.5%	5	0.6%	
<b>*University Medical Center</b>	0	0.0%	3	0.4%	
Valley Hospital Medical Center	0	0.0%	0	0.0%	
Washoe County	Incline Village Community Hospital	0	0.0%	0	0.0%
	Northern Nevada Medical Center	94	12.1%	94	11.7%
	<b>*Renown Regional Medical Center</b>	361	46.5%	387	48.0%
	Renown South Meadows Medical Center	192	24.7%	192	23.8%
	St. Mary's Regional Medical Center	87	11.2%	87	10.8%
All Other Counties	Banner Churchill Community Hospital	6	0.8%	6	0.7%
	Battle Mountain General Hospital	0	0.0%	0	0.0%
	Carson Tahoe Regional Medical Center	21	2.7%	21	2.6%
	Carson Valley Medical Center	2	0.3%	2	0.2%
	Desert View Hospital	0	0.0%	0	0.0%
	Grover C. Dils Medical Center	0	0.0%	0	0.0%
	Humboldt General Hospital	2	0.3%	2	0.2%
	Mt. Grant General Hospital	0	0.0%	0	0.0%
	Northeastern Nevada Regional Hospital	2	0.3%	2	0.2%
	Pershing General Hospital	0	0.0%	0	0.0%
	South Lyon Medical Center	0	0.0%	0	0.0%
Williams Bee Ririe Hospital	1	0.1%	1	0.1%	
<b>Nevada (Total)</b>		<b>776</b>	<b>100.0%</b>	<b>806</b>	<b>100.0%</b>

\* Unique Trauma Patients are calculated by matching transferred patients based on birth date, injury date, patient zip code, and discharge/arrival date and only counted once by the facility where they first presented with the trauma (excepted when mortality data is analyzed), which is represented as Unique Trauma throughout the report.

\*Total Trauma cases are all the cases reported to the Nevada Trauma Registry for 2021.

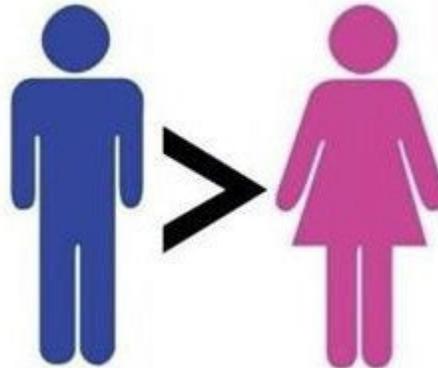
**Table 62: Washoe County Trauma Incidence and Mortality Proportion by Trauma Center Designation for Trauma Center Levels 1 & 2.**

Trauma Center designation	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Trauma Center level 1	3	0.8%	0	0.0%
Trauma Center level 2	392	99.2%	31	7.9%
<b>Total</b>	<b>395</b>	<b>100.0%</b>	<b>31</b>	<b>7.8%</b>

**APPENDIX B: DEMOGRAPHICS**

**Table 63: Washoe County Trauma Cases by Sex (Unique Traumas)**

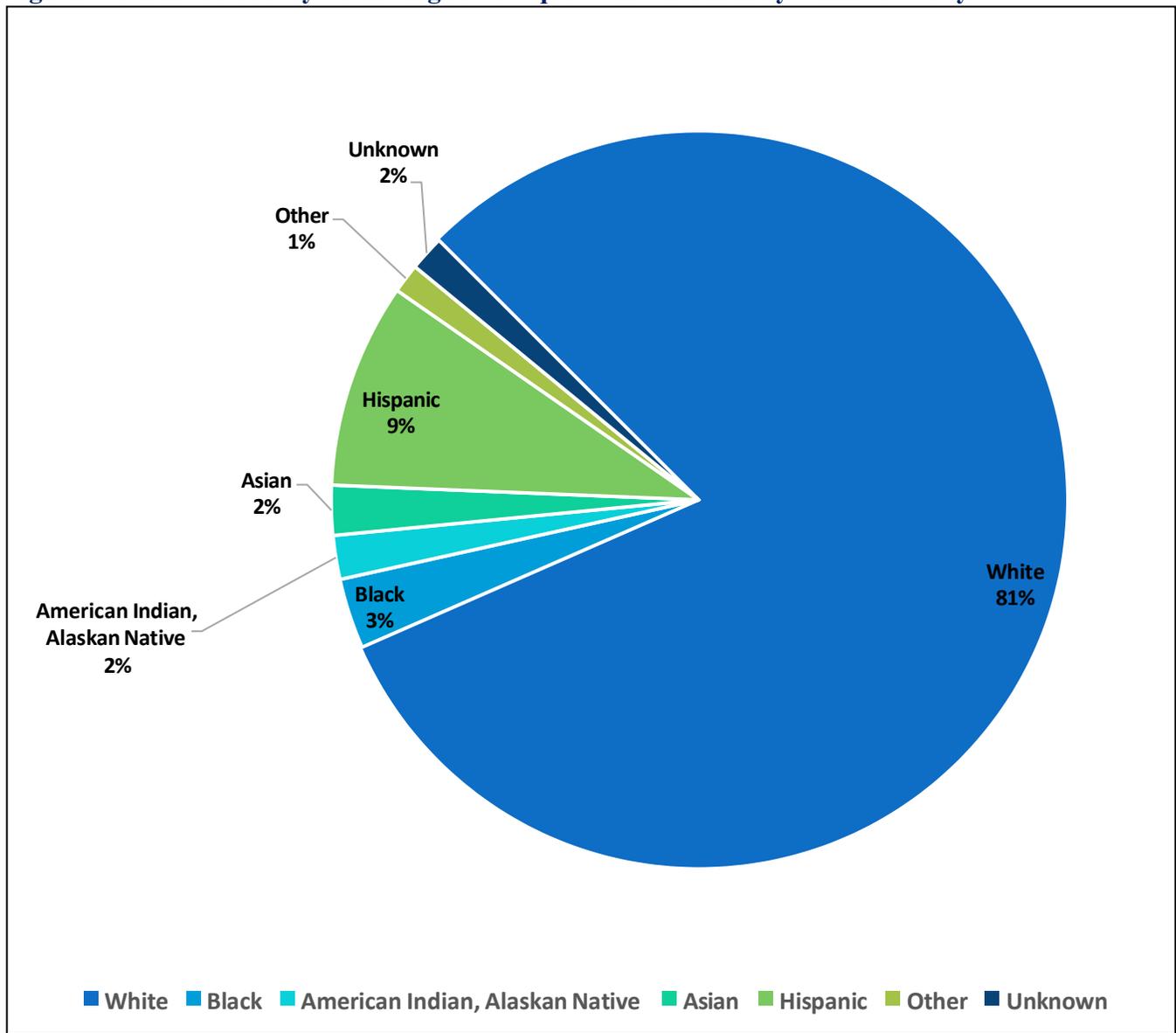
Sex	Count	Column Percent	Rate per 100,000 (95% CI)
Male	426	54.9%	26.5 (24.0-29.0)
Female	350	45.1%	21.8 (19.5-24.1)
Total	776	100%	24.1 (22.4-25.8)



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

Race/Ethnicity	Count	Column Percent	Rate per 100,000 (95% CI)
White	628	80.9%	39.9 (36.7-43.0)
Black	24	3.1%	8.3 (5.0-11.6)
American Indian, Alaskan Native	15	1.9%	41.5 (20.5-62.5)
Asian	17	2.2%	5.2 (2.7-7.7)
Hispanic	70	9.0%	7.1 (5.4-8.8)
Other	10	1.3%	. (-.)
Unknown	12	1.5%	. (-.)
<b>Total</b>	<b>776</b>	<b>100.0%</b>	<b>24.1 (22.4-25.8)</b>

**Figure 24: Washoe County Percentage of Unique Trauma Cases by Race/Ethnicity**



**Table 65: Washoe County 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	11	1	0	0	3	0	0	15
6-17	26	0	3	0	9	0	1	39
18-24	32	1	2	1	10	3	4	53
25-34	46	4	3	1	17	0	1	72
35-44	38	4	3	2	9	1	2	59
45-54	50	4	1	2	7	0	0	64
55-64	74	8	0	1	8	2	1	94
65-74	138	2	2	1	2	2	0	147
75-84	108	0	1	6	1	1	1	118
85+	104	0	0	2	4	1	2	113
<b>Total</b>	<b>628</b>	<b>24</b>	<b>15</b>	<b>17</b>	<b>70</b>	<b>10</b>	<b>12</b>	<b>776</b>

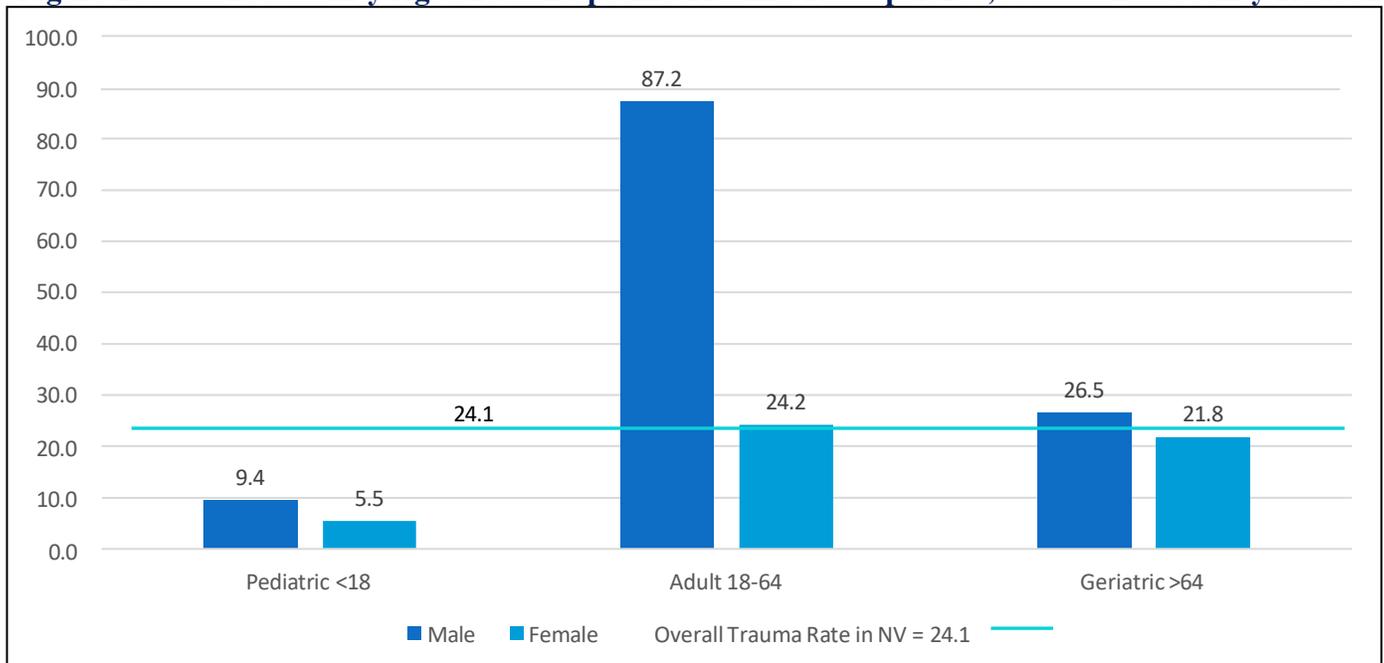
**Table 66: Washoe County Age-Specific Trauma Cases and Mortality Proportion (Unique Traumas)**

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
<1	2	0.3%	0	0.0%
1-5	15	1.9%	1	6.7%
6-17	39	5.0%	0	0.0%
18-24	54	6.9%	1	1.9%
25-34	72	9.2%	1	1.4%
35-44	60	7.7%	5	8.3%
45-54	64	8.2%	1	1.6%
55-64	94	12.1%	11	11.7%
65-74	147	18.9%	10	6.8%
75-84	119	15.3%	3	2.5%
85+	113	14.5%	3	2.7%
<b>Total</b>	<b>779</b>	<b>100.0%</b>	<b>36</b>	<b>4.6%</b>

**Table 67: Washoe County Age and Sex-Specific Trauma Rates per 100,000 Washoe County 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	36	9.4 (6.4-12.5)	20	5.5 (3.1-7.9)	56	7.5 (5.5-9.5)
Adult 18-64	243	87.2 (76.0-98.5)	99	24.2 (21.2-27.3)	342	17.3 (15.4-19.1)
Geriatric >64	147	26.5 (24.0-29.0)	231	21.8 (19.5-24.1)	378	24.1 (22.4-25.8)
<b>Total</b>	<b>426</b>	<b>26.5 (24.0-29.0)</b>	<b>350</b>	<b>21.8 (19.5-24.1)</b>	<b>776</b>	<b>24.1 (22.4-25.8)</b>

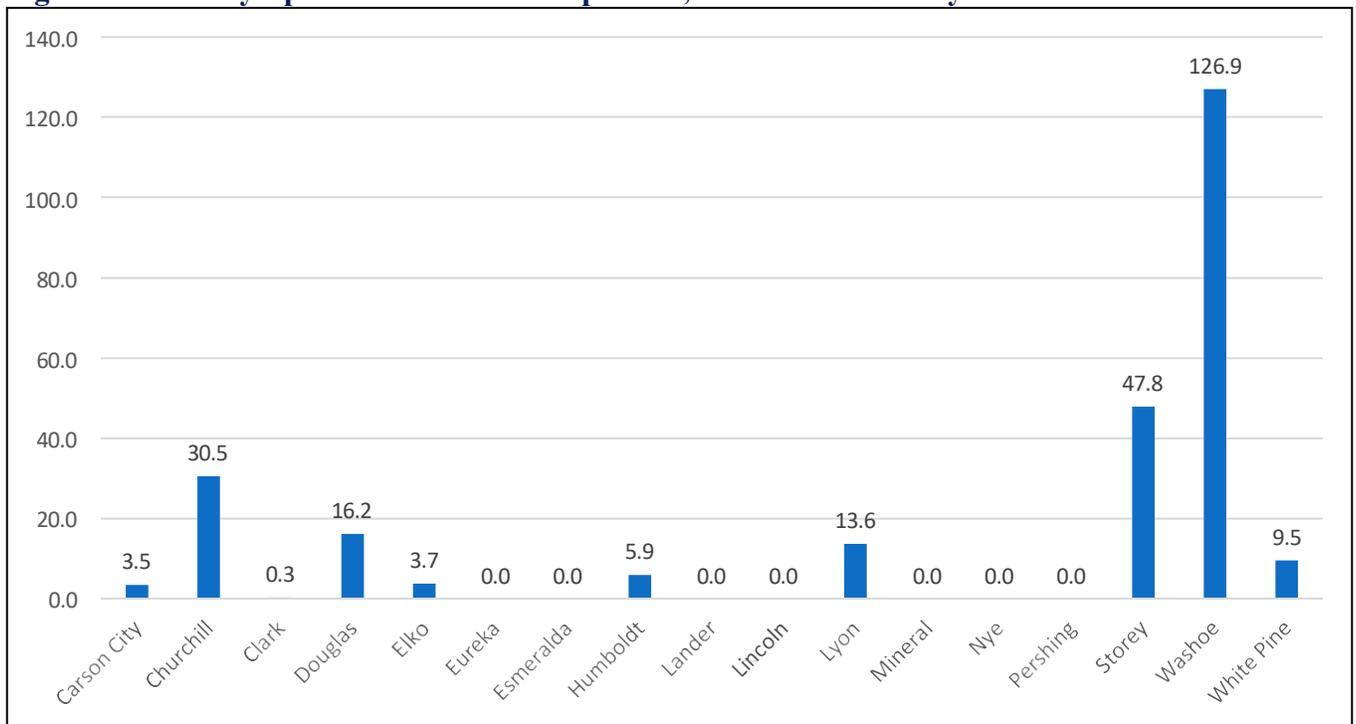
**Figure 25: Washoe County Age and Sex-Specific Trauma Rates per 100,000 Washoe County Residents**



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

County	Count	Rate per 100,000 (95% CI)
Carson City	2	3.5 (-1.3-8.3)
Churchill	8	30.5 (9.4-51.6)
Clark	6	0.3 (0.1-0.5)
Douglas	8	16.2 (5.0-27.3)
Elko	2	3.7 (-1.4-8.8)
Humboldt	1	5.9 (-5.7-17.5)
Lyon	8	13.6 (4.2-23.0)
Storey	2	47.8 (-18.5-114.1)
Washoe	612	126.9 (116.9-137.0)
White Pine	1	9.5 (-9.1-28.1)
Out of State	29	-

**Figure 26: County-Specific Trauma Rates per 100,000 Washoe County Residents**



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

Age Group	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Pediatric <18	21	12.8%	1	4.8%
Adult 18-64	88	53.7%	8	9.1%
Geriatric >64	55	33.5%	6	10.9%
<b>Total</b>	<b>164</b>	<b>100%</b>	<b>15</b>	<b>9.1%</b>

*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: Washoe County Age-Specific Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas)**

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
<1	2	1.2%	0	0.0%
1-5	6	3.7%	1	16.7%
6-17	13	7.9%	0	0.0%
18-24	13	7.9%	1	7.7%
25-34	15	9.1%	1	6.7%
35-44	19	11.6%	2	10.5%
45-54	14	8.5%	0	0.0%
55-64	27	16.5%	4	14.8%
65-74	25	15.2%	5	20.0%
75-84	18	11.0%	0	0.0%
85+	12	7.3%	1	8.3%
<b>Total</b>	<b>164</b>	<b>100.0%</b>	<b>15</b>	<b>9.1%</b>

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

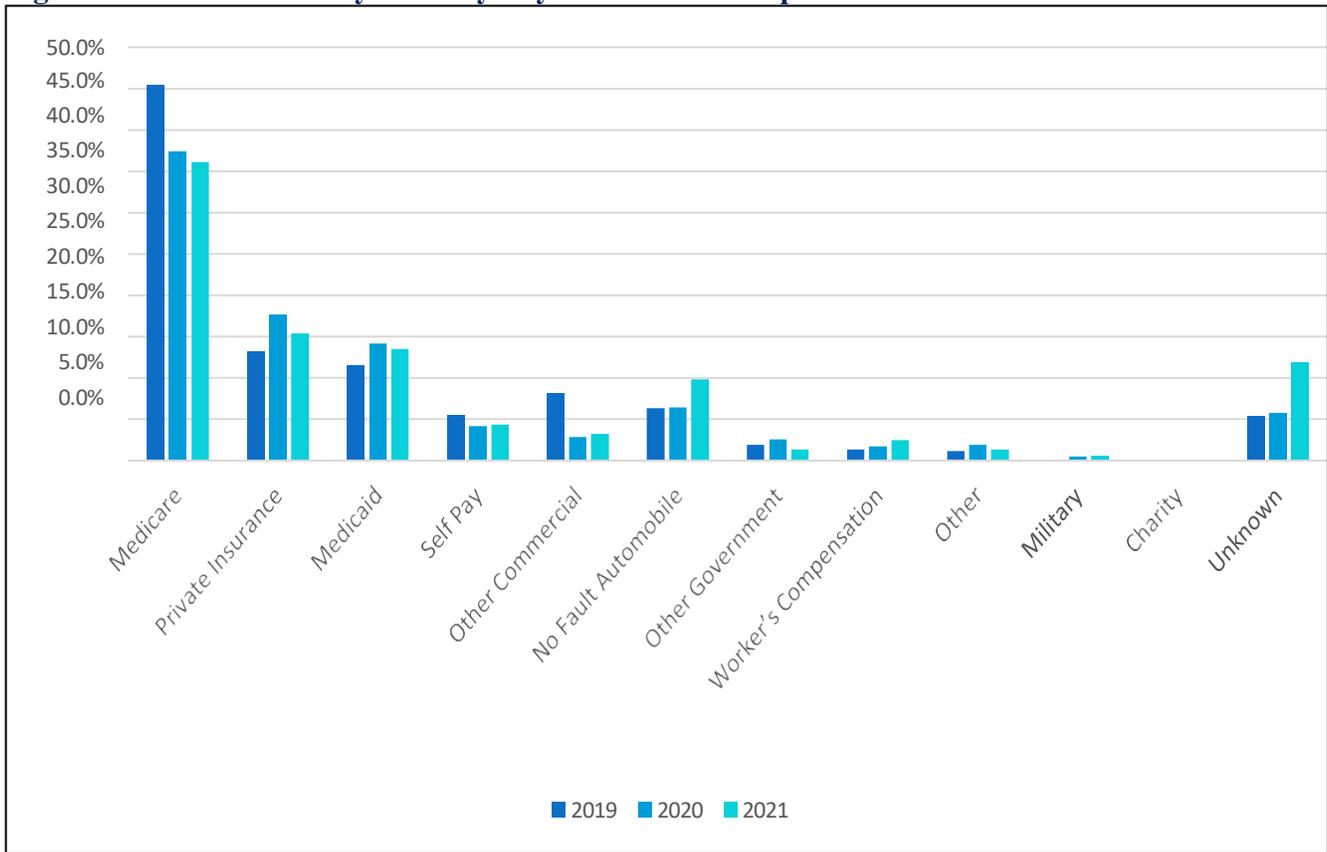
**Table 71: Washoe County Primary Payment Source Proportion for 2019, 2020 All Trauma Cases**

Primary Source of Payment	2019	2020	2021
Medicare	45.4%	37.3%	36.1%
Private Insurance	13.1%	17.6%	15.4%
Medicaid	11.5%	14.1%	13.5%
Self-Pay	5.5%	4.2%	4.3%
Other Commercial	8.2%	2.9%	3.2%
No-Fault Automobile	6.4%	6.4%	9.8%
Other Government	1.9%	2.5%	1.4%
Worker's Compensation	1.3%	1.7%	2.5%
Other	1.2%	1.9%	1.4%
Military	0.0%	0.5%	0.6%
Charity	0.0%	0.1%	0.0%
Unknown	5.4%	5.7%	11.8%

Note: 2019 was the first year compared

\*\*395 combined payment

**Figure 27: Washoe County Primary Payment Source Proportion for 2019-2021 All Trauma Cases**



## APPENDIX B: PLACE AND MECHANISM OF INJURY

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

Place of Injury	Trauma Count	Percent
Residential	349	45.0%
Street	237	30.5%
Recreation area	35	4.5%
Trade and Service Area	32	4.1%
Wilderness	22	2.8%
Industrial and Construction	14	1.8%
Sports Area	7	0.9%
School or Public Area	6	0.8%
Other Specified	4	0.5%
Railroad Track	3	0.4%
Farm	2	0.3%
Transport Vehicle as Place	2	0.3%
Unknown/Unspecified	63	8.1%
<b>Total</b>	<b>776</b>	<b>100%</b>



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

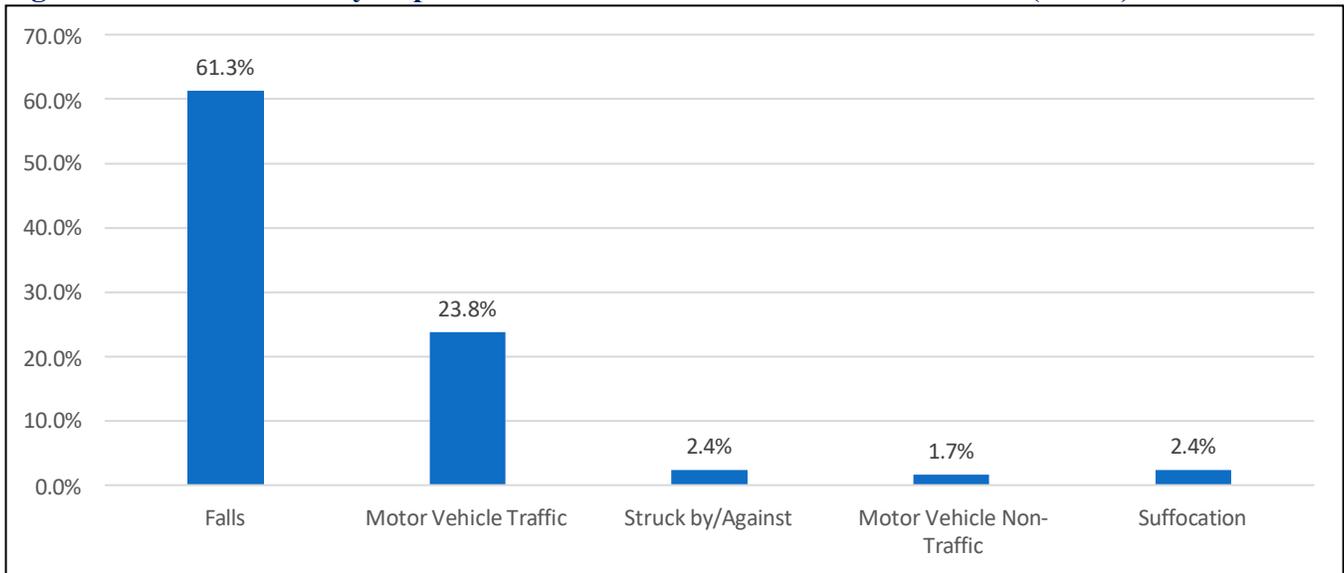
Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	440	56.5%	18	4.1%
Motor Vehicle Traffic	171	22.0%	12	7.0%
Struck by/Against	38	4.9%	1	2.6%
Cut/Pierce	28	3.6%	1	3.6%
Pedal Cyclist, Other	21	2.7%	0	0.0%
Suffocation	20	2.6%	0	0.0%
Motor Vehicle Non-Traffic	12	1.5%	0	0.0%
Other Transport (Land, Sea, Sky)	11	1.4%	0	0.0%
Other Specified	10	1.3%	0	0.0%
Firearm	9	1.2%	3	33.3%
Pedestrian, Other	6	0.8%	1	16.7%
Overexertion	4	0.5%	0	0.0%
Fire/Burn	3	0.4%	0	0.0%
Natural/Environmental	3	0.4%	0	0.0%
Unknown	2	0.3%	0	0.0%
Machinery	1	0.1%	0	0.0%
<b>Total</b>	<b>779</b>	<b>100.0%</b>	<b>36</b>	<b>4.6%</b>

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

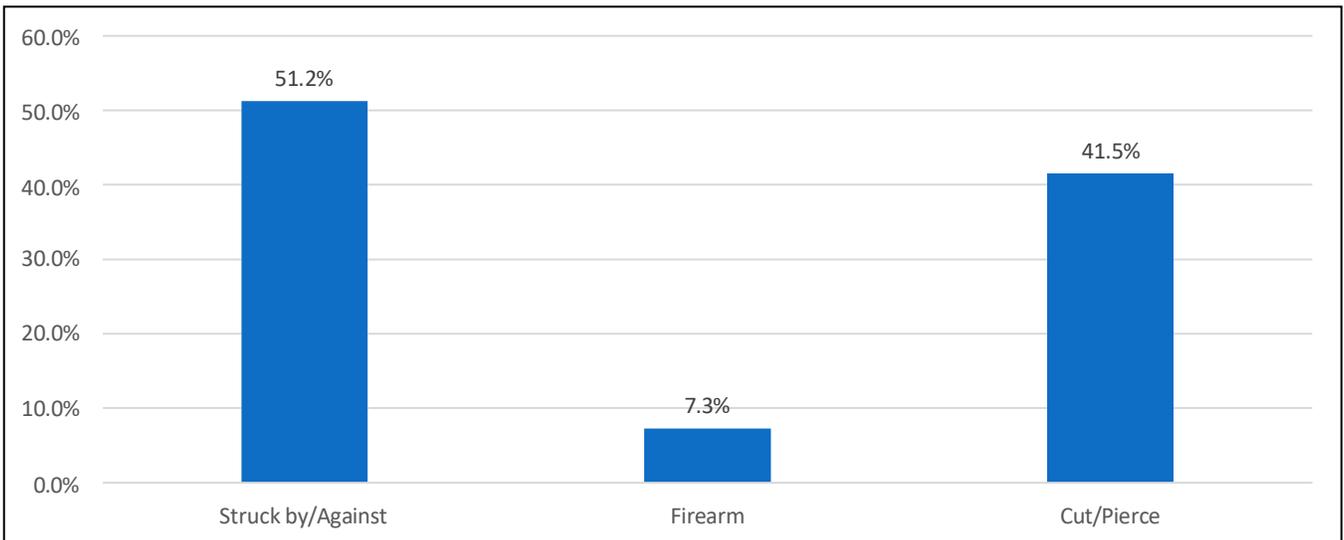
**Table 74: Washoe County Trauma Rates for Top Three Mechanisms of Injury by Age (Unique Traumas)**

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	14	1.9 (0.9-2.9)	4	0.5 (0.0-1.1)	17	2.3 (1.2-3.4)
Adult 18-64	100	5.0 (4.1-6.0)	30	1.5 (1.0-2.1)	125	6.3 (5.2-7.4)
Geriatric >64	326	67.0 (59.7-74.3)	4	0.8 (0.0-1.6)	28	5.8 (3.6-7.9)
<b>Total</b>	<b>440</b>	<b>5.3 (4.5-6.1)</b>	<b>38</b>	<b>1.2 (0.8-1.6)</b>	<b>170</b>	<b>5.3 (4.5-6.1)</b>

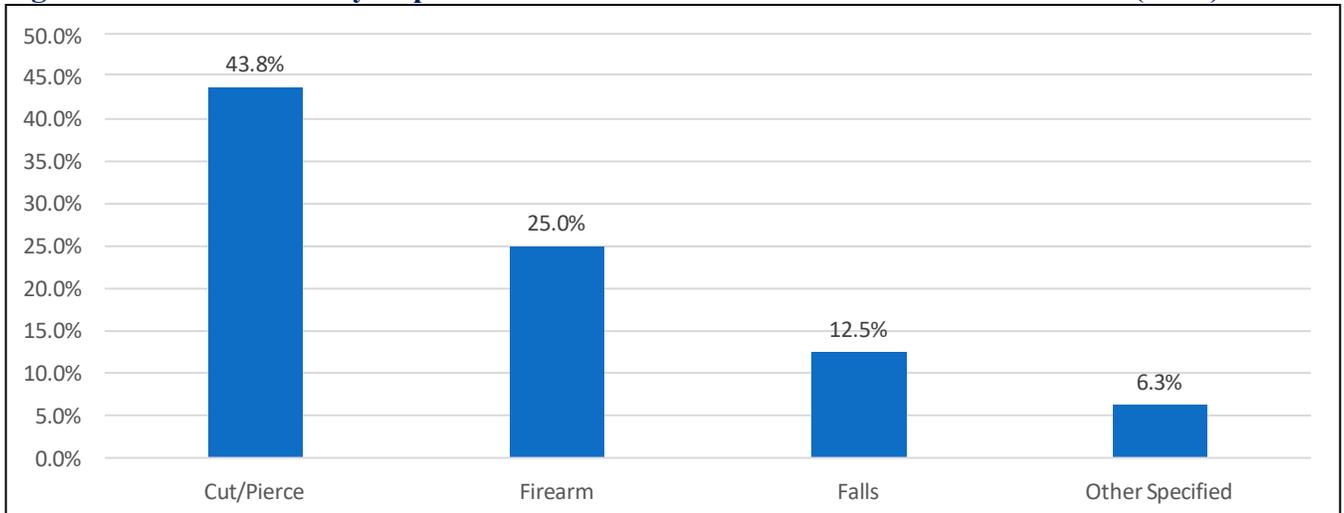
**Figure 28: Washoe County Top Five Mechanisms of Unintentional Trauma (n=654)**



**Figure 29: Washoe County Top Three Mechanisms of Homicide/Assault-Related Trauma (n=41)**



**Figure 30: Washoe County Top Four Mechanisms of Suicide/Self-Inflicted Trauma (n=16)**

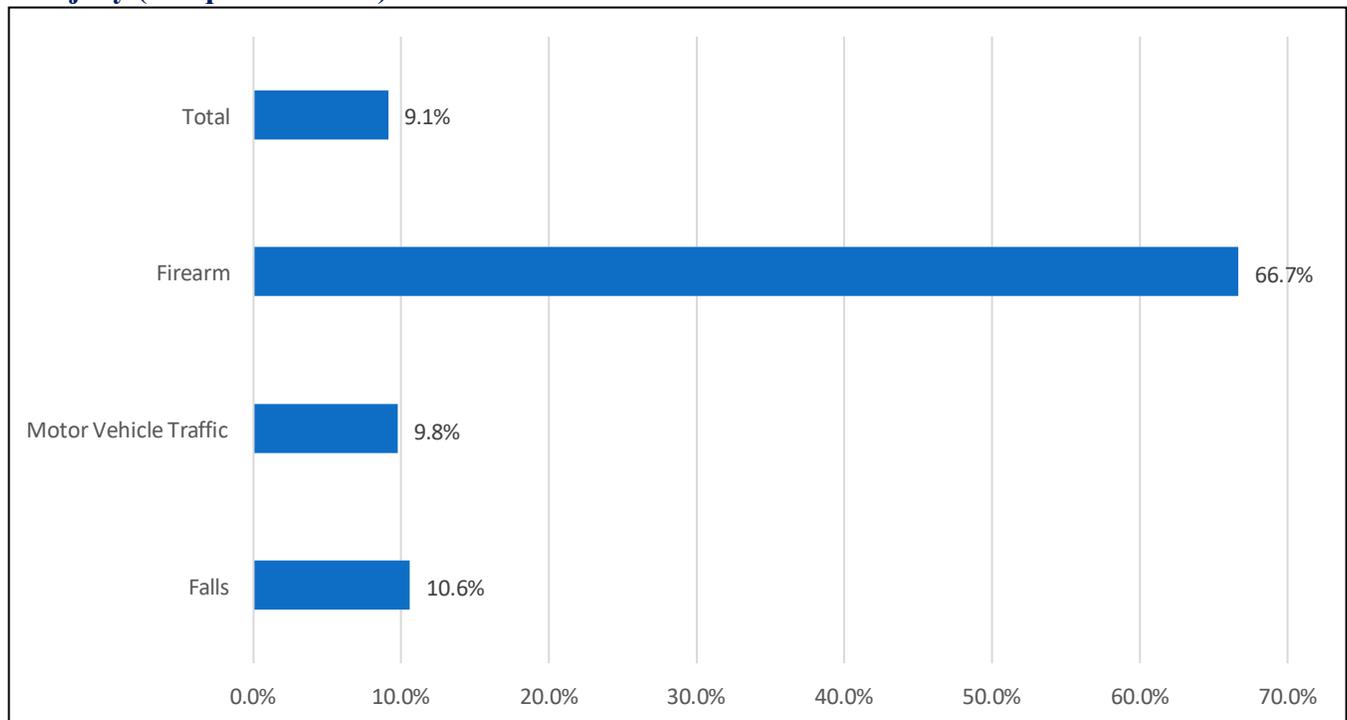


**Table 75: Washoe County Traumatic Brain Injury Incidence and Mortality by Mechanism of Injury**

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	85	51.8%	9	10.6%
Motor Vehicle Traffic	41	25.0%	4	9.8%
Struck by/Against	17	10.4%	0	0.0%
Pedal Cyclist, Other	5	3.0%	0	0.0%
Suffocation	4	2.4%	0	0.0%
Firearm	3	1.8%	2	66.7%
Motor Vehicle Non-Traffic	3	1.8%	0	0.0%
Other Transport (Land, Sea, Sky)	3	1.8%	0	0.0%
Other Specified	2	1.2%	0	0.0%
Cut/Pierce	1	0.6%	0	0.0%
<b>Total</b>	<b>164</b>	<b>100.0%</b>	<b>15</b>	<b>9.1%</b>

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

**Figure 31: Washoe County Mortality Proportion of Traumatic Brain Injury Incidence by Mechanism of Injury (Unique Traumas)**



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

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

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Minor, 1-8	275	35.3%	2	0.7%
Moderate, 9-15	357	45.8%	7	2.0%
Serious, 16-24	95	12.2%	8	8.4%
Severe, 25-75	50	6.4%	19	38.0%
Missing/NA/ND	2	0.3%	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.*

**Table 77: Washoe County 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	29	17.7%	0	0.0%
Moderate, 9-15	76	46.3%	1	1.3%
Serious, 16-24	34	20.7%	3	8.8%
Severe, 25-75	25	15.2%	11	44.0%
<b>Total</b>	<b>164</b>	<b>100.0%</b>	<b>15</b>	<b>0.0%</b>

*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	1	0	0	0	0
Clark	2	1	0	0	0	0
Douglas	0	1	0	0	0	0
Humboldt	0	1	0	0	0	0
Lincoln	3	0	0	0	0	0
Lyon	0	1	0	0	0	0
Pershing	1	0	0	0	0	0
Storey	15	1	0	0	0	0
Unknown	83	0	3	1	1	0
Washoe	0	12	2	0	1	0
Out of State	0	4	1	1	0	1
<b>Total</b>	<b>112</b>	<b>22</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>1</b>

## **APPENDIX B: PATIENT TRANSPORTATION**



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

Mode of Arrival	Trauma Count	Percent
Missing	1	0.13%
Ground Ambulance	571	73.58%
Private Vehicle or Walk-in	163	21.01%
Helicopter Ambulance	38	4.90%
Police	2	0.26%
Fixed-Wing Ambulance	1	0.13%
<b>Total</b>	<b>776</b>	<b>100.00%</b>

**Table 80: Washoe County 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
Missing	0	1	0	0	0
Ground Ambulance	273	182	77	38	1
Private Vehicle or Walk-in	69	87	4	2	1
Helicopter Ambulance	11	5	14	8	0
Police	1	0	0	1	0
Fixed-Wing Ambulance	0	0	0	1	0
<b>Total</b>	<b>354</b>	<b>275</b>	<b>95</b>	<b>50</b>	<b>2</b>

## APPENDIX B: PATIENT DISCHARGE AND TRANSFER

Table 81: Washoe County 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	74	7.3	3.4	1 - 17
Sunrise Hospital Medical Center	2	13.0	17.0	1 - 25
University Medical Center	2	8.5	0.7	8 - 9

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

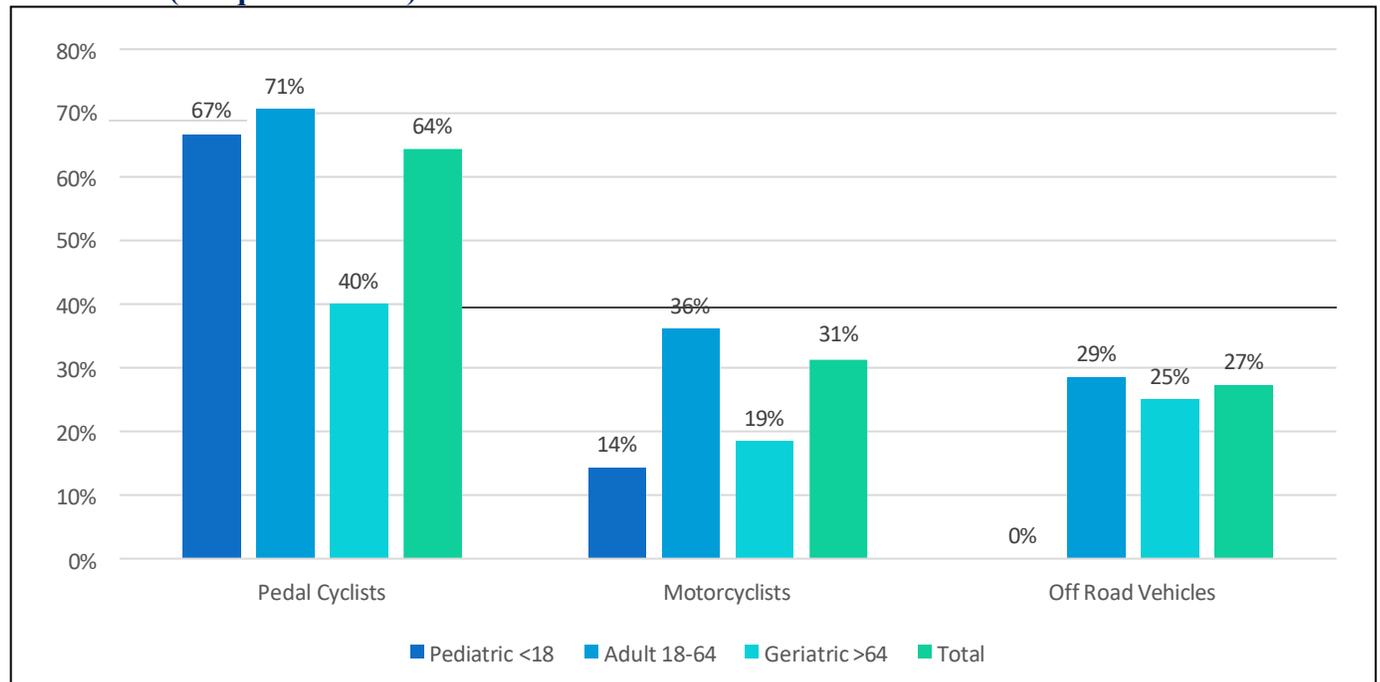
## APPENDIX B: RISK FACTORS: DRUG/ALCOHOL USE

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

Injury Intent	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Unintentional	715	113	16%
Suicide	16	8	50%
Homicide/Assault	41	20	49%
Undetermined (accidental/intentional)	2	0	0%
Missing	2	0	0%
<b>Total</b>	<b>776</b>	<b>141</b>	<b>18%</b>

## APPENDIX B: SAFETY EQUIPMENT

Figure 32: Washoe County Proportion of Helmet Use Among Pedal Cyclists, Motorcyclists, and Off-Road Users (Unique Traumas)



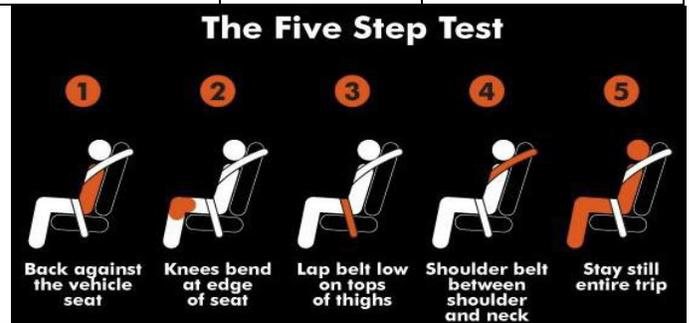
**Table 83: Washoe County Age-Specific Restraint Use Among Motor Vehicle Traffic Occupants**

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total
Seatbelt	5	36	14	55
Child or Infant booster/car seat	2	0	0	2
None	5	23	3	31
Unknown	0	5	0	5
<b>Total</b>	<b>12</b>	<b>64</b>	<b>17</b>	<b>93</b>

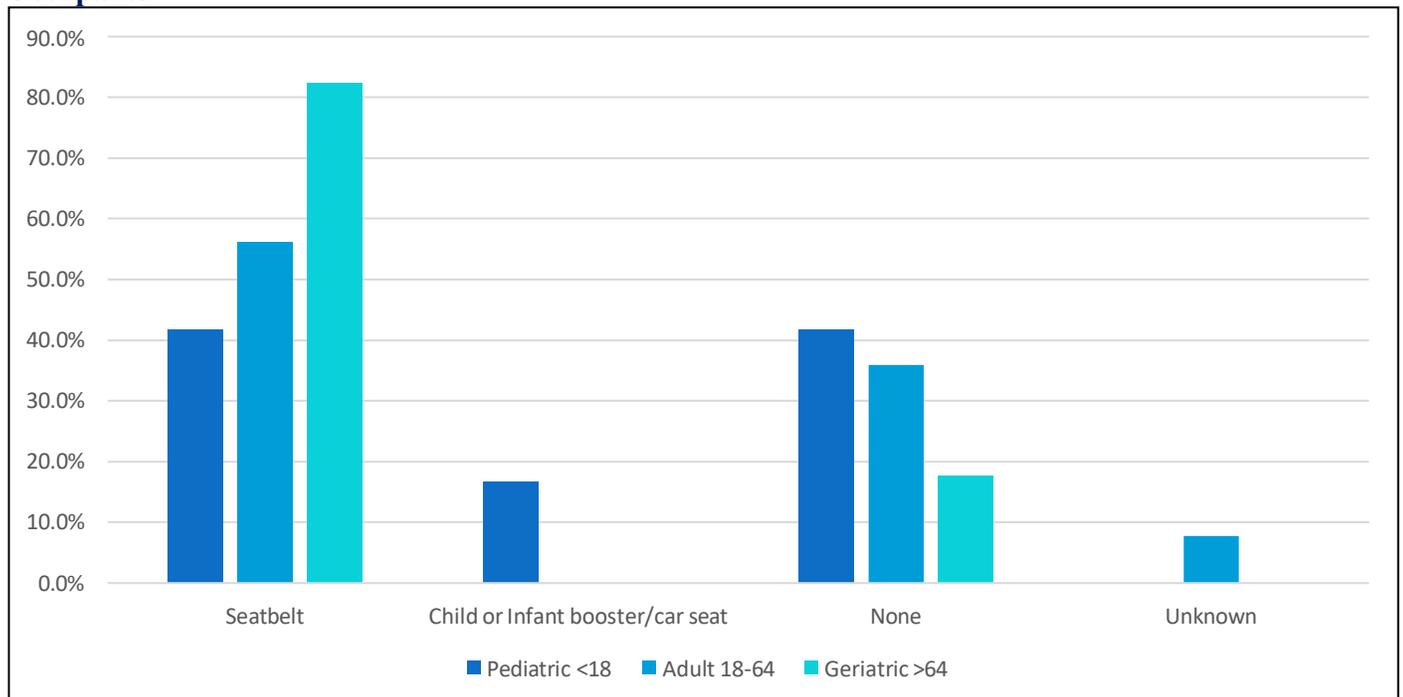
**Table 84: Washoe County Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants**

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total (column percent)
Seatbelt	41.7%	56.3%	82.4%	59.1%
Child or Infant booster/car seat	16.7%	0.0%	0.0%	2.2%
None	41.7%	35.9%	17.6%	33.3%
Unknown	0.0%	7.8%	0.0%	5.4%
<b>Total Age-Specific Proportion</b>	<b>12.9%</b>	<b>68.8%</b>	<b>18.3%</b>	<b>100.0%</b>

1. Among motor vehicle occupants: 12.9% are <18, 68.8% are 18-64 and 18.3% are >64.
2. Among motor vehicle occupants: 59.1% used seatbelts, 2.2% used child booster/care seat, 33.3% used no restraint, and 5.4% of motor vehicle occupants had unknown restraint information.
3. Among all motor vehicle traffic occupants, <18 years, 41.7% used seatbelts.



**Figure 33: Washoe County Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants**



## APPENDIX B: FALLS – BY LAST TRANSFER FACILITY

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

Sex	n	Rate per 100,000 (95% CI)
Female	258	16.0 (14.1-18.0)
Male	195	12.1 (10.4-13.8)
Total	453	14.1 (12.8-15.4)

**Table 86: Washoe County 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)	293	64.7%	10	3.4%
From Furniture	28	6.2%	1	3.6%
Steps	24	5.3%	3	12.5%
Unspecified	20	4.4%	1	5.0%
Multi-Level: Cliff, Tree, Water, etc.	19	4.2%	0	0.0%
Pedestrian Conveyance Accident	19	4.2%	1	5.3%
Fall Due to Environmental Factors	16	3.5%	1	6.3%
On or From Ladder/Scaffolding	15	3.3%	1	6.7%
Out of Building or Structure	10	2.2%	0	0.0%
Playground Equipment	6	1.3%	0	0.0%
Suicide-Related	2	0.4%	0	0.0%
Collision, Push or Shove By, or Other Person	1	0.2%	0	0.0%
<b>Total</b>	<b>453</b>	<b>100.0%</b>	<b>18</b>	<b>4.0%</b>

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: Washoe County 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	2	0.3 (0.0-0.6)	1	0.1 (0.0-0.4)
Adult 18-64	7	0.4 (0.1-0.6)	43	2.2 (1.5-2.8)	7	0.4 (0.1-0.6)
Geriatric >64	17	3.5 (1.8-5.2)	248	51.0 (44.6-57.3)	20	4.1 (2.3-5.9)
<b>Total</b>	<b>24</b>	<b>0.0 (0.0-0.0)</b>	<b>293</b>	<b>0.0 (0.0-0.0)</b>	<b>28</b>	<b>1.0 (0.0-0.0)</b>

# 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 *Trauma Center	Unique Traumas Trauma Patients^		Total Trauma Cases*	
Clark County	Boulder City Hospital	42	0.5%	42	0.5%
	Centennial Hills Hospital	207	2.6%	208	2.4%
	Desert Springs Hospital Center	43	0.5%	43	0.5%
	Henderson ER at Green Valley Ranch	80	1.0%	80	0.9%
	Henderson Hospital	247	3.1%	248	2.9%
	Mesa View Regional Hospital	8	0.1%	8	0.1%
	Mike O'Callaghan Federal Medical Center	47	0.6%	47	0.5%
	Mountain View ER at Aliante	2	0.0%	2	0.0%
	Mountain View Hospital	733	9.3%	738	8.6%
	North Vista Hospital	136	1.7%	136	1.6%
	Southern Hills ER at the Lakes	0	0.0%	9	0.1%
	Southern Hills Hospital Medical Center	9	0.1%	0	0.0%
	Spring Valley ER at Blue Diamond	5	0.1%	5	0.1%
	Spring Valley Hospital Medical Center	523	6.6%	529	6.1%
	St. Rose Dominican Hospital Blue Diamond	23	0.3%	23	0.3%
	St. Rose Dominican Hospital De Lima Campus	103	1.3%	103	1.2%
	St. Rose Dominican Hospital North Las Vegas	43	0.5%	43	0.5%
	St. Rose Dominican Hospital San Martin Campus	108	1.4%	117	1.4%
	<b>*St. Rose Dominican Hospital Siena Campus</b>	311	3.9%	319	3.7%
	St. Rose Dominican Hospital West Flamingo	15	0.2%	15	0.2%
	St. Rose Dominican Hospital West Sahara	4	0.1%	4	0.0%
	Summerlin Hospital Medical Center	473	6.0%	478	5.5%
	<b>*Sunrise Hospital Medical Center</b>	1955	24.7%	2233	25.9%
<b>*University Medical Center</b>	2751	34.7%	3131	36.4%	
Valley Hospital Medical Center	29	0.4%	29	0.3%	
Washoe County	Incline Village Community Hospital	0	0.0%	0	0.0%
	Northern Nevada Medical Center	2	0.0%	2	0.0%
	<b>*Renown Regional Medical Center</b>	3	0.0%	3	0.0%
	Renown South Meadows Medical Center	0	0.0%	0	0.0%
	St. Mary's Regional Medical Center	1	0.0%	1	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	1	0.0%	1	0.0%
	Desert View Hospital	9	0.1%	9	0.1%
	Grover C. Dils Medical Center	0	0.0%	0	0.0%
	Humboldt General Hospital	0	0.0%	0	0.0%
	Mt. Grant General Hospital	1	0.0%	1	0.0%
	Northeastern Nevada Regional Hospital	2	0.0%	2	0.0%
	Pershing General Hospital	1	0.0%	1	0.0%
	South Lyon Medical Center	0	0.0%	0	0.0%
	Williams Bee Ririe Hospital	3	0.0%	3	0.0%
<b>Nevada (Total)</b>		<b>7,920</b>	<b>100.0%</b>	<b>8,613</b>	<b>100.0%</b>

\* Unique Trauma Patients are calculated by matching transferred patients based on birth date, injury date, patient zip code, and discharge/arrival date and only counted once by the facility where they first presented with the trauma (excepted when mortality data is analyzed), which is represented as Unique Trauma throughout the report.

\*Total Trauma cases are all the cases reported to the Nevada Trauma Registry for 2021.

**Table 89: Clark County 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	3131	56.0%	196	6.3%
Trauma Center level 2	2236	40.0%	94	4.2%
Trauma Center Level 3	228	4.1%	3	1.3%
<b>Total</b>	<b>5595</b>	<b>100.0%</b>	<b>293</b>	<b>5.2%</b>

*There were 5 unknown discharge status (dead/alive) cases.*

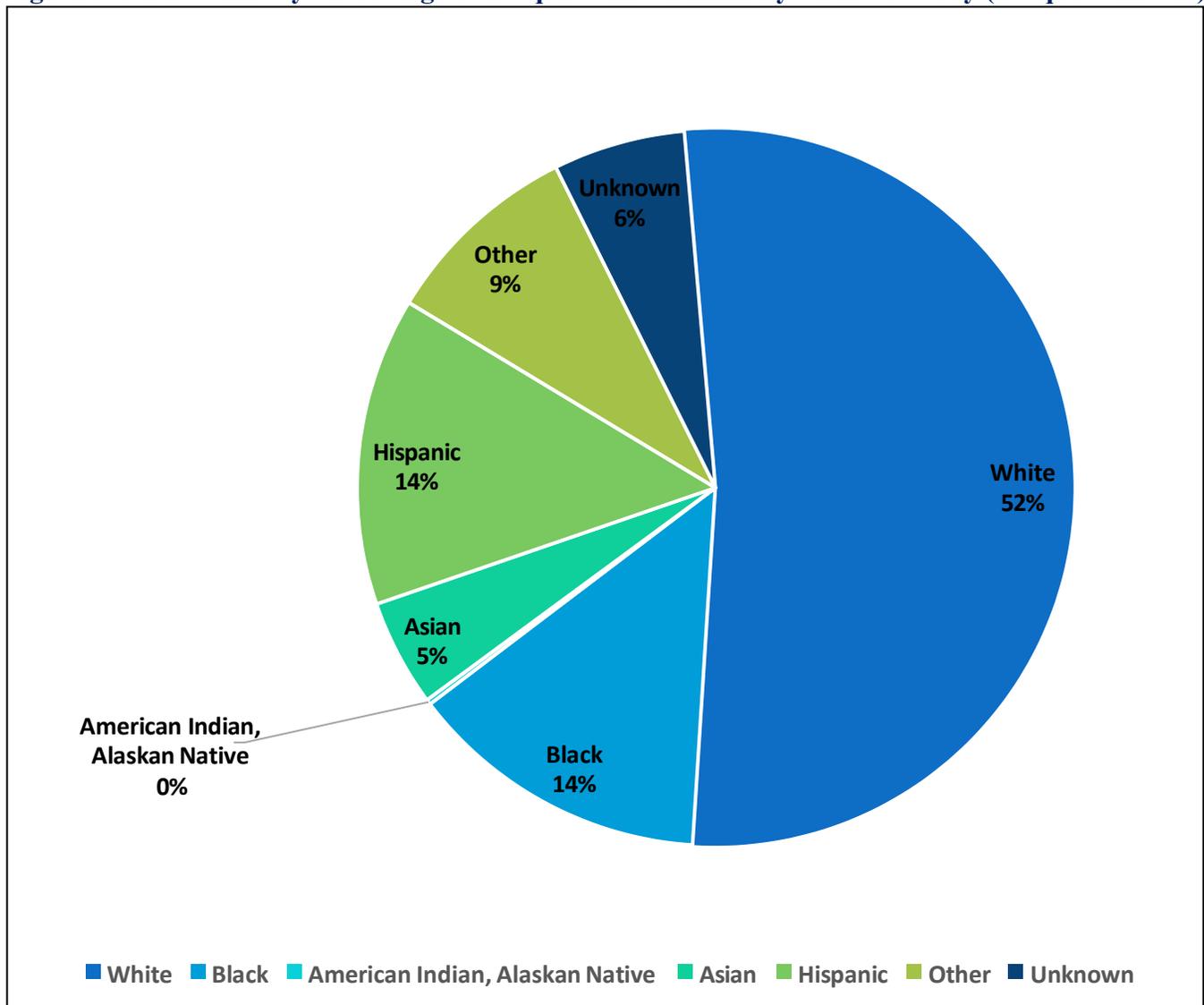
**Table 90: Clark County Trauma Cases by Sex (Unique Traumas)**

Sex	Count	Percent	Rate per 100,000 (95% CI)
Male	4,477	56.5%	278.6 (270.5-286.8)
Female	3,443	43.5%	214.2 (207.0-221.3)
<b>Total</b>	<b>7,920</b>	<b>100%</b>	<b>246.4 (241.0-251.8)</b>

**Table 91: Clark County Trauma Cases by Race/Ethnicity (Unique Traumas)**

Race/Ethnicity	Count	Column Percent	Rate per 100,000 (95% CI)
White	4,150	52.4%	263.3 (255.3-271.4)
Black	1,082	13.7%	372.9 (350.7-395.2)
American Indian, Alaskan Native	18	0.2%	49.8 (26.8-72.9)
Asian	383	4.8%	117.6 (105.8-129.4)
Hispanic	1,102	13.9%	111.7 (105.1-118.3)
Other	713	9.0%	. (-.)
Unknown	472	6.0%	. (-.)
<b>Total</b>	<b>7,920</b>	<b>100.0%</b>	<b>246.4 (241.0-251.8)</b>

**Figure 34: Clark County Percentage of Unique Trauma Cases by Race/Ethnicity (Unique Traumas)**



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

Age Groups	White	Black	American Indian, Alaskan Native	Asian	Hispanic	Other	Unknown	Total
<1	22	21	0	3	11	16	5	78
1-5	48	36	0	10	51	19	21	185
6-17	122	95	1	16	101	51	30	416
18-24	121	126	0	15	124	65	30	481
25-34	251	216	0	27	178	88	59	819
35-44	302	155	3	23	150	90	51	774
45-54	311	134	3	30	139	71	36	724
55-64	552	124	4	34	102	81	56	953
65-74	835	86	4	77	95	83	72	1,252
75-84	976	61	2	66	92	88	64	1,349
85+	610	28	1	82	59	61	48	889
<b>Total</b>	<b>4,150</b>	<b>1,082</b>	<b>18</b>	<b>383</b>	<b>1,102</b>	<b>713</b>	<b>472</b>	<b>7,920</b>

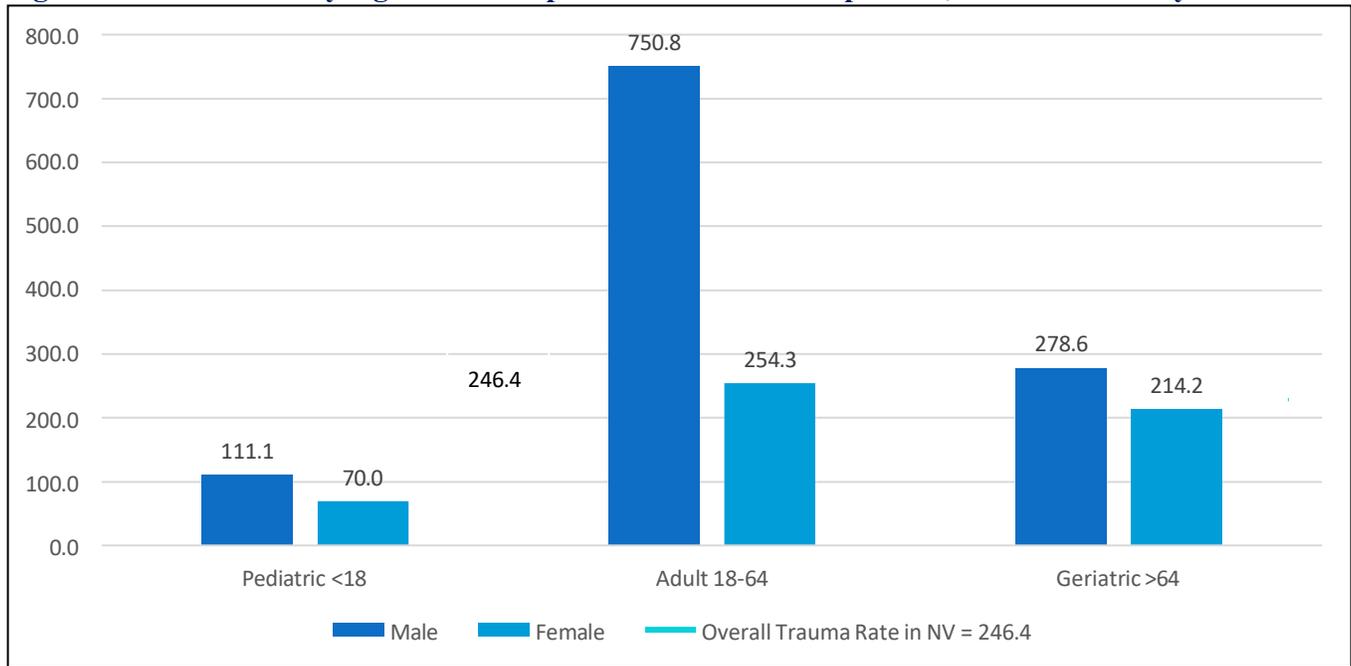
**Table 93: Clark County Age-Specific Trauma Cases and Mortality Proportion (Unique Traumas)**

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
<1	78	1.0%	0	0.0%
1-5	185	2.3%	4	2.2%
6-17	417	5.3%	13	3.1%
18-24	477	6.0%	27	5.7%
25-34	816	10.3%	58	7.1%
35-44	775	9.8%	38	4.9%
45-54	722	9.1%	35	4.8%
55-64	957	12.1%	38	4.0%
65-74	1,253	15.8%	39	3.1%
75-84	1,347	17.0%	40	3.0%
85+	890	11.2%	30	3.4%
<b>Total</b>	<b>7,917</b>	<b>100.0%</b>	<b>322</b>	<b>4.1%</b>

**Table 94: Clark County Age and Sex-Specific Trauma Rate per 100,000 Clark County 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	424	111.1 (100.5-121.7)	255	70.0 (61.5-78.6)	679	91.0 (84.2-97.9)
Adult 18-64	2,551	254.3 (244.4-264.1)	1,200	254.3 (244.4-264.1)	3,751	189.3 (183.2-195.3)
Geriatric >64	1,502	677.1 (642.9-711.4)	1,988	750.8 (717.8-783.8)	3,490	717.2 (693.4-741.0)
<b>Total</b>	<b>4,477</b>	<b>278.6 (270.5-286.8)</b>	<b>3,443</b>	<b>214.2 (207.0-221.3)</b>	<b>7,920</b>	<b>246.4 (241.0-251.8)</b>

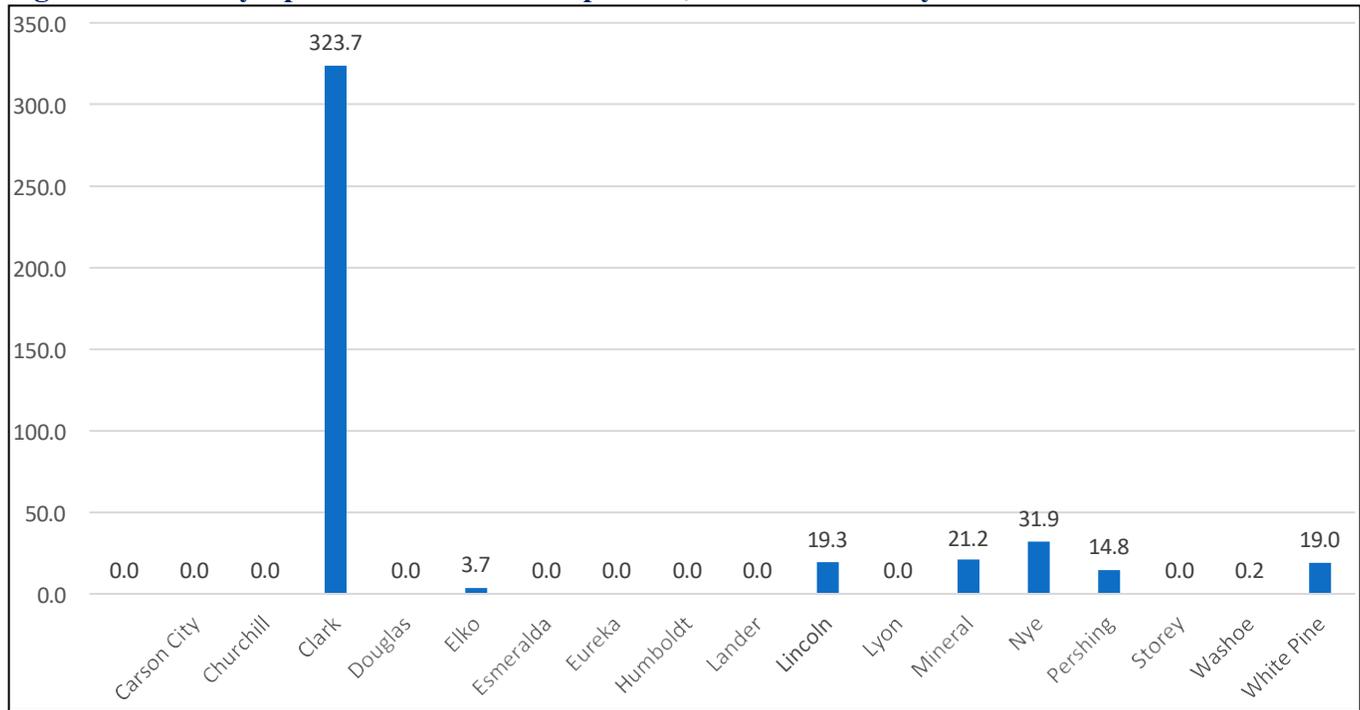
**Figure 35: Clark County Age and Sex-Specific Trauma Rates per 100,000 Clark County Residents**



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

County	Count	Rate per 100,000 (95% CI)
Carson City	.	. (-.)
Churchill	.	. (-.)
Clark	7,701	323.7 (316.5-331.0)
Douglas	.	. (-.)
Elko	2	3.7 (0.0-8.8)
Esmeralda	.	. (-.)
Eureka	.	. (-.)
Humboldt	.	. (-.)
Lander	.	. (-.)
Lincoln	1	19.3 (0.0-57.2)
Lyon	.	. (-.)
Mineral	1	21.2 (0.0-62.8)
Nye	16	31.9 (16.3-47.5)
Pershing	1	14.8 (0.0-43.7)
Storey	.	. (-.)
Washoe	1	0.2 (0.0-0.6)
White Pine	2	19.0 (0.0-45.3)
Out of State	59	.
Unknown	0	0.0 (0.0-0.0)

**Figure 36: County-Specific Trauma Rates per 100,000 Clark County Residents**



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

Age Group	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Pediatric <18	150	11.5%	13	8.7%
Adult 18-64	565	43.4%	62	11.0%
Geriatric >64	588	45.1%	53	9.0%
<b>Total</b>	<b>1303</b>	<b>100.0%</b>	<b>128</b>	<b>9.8%</b>

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

Age Groups	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
<1	27	2.1%	0	0.0%
1-5	36	2.8%	3	8.3%
6-17	87	6.7%	10	11.5%
18-24	75	5.8%	12	16.0%
25-34	101	7.8%	12	11.9%
35-44	102	7.8%	11	10.8%
45-54	126	9.7%	12	9.5%
55-64	161	12.4%	15	9.3%
65-74	229	17.6%	19	8.3%
75-84	230	17.7%	22	9.6%
85+	129	9.9%	12	9.3%
<b>Total</b>	<b>1,303</b>	<b>100.0%</b>	<b>128</b>	<b>9.8%</b>

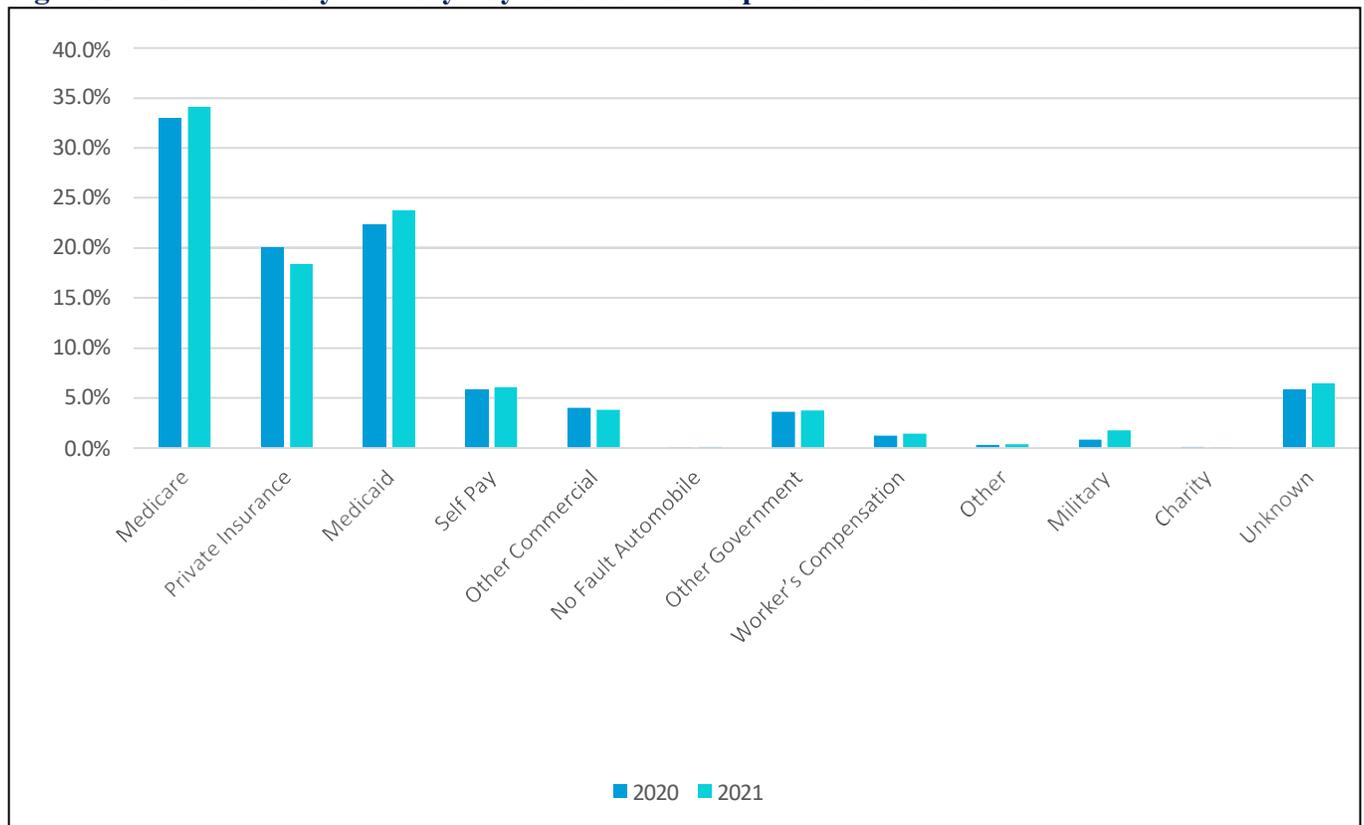
Throughout the report, Unique Traumas are analyzed by where the patient first originated; however, mortality data is analyzed based on their final facility. \*\*2 Unknown dead/alive status\*\*

**Table 98: Clark County Primary Payment Source Proportion for 2020-2021**

Primary Source of Payment	2020	2021
Medicare	33.0%	34.1%
Private Insurance	20.0%	18.4%
Medicaid	22.3%	23.7%
Self-Pay	5.9%	6.1%
Other Commercial	4.0%	3.8%
No-Fault Automobile	0.0%	0.1%
Other Government	3.6%	3.8%
Worker's Compensation	1.3%	1.4%
Other	0.3%	0.4%
Military	0.9%	1.7%
Charity	0.1%	0.0%
Unknown	5.8%	6.5%

*\*395 Combined payments*

**Figure 37: Clark County Primary Payment Source Proportion for 2020-2021**



## APPENDIX C: PLACE AND MECHANISM OF INJURY

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

Place of Injury	Trauma Count	Percent
Residential	3,954	49.92%
Street	2,034	25.68%
Unknown/Unspecified	906	11.44%
Trade and Service Area	437	5.52%
Recreation area	110	1.39%
Sports Area	108	1.36%
Wilderness	88	1.11%
School or Public Area	80	1.01%
Transport Vehicle as Place	69	0.87%
Industrial and Construction	67	0.85%
Other Specified	60	0.76%
Farm	4	0.05%
Railroad Track	3	0.04%
<b>Total</b>	<b>7,920</b>	<b>100.00%</b>

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

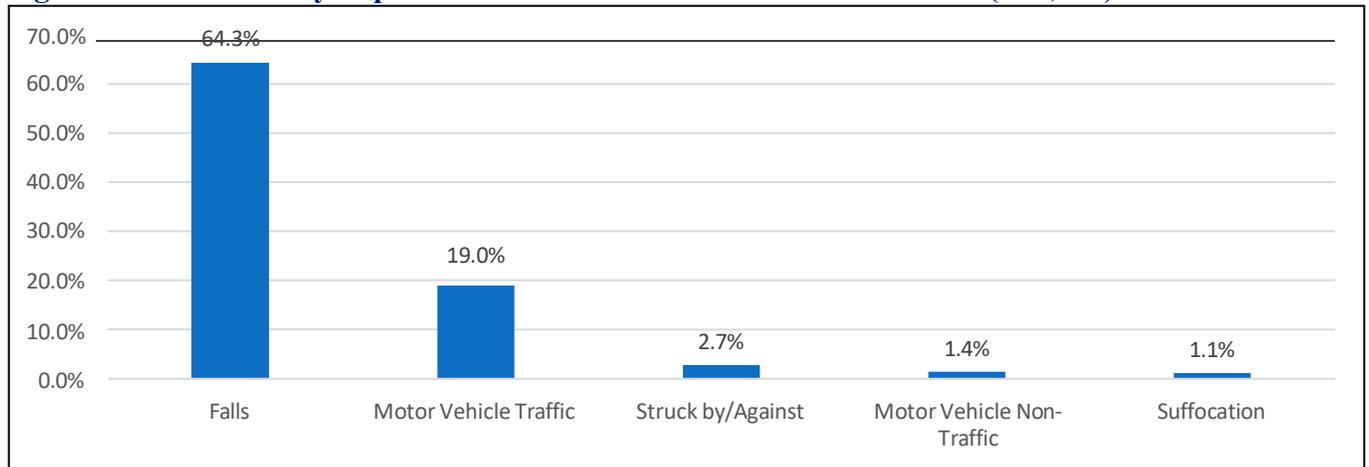
Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	4,426	55.9%	107	2.4%
Motor Vehicle Traffic	1,341	16.9%	100	7.5%
Struck by/Against	526	6.6%	6	1.1%
Firearm	380	4.8%	85	22.4%
Cut/Pierce	347	4.4%	9	2.6%
Other Specified	178	2.2%	6	3.4%
Pedal Cyclist, Other	121	1.5%	0	0.0%
Natural/Environmental	102	1.3%	0	0.0%
Suffocation	85	1.1%	2	2.4%
Motor Vehicle Non-Traffic	69	0.9%	1	1.4%
Other Transport (Land, Sea, Sky)	62	0.8%	3	4.8%
Machinery	55	0.7%	0	0.0%
Fire/Burn	50	0.6%	1	2.0%
Pedestrian, Other	46	0.6%	1	2.2%
Overexertion	44	0.6%	0	0.0%
Unknown	44	0.6%	0	0.0%
Unspecified	41	0.5%	1	2.4%
<b>Total</b>	<b>7,917</b>	<b>100.0%</b>	<b>322</b>	<b>4.1%</b>

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

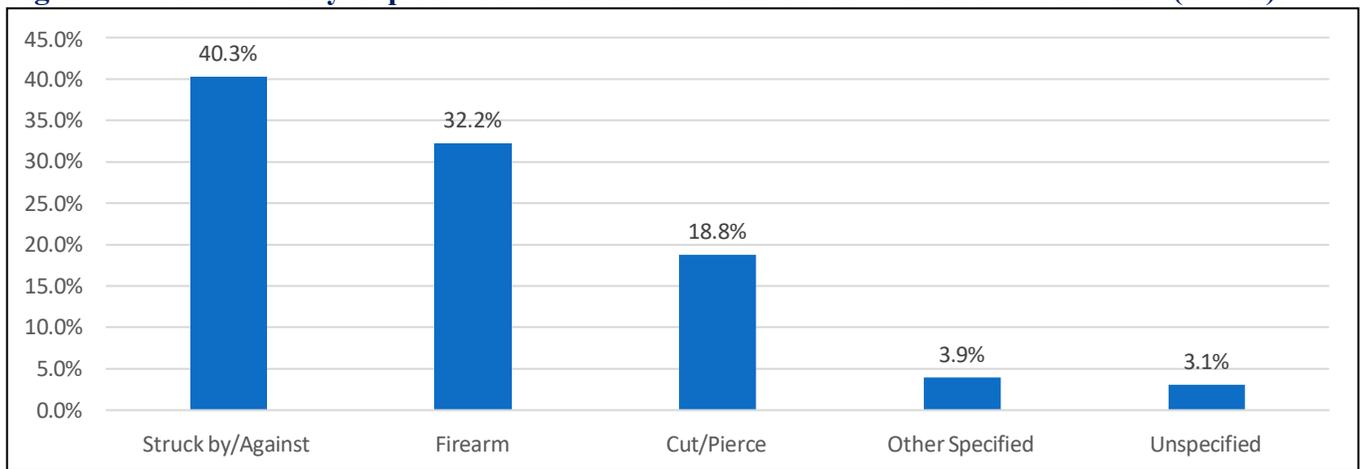
**Table 101: Clark County Trauma Rates for Top Three Mechanisms of Injury by Age (Unique Traumas)**

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	271	36.3 (32.0-40.7)	67	9.0 (6.8-11.1)	85	11.4 (9.0-13.8)
Adult 18-64	1,159	58.5 (55.1-61.8)	389	19.6 (17.7-21.6)	996	50.3 (47.1-53.4)
Geriatric >64	2,989	614.3 (592.2-636.3)	67	13.8 (10.5-17.1)	236	48.5 (42.3-54.7)
<b>Total</b>	<b>4,419</b>	<b>137.5 (133.4-141.5)</b>	<b>523</b>	<b>16.3 (14.9-17.7)</b>	<b>1,317</b>	<b>41.0 (38.8-43.2)</b>

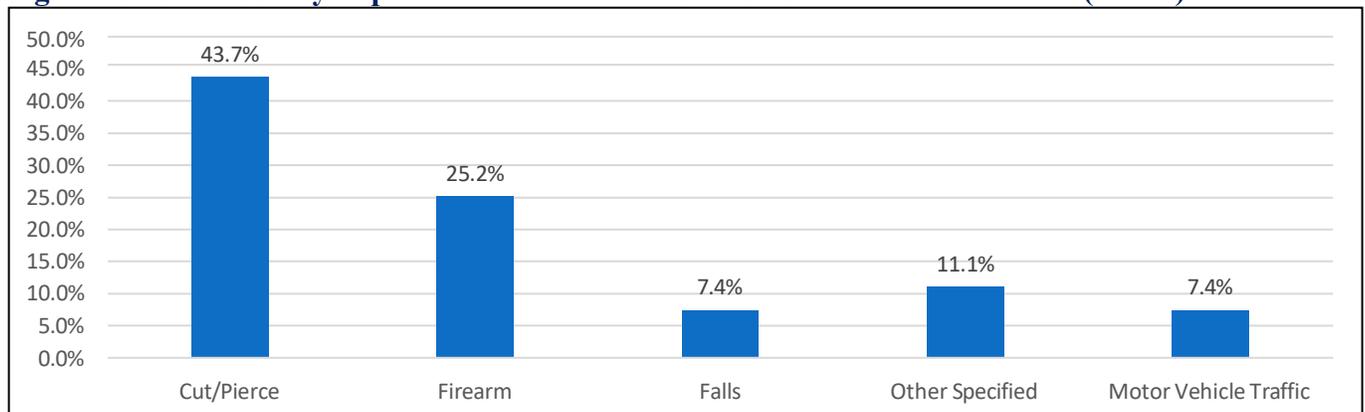
**Figure 38: Clark County Top Five Mechanisms of Unintentional Trauma (n=6,045)**



**Figure 39: Clark County Top Five Mechanisms of Homicide/Assault Related Trauma (n=802)**



**Figure 40: Clark County Top Five Mechanisms of Suicide/Self-Inflicted Trauma (n=128)**

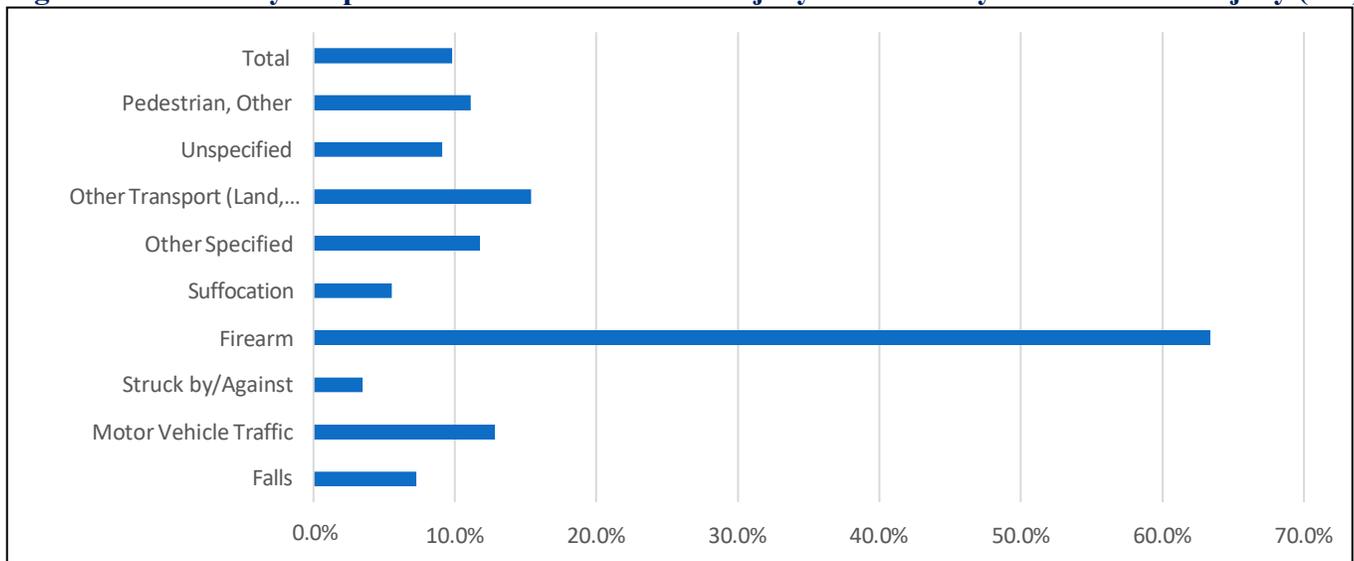


**Table 102: Clark County Traumatic Brain Injury Incidence and Mortality by Mechanism of Injury**

Mechanism	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Falls	756	58.0%	55	7.3%
Motor Vehicle Traffic	281	21.6%	36	12.8%
Struck by/Against	115	8.8%	4	3.5%
Firearm	41	3.1%	26	63.4%
Suffocation	18	1.4%	1	5.6%
Other Specified	17	1.3%	2	11.8%
Pedal Cyclist, Other	16	1.2%	0	0.0%
Other Transport (Land, Sea, Sky)	13	1.0%	2	15.4%
Unspecified	11	0.8%	1	9.1%
Motor Vehicle Non-Traffic	10	0.8%	0	0.0%
Pedestrian, Other	9	0.7%	1	11.1%
Unknown	7	0.5%	0	0.0%
Cut/Pierce	6	0.5%	0	0.0%
Natural/Environmental	2	0.2%	0	0.0%
Fire/Burn	1	0.1%	0	0.0%
<b>Total</b>	<b>1,303</b>	<b>100.0%</b>	<b>128</b>	<b>9.8%</b>

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\*\*

**Figure 41: Mortality Proportion of Traumatic Brain Injury Incidence by Mechanism of Injury (UT)**



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

Table 103: Clark County 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	3,884	49.1%	28	0.7%
Moderate, 9-15	2,930	37.0%	48	1.6%
Serious, 16-24	576	7.3%	58	10.1%
Severe, 25-75	515	6.5%	188	36.5%
Missing/NA/ND	12	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.

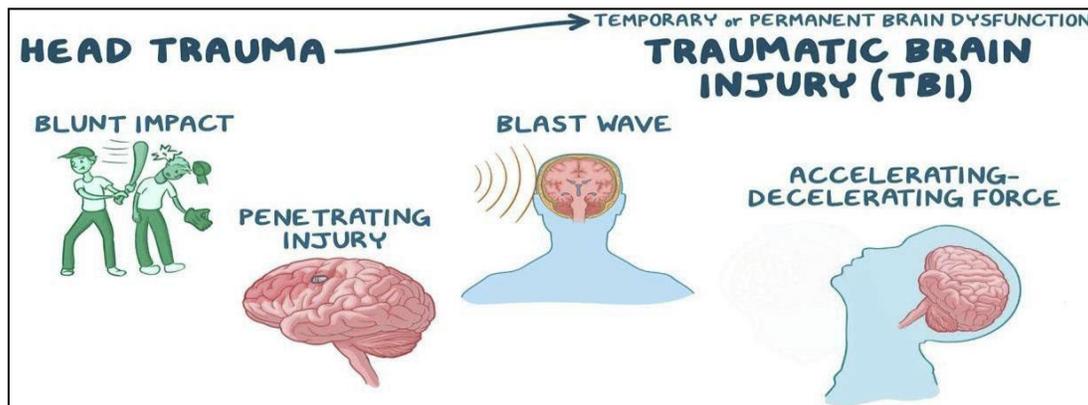


Table 104: Clark County Traumatic Brain Injury Incidence and Mortality Proportion (Unique Traumas) by Injury Severity

Injury Severity Score	Count	Column Percent	Deaths	Mortality Proportion (Row Percent)
Missing/NA	1	0.1%	0	0.0%
Minor, 1-8	274	21.0%	1	0.4%
Moderate, 9-15	480	36.8%	12	2.5%
Serious, 16-24	242	18.6%	10	4.1%
Severe, 25-75	306	23.5%	105	0.0%
<b>Total</b>	<b>1,303</b>	<b>100.0%</b>	<b>128</b>	<b>9.8%</b>

\*\*2 unknown dead/alive status\*\*

**Table 105: Injury to ED arrival time for a 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	964	107	27	19	7	44
Lincoln	1	0	0	0	0	0
Mineral	1	0	0	0	0	0
Nye	6	0	0	0	0	0
Unknown	7	0	1	2	0	0
White Pine	1	0	0	0	0	0
Out of State	9	6	0	1	0	1
<b>Total</b>	<b>989</b>	<b>113</b>	<b>28</b>	<b>22</b>	<b>7</b>	<b>45</b>

## **APPENDIX C: PATIENT TRANSPORTATION**

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

Mode of Arrival	Trauma Count	Percent
Missing	2	0.03%
Ground Ambulance	5,849	73.85%
Private Vehicle or Walk-in	1,933	24.41%
Helicopter Ambulance	115	1.45%
Police	13	0.16%
Fixed-Wing Ambulance	6	0.08%
Other	2	0.03%
<b>Total</b>	<b>7,920</b>	<b>100.00%</b>

**Table 107: Clark County 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
Missing	1	0	0	0	1
Ground Ambulance	2,598	2,326	470	452	3
Private Vehicle or Walk-in	1,214	479	155	73	12
Helicopter Ambulance	16	50	23	26	0
Police	9	1	1	2	0
Fixed-Wing Ambulance	3	1	2	0	0
Other	0	2	0	0	0
<b>Total</b>	<b>3,841</b>	<b>2,859</b>	<b>651</b>	<b>553</b>	<b>16</b>

## **APPENDIX C: PATIENT DISCHARGE AND TRANSFER**

**Table 108: Clark County 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	3	3	9.7	4 - 16
St. Rose Dominican Hospital Siena Campus	45	44	7.4	1 - 75
Sunrise Hospital Medical Center	1	1	9.0	9 - 9
University Medical Center	488	485	9.3	1 - 57

*“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: Clark County Injury Intent and Drug/Alcohol Use (Unique Traumas)

Injury Intent	Trauma Cases	Drug/Alcohol Use	Percent Drug/Alcohol Use (Row Percent)
Unintentional	6,834	862	13%
Suicide	135	56	41%
Homicide/Assault	816	245	30%
Legal Intervention	16	9	56%
Undetermined (accidental/intentional)	70	14	20%
Missing	49	4	8%
<b>Total</b>	<b>7,920</b>	<b>1,190</b>	<b>15%</b>

## APPENDIX C: SAFETY EQUIPMENT

Figure 42: Proportion of Helmet Use Among Pedal Cyclists, Motor Cyclists, and Off-Road Users

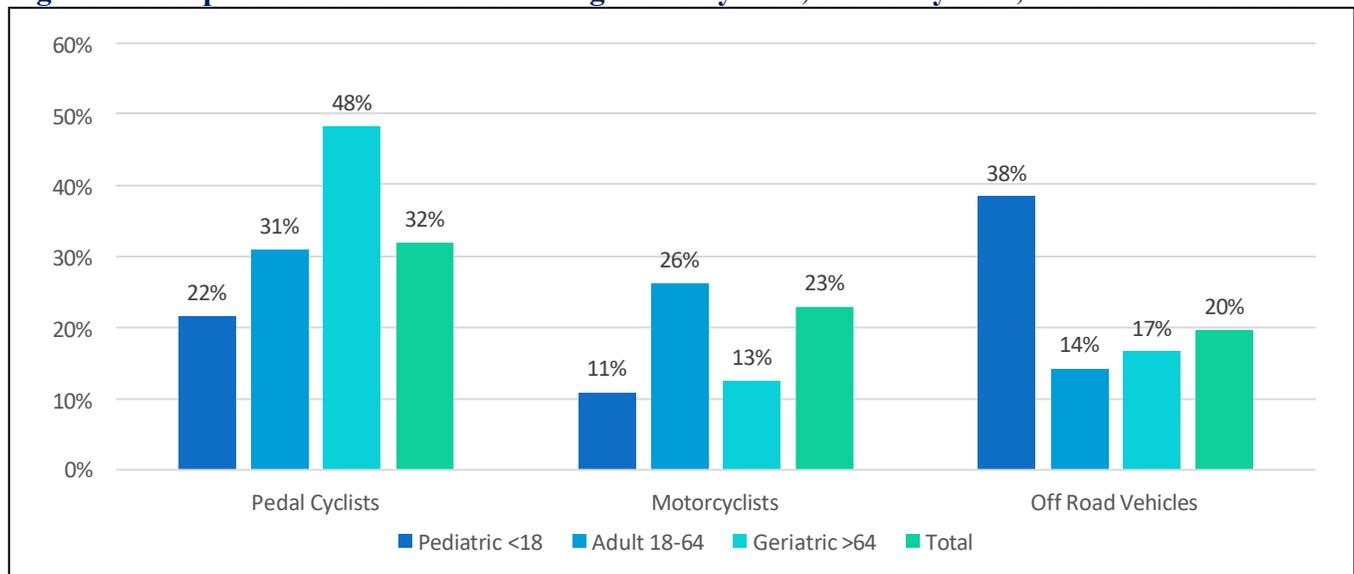


Table 110: Clark County Age-Specific restraint use among Motor Vehicle Traffic Occupants

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total
Seatbelt	20	366	128	514
Child or Infant booster/car seat	3	0	0	3
None	15	140	23	178
Unknown	4	41	19	64
<b>Total</b>	<b>42</b>	<b>547</b>	<b>170</b>	<b>759</b>

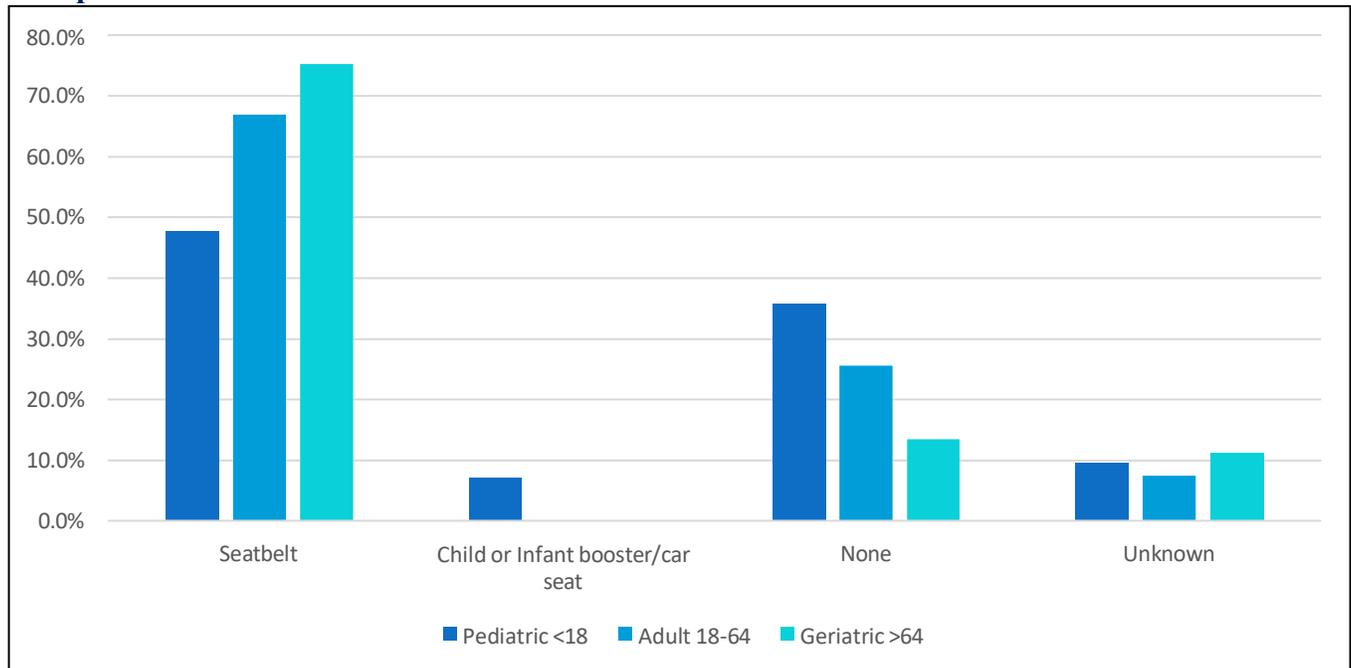
**Table 111: Clark County Age-Specific Proportion of Restraint Use Among Motor-Vehicle Traffic Occupants**

Age Group	Pediatric <18	Adult 18-64	Geriatric >64	Total (column percent)
Seatbelt	47.6%	66.9%	75.3%	67.7%
Child or Infant booster/car seat	7.1%	0.0%	0.0%	0.4%
None	35.7%	25.6%	13.5%	23.5%
Unknown	9.5%	7.5%	11.2%	8.4%
<b>Total Age-Specific Proportion</b>	<b>5.5%</b>	<b>72.1%</b>	<b>22.4%</b>	<b>100.0%</b>

1. Among Motor vehicle occupants 5.5% are <18, 72.1% are 18-64 and 22.4% are >64years.
2. Among Motor vehicle occupants, 67.7% used a seatbelt, 0.4% used a Child booster/car seat, and 23.5% used no restraint. In addition, 8.4% of motor vehicle occupants have unknown restraint information.
3. Among all motor vehicle traffic occupants, 47.6% used seatbelts and are < 18 years, etc.



**Figure 43: Clark County Age-Specific Proportion of Restraint Use Among Motor Vehicle Traffic Occupants**



## **APPENDIX C: FALLS – BY LAST TRANSFER FACILITY**

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

Sex	n	Rate per 100,000 (95% CI)
Female	2,425	150.9 (144.9-156.9)
Male	2,077	129.3 (123.7-134.8)
<b>Total</b>	<b>4,502</b>	<b>140.1 (136.0-144.2)</b>

**Table 113: Clark County 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)	3,088	68.6%	64	2.1%
From Furniture	374	8.3%	11	2.9%
Unspecified	237	5.3%	14	5.9%
Steps	236	5.2%	9	3.8%
Pedestrian Conveyance Accident	145	3.2%	1	0.7%
Multi-Level: Cliff, Tree, Water, etc.	138	3.1%	3	2.2%
On or From Ladder/Scaffolding	134	3.0%	1	0.7%
Out of Building or Structure	47	1.0%	1	2.1%
Playground Equipment	35	0.8%	0	0.0%
Collision, Push or Shove By, or Other Person	30	0.7%	0	0.0%
Suicide-Related	19	0.4%	7	36.8%
Fall Due to Environmental Factors	7	0.2%	0	0.0%
Assault Related	6	0.1%	0	0.0%
Undetermined Fall from High Place	6	0.1%	1	16.7%
<b>Total</b>	<b>4,502</b>	<b>100.0%</b>	<b>112</b>	<b>2.5%</b>

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

**Table 114: Clark County 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	10	1.3 (0.5-2.2)	66	8.9 (6.7-11.0)	68	9.1 (7.0-11.3)
Adult 18-64	85	4.3 (3.4-5.2)	676	34.1 (31.5-36.7)	65	3.3 (2.5-4.1)
Geriatric >64	141	96.1 (92.7-99.5)	2,346	482.1 (462.6-501.6)	241	49.5 (43.3-55.8)
<b>Total</b>	<b>236</b>	<b>7.3 (6.4-8.3)</b>	<b>3,088</b>	<b>96.1 (92.7-99.5)</b>	<b>374</b>	<b>11.6 (10.5-12.8)</b>