

Neil Krutz  
City Manager  
City of Sparks

Doug Thornley  
City Manager  
City of Reno

# Emergency Medical Services Advisory Board

Eric Brown  
County Manager  
Washoe County

Dr. John Hardwick  
Emergency Room Physician

Kevin Dick  
District Health Officer  
Washoe County Health  
District

WASHOE COUNTY  
HEALTH DISTRICT  
ENHANCING QUALITY OF LIFE

Joe Macaluso  
Director of Risk Management  
Renown

## MEETING NOTICE AND AGENDA

Date and Time of Meeting: Thursday, August 4, 2022, 9:00 a.m.

**This meeting will be held virtually only.**

Please attend this meeting via the link listed below or via phone.

(Please be sure to keep your devices on mute and do not place the meeting on hold)

<https://us02web.zoom.us/j/83845321966>

Meeting ID: 838 4532 1966 Phone: 1 669 900 6833 US

1. **\*Roll Call and Determination of Quorum**
2. **\*Public Comment**  
Limited to three (3) minutes per person. No action may be taken.
3. **Consent Items** (For Possible Action)  
Matters which the Emergency Medical Services Advisory Board may consider in one motion. Any exceptions to the Consent Agenda must be stated prior to approval.
  - A. **Approval of Draft Minutes**  
May 5, 2022
4. **Discussion and Possible Election of:**
  - A. EMS Advisory Committee Chair (For Possible Action)
  - B. EMS Advisory Committee Vice Chair (For Possible Action)
5. **\*Prehospital Medical Advisory Committee (PMAC) Update**  
Dr. John Hardwick
6. **\*EMS Oversight Program and Performance Data Updates** – Joint Advisory Committee  
Activities, Special Projects, EMS Planning, Data Performance, REMSA Franchise Agreement Updates, REMSA Exemption Requests, Mass Gatherings and Special Events Reviews  
Andrea Esp
7. **\*Presentation of the Washoe County Special Trauma Report 2021**  
Anastasia Gunawan

## 8. \*Agency Reports and Updates

### A. \*REMSA EMSAB Report, Adam Heinz

Data Performance Report, EMS Operations Report

### B. \*City of Sparks Fire Department EMSAB Report, Chief Jim Kindness

Data Performance Report, EMS Operations Report

### C. \*Truckee Meadows Fire and Rescue EMSAB Report, Chief Joe Kammann

Data Performance Report, EMS Operations Report

### D. \*Reno Fire Department EMSAB Report, Reno Fire Department Staff Representative

Data Performance Report, EMS Operations Report

## 9. \*Board Comment

Limited to announcements or issues for future agendas. No action may be taken.

## 10. \*Public Comment

Limited to three (3) minutes per person. No action may be taken.

## Adjournment

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Items on the agenda may be taken out of order, combined with other items, withdrawn from the agenda, moved to the agenda of a later meeting; or they may be voted on in a block. Items with a specific time designation will not be heard prior to the stated time, but may be heard later. An item listed with asterisk (\*) next to it is an item for which no action will be taken.

The Emergency Medical Services Advisory Board meetings are accessible to the disabled. Disabled members of the public who require special accommodations or assistance at the meeting are requested to notify Administrative Health Services at the Washoe County Health District, 1001 E. 9<sup>th</sup> St, Reno, NV 89512, or by calling 775.326-6049, at least 24 hours prior to the meeting.

**Time Limits:** Public comments are welcome during the Public Comment periods for all matters whether listed on the agenda or not. All comments are limited to three (3) minutes per person. Additionally, public comment of three (3) minutes per person may be heard during individual action items on the agenda. Persons are invited to submit comments in writing on the agenda items and/or comment on that item at the Board meeting. Persons may not allocate unused time to other speakers.

**Response to Public Comments:** The Emergency Medical Services Advisory Board can deliberate or take action only if a matter has been listed on an agenda properly posted prior to the meeting. During the public comment period, speakers may address matters listed or not listed on the published agenda. The Open Meeting Law does not expressly prohibit responses to public comments by the Emergency Medical Services Advisory Board. However, responses from the Board members to unlisted public comment topics could become deliberation on a matter without notice to the public. On the advice of legal counsel and to ensure the public has notice of all matters the Emergency Medical Services Advisory Board will consider, Board members may choose not to respond to public comments, except to correct factual inaccuracies, ask for Health District Staff action or to ask that a matter be listed on a future agenda. The Emergency Medical Services Advisory Board may do this either during the public comment item or during the following item: "Board Comments – Limited to announcements or issues for future agendas."

### **Posting of Agenda; Location:**

Pursuant to NRS 241.020, Notice of this meeting was posted at the following locations:

Washoe County Health District, 1001 E. 9th St., Reno, NV

Washoe County Health District Website <https://www.washoecounty.us/health>

State of Nevada Website: <https://notice.nv.gov>

Supporting materials are available at the Washoe County Health District located at 1001 E. 9<sup>th</sup> St., Reno, NV and on the website [www.washoecounty.gov/health](http://www.washoecounty.gov/health) pursuant to the requirements of NRS 241.020. Ms. Dawn Spinola, Administrative Secretary to the Emergency Medical Services Advisory Board, is the person designated by the Emergency Medical Services Advisory Board to respond to requests for supporting materials. Ms. Spinola may be reached by telephone at (775) 326-6049, or by email at [dspinola@washoecounty.us](mailto:dspinola@washoecounty.us).

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## MEETING MINUTES

Date and Time of Meeting: Thursday, May 5<sup>th</sup>, 2022, 9:00 a.m.

**This meeting was held virtually.**

### 1. \*Roll Call and Determination of Quorum

Chair Krutz called the meeting to order at 9:05 a.m.

The following members and staff were present:

Members present: Neil Krutz, Chair  
Kevin Dick  
Eric Brown  
Joe Macaluso  
Dr. John Hardwick  
Doug Thornley

Members absent: None

**Ms. Spinola verified a quorum was present.**

Staff present: Dania Reid, Deputy District Attorney  
Nancy Diao, Epidemiology and Public Health Preparedness Division  
Director  
Andrea Esp, Preparedness and EMS Program Manager  
Anastasia Gunawan, EMS Statistician  
Sabrina Brasuell, EMS Coordinator  
Dawn Spinola, Administrative Secretary, Recording Secretary

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### 2. \*Public Comment

Limited to three (3) minutes per person. No action may be taken.

Dr. Fry expressed his thanks for the committee work being done on the catchment area maps and revisions thereof. He felt it has landed in a good place that is patient centric.

Erik Olson also expressed his appreciation for the work being done on the catchment zone area maps by the EMS consortium and Washoe County staff. opined that the map that was in place addresses their concerns and accomplishes the needs to establish a catchment for the

new hospital. He felt it was reasonable to continue to utilize the new map, while reevaluating its effectiveness at some point in the future. His interest was focused on decisions being patient centric.

**Chair Krutz closed the public comment period.**

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7. **Discussion and Possible Approval of EMSAB Revised Bylaws** (For Possible Action) – Recommendation to revise Article II, Section 1 of the Emergency Medical Services Advisory Board (EMSAB) bylaws to allow each representative of a City, County or Health District to designate an alternate to replace the representative in the representative’s absence from meetings of the EMSAB. The alternate must be a City or County Assistant Manager or Health District Division Director.

Andrea Esp

Ms. Esp introduced herself for the record and started out by explaining that the intent of the item was to align the bylaws with the Interlocal Agreement (ILA). The ILA was amended in 2018 to allow for the designation of Board alternates. The bylaws were updated in 2021, but due to administrative error, the language regarding the alternates was not included in that version. The alternates that may be designated are the City or County Assistant Manager, and for the Health District, a Division Director. The current proposed bylaws update included both the language authorizing the alternate(s), and to reduce the terms of the Chair and Vice to one year instead of two.

Mr. Macaluso asked if there was a limit set to the frequency under which a Board member might designate an alternate. Ms. Esp replied that had not been specified in either the Bylaws or the ILA.

Dr. Hardwick asked if there was a way to include language to designate an alternative for him, perhaps another PMAC member. Ms. Reid explained the ability to appoint alternates was governed by the Open Meeting Law, and the Board’s enabling authority did not allow for alternates for positions that were non-elected or non-appointed.

**Mr. Brown moved to approve. Mr. Thornley seconded the motion which passed unanimously.**

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3. **Consent Items** (For Possible Action)

Matters which the Emergency Medical Services Advisory Board may consider in one motion. Any exceptions to the Consent Agenda must be stated prior to approval.

A. **Approval of Draft Minutes**

February 3<sup>rd</sup>, 2022

**Mr. Brown moved to approve the draft minutes. Mr. Thornley seconded the motion, which passed unanimously.**

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4. **\*Prehospital Medical Advisory Committee (PMAC) Update**

Dr. John Hardwick

Dr. Hardwick noted the main item that was discussed was how to best utilize Ketamine and limit adverse effects. With that they are changing some language and dosing requirements and changing the format to ensure that all accepting hospitals and transporting agencies have transparency when it comes to changes and protocols, breaches in protocols or any other issues

that arise.

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5. **\*EMS Oversight Program and Performance Data Updates (For Possible Action) – Joint Advisory Committee Activities, EMS Planning, Data Performance Reports, Franchise Agreement Updates, REMSA Exemption Requests, Mass Gatherings and Special Events Reviews, Trauma Data Report and Boundary Drops**

Andrea Esp

Ms. Esp explained the current strategic plan changes are being led by Dennis Nolan and the LCB. They are focusing on the legal protection for all agencies when in the process of Quality Assurance or Quality Improvement review. The current statute allows for this protection for medical facilities but not EMS. Once language to correct this is developed, an entity will be sought to sponsor a bill to take it to the next Legislative session.

Ms. Esp went on to explain that the EMS Oversight Program staff (Program) was working in conjunction with the Joint Advisory Committee (JAC), made up of regional EMS partners, on a more patient-centric data initiative to better understand patient outcomes. A request has been submitted to State EMS to access their databases. The current focus was on stroke victims. Additionally, the Program and the JAC are collaborating with the Nevada Health Information Exchange to gain access and knowledge of available EPCR indicators recommended by ESO EMS best practices. Partners in the region are trying to determine how best to obtain and utilize data to look at patient outcome. As the data is obtained and the JAC analyzes it, the information will be brought back to the Board.

Ms. Esp noted the Program was working to organize a meeting with the different jurisdictions and State EMS regarding better communication, consistency, permit approval, and enforcement of EMS guidelines for mass gatherings. Currently these processes are inconsistent across the agencies.

Mr. Macaluso thanked Ms. Esp for the report regarding privilege protection for quality improvement data. He indicated that in 2005, Federal laws addressing the Patient Safety Quality Improvement Act, which relate to Federal protection for hospitals. He suggested there was substantial amounts of information available on the topic and that they should consider reviewing that prior to looking into changing State law.

Chief Dennis Nolan noted he had that discussion yesterday with the Legislative Council Bureau, and they agreed there were some opportunities to align with the PSO. The model of the current Federal legislation will make it easier, but some legislation will require adjustments due to the different statutes that would be affected.

Dr. Hardwick opined it was great that this was being addressed, as it was important to be able to have transparent discussion. He noted that one of the metrics selected was Ketamine administration and recommended that accurate Ketamine dosing for pediatric patients should be considered.

**Mr. Brown moved to approve the report. Mr. Macaluso seconded the motion, which passed unanimously.**

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6. **Presentation and Discussion of Possible Updates to the EMS Oversight Program Annual Report Outline, to Include Overdose Metrics (For Possible Action)**

Andrea Esp

May 5, 2022 Emergency Medical Services Advisory Board Meeting Minutes

Ms. Esp noted that the request to add overdoses to the report metrics was being requested at this time due to the fact the data was now available for the Program's use. They were working to acquire data on Ketamine administration, stroke, and other data elements that would be useful to the Board and those were items the Program would like to report on in the future. Those would be selected by the JAC. The Program would also like to remove the programmatic reports for EMS agencies that are not part of the ILA.

Dr. Fry opined the PMP could ideally be retooled to potentially include overdose data on prescription medications as a preventative tool, and that there may be a way to work with the State Board of Pharmacy on the topic.

**Mr. Dick moved to approve the updates to the annual report to include overdose metrics. Mr. Brown seconded the motion, which passed unanimously.**

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**8. Presentation, Discussion, and Request to the Board to Advise Staff Regarding Process for Further Updates to the EMS Catchment Zone Map (For Possible Action) – Updated due to addition of new area hospital, Northern Nevada Sierra Medical Center.**

Andrea Esp

Ms. Esp explained the Program was requesting guidance on the catchment zone process. She noted the map provided unbiased guidance for EMS transport in the event a patient could not articulate or had no preference as to which hospital they go to. It was believed that a previous map had been developed at the time Renown South Meadows opened, but there was no indication as to the methodology used to create it. Northern Nevada Medical Center's free-standing ED opened in 2020 and was integrated into the map, and at that time the EMS community determined that a formal process needed to be developed to guide the creation of the catchment map for the region.

Ms. Esp pointed out the addition of the new Sierra Medical Center required that a new map be created in the interim while the process and methodology discussions continued. The interim map was compiled utilizing drive time data, which does not include traffic, construction or topography, and therefore does not represent real time. Another factor that fed into that was availability – the nearest hospital may not have bed space so the patient may need to be taken somewhere farther away. She reiterated that they were requesting guidance from the Board as to how to proceed with developing the map, as there had not been a consensus among the agencies in the region on that topic.

Mr. Macaluso opined the map should take patient care and safety into consideration, to avoid secondary transports. He asked what metrics were available to either help establish or evaluate the map's efficiency and efficacy.

Ms. Esp replied they were working with the free-standing ED, which had been on the previous map, to obtain and analyze data regarding secondary transport. A meeting was scheduled for June 2<sup>nd</sup> for the regional partners to gather together and discuss how the map was working for everyone, along with any issues they had or changes they would like to see. Further discussion would occur regarding the use of code catchment, which allows the hospitals to better predict their patient load and not become overwhelmed. It is an alternative to selecting to be on Divert status.

Aaron Abbott, Executive Director of REMSA, clarified that the catchment map only applies to patients that do not have a preference or do not require specialty care. REMSA only

transports patients to the free-standing ED according to protocol and have a very low likelihood of requiring repatriation to a larger hospital.

Ms. Esp noted that the original map that was put out for vote did include the free-standing ED, designated patients from Sun Valley be transported to St. Mary's and designated patients from the South end of Washoe Valley be taken to Carson Tahoe. After some discussion those areas were revised or removed and it was agreed they should be brought to EMSAB for guidance. Other possible changes and concerns were discussed as well, including the fact that only approximately eight percent of patients were affected by catchments.

Dr. Hardwick pointed out partners in the South had already created the precedent for freestanding facilities, and did not have catchments. He opined that was mainly due to concern of repatriation. He reiterated his objection to the first map that included Northern Nevada's freestanding ED, indicating it was important to develop a system that was not designed to fail. With the potential of future pandemics, the freestanding ERs, and the ones that were coming into the area, could be over-utilized and cause a backlog of patients requiring repatriation.

Mr. Dick noted he had requested that Ms. Esp bring the item to the Board due to the lack of consensus and some of the issues that had been raised during the meeting were also raised to him directly. In particular, issues surrounding the matter of the difference in transport time being only a few seconds, ER capacity, repatriation, process of the creation of the map itself, and the authority of the entity making the decisions. With that, he felt it was appropriate for the EMSAB to have input into how the map is developed and provide a recommendation to the DBOH for them to take action with their authority to approve.

Mr. Dick went on to state there was consensus on the catchment area for the new hospital, but the boundaries on the rest of the map had not been updated in approximately 19 years, so he did not feel it was urgent to proceed without first obtaining guidance from EMSAB and authority from the DBOH.

Adam Heinz, Executive Director of REMSA Health, requested the Board consider including hospitals outside of the County, as the main focus was about safety and accessing the closest, most appropriate facility. He noted the proximity of Carson-Tahoe, in particular, to the south end of Washoe Valley.

Mr. Macaluso asked Mr. Dick if he was requesting the appointment of an official task force, adoption of the current map, or perhaps assistance from an official sanctioned body, as Health staff had taken on the lion's share of the work and encountered some frustrations.

Mr. Dick noted that that the interim map was acceptable for the time being, the discussion was regarding the approach while developing further modifications. He suggested they ask Ms. Esp's opinion as to whether she felt that further discussion with a designated group could lead to consensus in the future.

Ms. Esp requested the opportunity to continue discussions with any interested parties in the community. If consensus was not reached, two maps could be brought back to the Board, with their selection being presented to DBOH for final approval.

Mr. Macaluso asked Ms. Esp if she felt the group was comprised of the right people.

Ms. Esp responded that it was made up of EMS agencies inside and outside of Washoe County's jurisdiction, with the request to invite any other members of their agency who was not included on the original email, but that only one vote from each agency would be counted. She noted there was only one agency that had concerns and wanted to see changes made.

Dr. Hardwick opined there would be difficulties in coming to a consensus. He felt the interim map was the most intuitive since it represented only a matter of a few seconds in between the two hospitals, and did not inundate just one of them in the event of a code catchment situation. Also, it was essentially a continuation of the prior map, which decreased confusion for EMS providers. He suggested that in an effort to move the decision forward, perhaps reaching out to the heads of each of the agencies to be sure they are satisfied.

At 9:59 a.m. Ms. Spinola noted for the record that Mr. Thornley had left the meeting and J.W. Hodge was now representing the City of Reno.

Dr. Hardwick went on to say that he felt it was important to follow State precedent when it came to the free-standing EDs. He stated the hospitals should be included in the discussion, and noted the freestanding EDs were very clearly not hospitals, so should not be included in the catchment.

Chair Krutz summarized, stating the Board wanted a patient-centric approach. First, they would stay with the current map while continuing the conversation with the partner agencies.

**Mr. Dick moved to approve as stated. Mr. Macaluso seconded the motion, which was approved unanimously.**

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## 9. \*City of Reno & REMSA CAD to CAD Implementation Project Update

Cody Shadle

Mr. Shadle reviewed the information contained in Exhibit A, emphasizing that the maps were on different platforms and the systems were unable to separate out HIPAA-protected information during dispatch, which allowed anyone in the system to hear that. They are currently working to locate a new CAD system that will work as intended, seamlessly connecting the region's EMS providers.

Mr. Abbott suggested, now that REMSA was utilizing GIS data from the County, it would be worth taking another look at premise location identification originally tested against the system base layer that had been established by a different vendor. He asked if the firefighters were qualified to receive the HIPAA information, and Mr. Shadle replied that some were. For those that were not, they could be requested to sign disclosures. He pointed out that would only work as long as the CAD-to-CAD remained a closed system.

Mr. Abbott went on to note that one of the major drivers of the need for the CAD-to-CAD system was the lack of ability for REMSA to provide the details about the call back to the firefighters, which would be useful when allocating necessary resources. He felt that information should be able to be fed into the communications systems in the fire apparatus.

Mr. Shadle further explained there was no way to protect the HIPAA portion of a dispatch, so that would mean that some calls would have to be excluded and information provided in a vacuum, with limited data being provided.

Mr. Abbott noted that he had previously been employed by a company that was one of 16 that were all on a CAD-to-CAD system and it worked beautifully. He requested REMSA be included during the selection process for the new CAD system, and requested support from the Board for that.

Mr. Dick stated he thought it was unfortunate and frustrating that they were only now being told that the system would not work, six years into the process, and also that it was noted as a



viable approach by the Tri-Data report. He agreed with Mr. Abbott that a one-way communication back to fire would solve a significant issue and save costs on fire responses.

Dr. Hardwick opined there was only one way forward, and that was to get all agencies on a single platform. If one agency changed their individual one, that new one might no longer communicate with the others, which would put the situation right back to the current one.

Mr. Shadle explained that they were looking for a system that builds agency configuration as a priority, as well as having significant security permissions built in so that data sharing can be specific and granular enough to limit and parse out protected information.

Mr. Hodge opined that everyone was on the same page regarding the need for a regional system. He acknowledged the amount of work that would be required to locate a new system and wanted to be sure there was a return on investment as it would significantly impact Reno's processes. He opined that more fixes and patches would introduce more potential for human error, and that the City of Reno did not find the value of continuing to work on the current system due to the risks.

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**10. Discussion and Possible Changes to the Agency Reports Format (For Possible Action) –**

Created a universal Agency Report to provide for uniform presentation of useful and relevant EMS data to the EMSAB.

Sabrina Brasuell

Ms. Brasuell explained the new format was designed to provide a uniform presentation of information that would make it easier for the Board members to locate certain items and make them more accessible. She noted the JAC may recommend different data points be added in the future, but the structure and formatting would remain the same.

**Mr. Dick moved to approve the new format. Mr. Macaluso seconded the motion.**

Chair Krutz asked if the motion allowed the freedom for the JAC to continue to work on the specific data points. Ms. Brasuell explained she would be working with the JAC to define definitions and come back to the Board to be sure they were appropriate.

**Mr. Dick clarified that his motion included approval of the form and also for Ms. Brasuell to pursue the work she described and come back to the Board.**

**The motion carried unanimously.**

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**11. Presentation of the Washoe County Special Trauma Report 2018 – 2020, and Possible Permission to Disseminate (For Possible Action)**

Anastasia Gunawan

Ms. Gunawan, EMS Statistician, noted the Trauma and Injury Prevention survey provided to regional hospitals and EMS partners the previous December indicated the injuries due to unintentional, homicide, suicide and motor vehicle accidents were the most relevant. The EMS Oversight Program staff combined this information with supporting information from the Nevada Trauma registry to create the Special Trauma Report. The same process will be repeated every three years. The Report provides evidence-based injury information so that Washoe County can plan for sustainable medical response and patient care. It would be distributed to partner agencies upon approval of the Board.

**Mr. Dick moved to approve dissemination of the report. Mr. Hodge seconded the motion, which was approved unanimously.**

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## 12. \*Agency Reports and Updates

### A. \*REMSA EMSAB Report, May 5<sup>th</sup>, 2022, Adam Heinz

Data Performance Report, EMS Operations Report

Mr. Heinz noted that EMS Week ran from May 15 through May 21, and the theme was Rising to the Challenge. It provided a great opportunity to recognize the great work that their men and women did every day. They would be holding an awards ceremony and everyone was invited. He brought up their Choose the Right Care campaign, designed to educate the public on the proper utilization of the emergency system, with the goal of reducing utilization for unnecessary EMS responses.

Mr. Heinz thanked the EMS Oversight team and the response partners for the meeting of April 13, which was to discuss the things in which REMSA believes are the future and initiatives that all can support in enhancing the EMS and first response system. He explained they would continue and the progress would be shared with the Board. He then noted that REMSA is intending to present a request for a rate increase at the May 26, 2022 DBOH meeting. A portion of that report will include some verbiage that supports the idea of EMS and Fire regionalization.

Mr. Heinz went on to note that hospital offload delays have not been an issue over the past three months, and they wanted the Board to know that they were very appreciative of the work the hospitals have done to accept patients.

Mr. Dick reminded the audience that REMSA has been operating under Directive 11 of the Emergency Declaration in providing a tiered response, and that discussions were occurring regarding potential modifications to the Franchise Agreement. He acknowledged that the Directive would most likely expire soon and expressed his hope that the issue of the tiered response would be heard by the DBOH sometime in the very near future to come to a resolution on the issue.

### B. \*City of Sparks Fire Department EMSAB Report, May 5<sup>th</sup>, 2022, Chief Jim Reid

Data Performance Report, EMS Operations Report

Chief Reid pointed out that his report included information regarding their current hiring process.

### C. \*Truckee Meadows Fire and Rescue EMSAB Report, May 5<sup>th</sup>, 2022, Chief Joe Kammann

Data Performance Report, EMS Operations Report

Chief Kamman noted they had three ambulances being utilized for response as well as thirty-three probationary personnel. TMFR is partnering with Truckee Meadows Community College to offer a combined paramedic program, and six employees were currently attending.

### D. \*Reno Fire Department EMSAB Report, May 5<sup>th</sup>, 2022, Reno Fire Department Staff Representative

Data Performance Report, EMS Operations Report

Chief Nolan offered to answer any questions about his report.

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13. **\*Board Comment**

Limited to announcements or issues for future agendas. No action may be taken.

None.

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14. **\*Public Comment**

Limited to three (3) minutes per person. No action may be taken.

Mr. Abbott referred back to the CAD-to-CAD item and opined the region needed direction and leadership on the topic, and there needed to be some movement.

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**Adjournment**

Chair Krutz adjourned the meeting at 11:02 a.m.

**STAFF REPORT  
EMERGENCY MEDICAL SERVICES ADVISORY BOARD  
MEETING DATE: August 4<sup>th</sup>, 2022**

**TO:** EMS Advisory Board Members  
**FROM:** Sabrina Brasuell, EMS Coordinator  
775-326-6043, [sbrasuell@washoecounty.gov](mailto:sbrasuell@washoecounty.gov)  
**SUBJECT:** Discussion and Possible Election of an Emergency Medical Services Advisory Committee (EMSAB) Chair (For Possible Action)

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**SUMMARY**

This is for discussion and possible election of an Emergency Medical Services Advisory Committee (EMSAB) Chair as this position is overdue for election.

**PREVIOUS ACTION**

At the February 4<sup>th</sup>, 2021, EMSAB meeting, Mr. Neil Krutz was nominated for, and elected as, the Chair of the Board.

**BACKGROUND**

At the time of Mr. Krutz's nomination and election to the position of Chair, the appointment term was two (2) years. Due to the alignment of the Inter-Local Agreement and EMSAB bylaws occurring after the recent elections in February of 2021, the terms of the positions of Chair and Vice-Chair changed. The current term for each is one (1) year. Per the bylaws, "both positions are eligible for reappointment for up to one subsequent one (1) year term, limited to two consecutive years."

**FISCAL IMPACT**

There is no fiscal impact.

**RECOMMENDATION**

Staff recommends the Board discuss and possibly elect a new Emergency Medical Services Advisory Board Chair.

**POSSIBLE MOTION**

Should the Board agree with staff's recommendation, a possible motion would be "Move to elect \_\_\_\_\_ for Emergency Medical Services Advisory Board Chair."

**STAFF REPORT  
EMERGENCY MEDICAL SERVICES ADVISORY BOARD  
MEETING DATE: August 4<sup>th</sup>, 2022**

**TO:** EMS Advisory Board Members  
**FROM:** Sabrina Brasuell, EMS Coordinator  
775-326-6043, [sbrasuell@washoecounty.gov](mailto:sbrasuell@washoecounty.gov)  
**SUBJECT:** Discussion and Possible Election of an Emergency Medical Services Advisory Committee (EMSAB) Vice Chair (For Possible Action)

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**SUMMARY**

This is for discussion and possible election of an Emergency Medical Services Advisory Committee (EMSAB) Vice-Chair as this position is overdue for election.

**PREVIOUS ACTION**

At the February 4<sup>th</sup>, 2021, EMSAB meeting, Mr. Eric Brown was nominated for, and elected as, the Vice Chair of the Board.

**BACKGROUND**

At the time of Mr. Brown's nomination and election to position of Vice Chair, the appointment term was two (2) years. Due to the alignment of the Inter-Local Agreement and EMSAB bylaws occurring after the recent elections in February of 2021, the terms of the positions of Chair and Vice-Chair changed. The current term for each is one (1) year. Per the bylaws, "both positions are eligible for reappointment for up to one subsequent one (1) year term, limited to two consecutive years."

**FISCAL IMPACT**

There is no fiscal impact.

**RECOMMENDATION**

Staff recommends the Board discuss and possibly elect a new Emergency Medical Services Advisory Board Vice Chair.

**POSSIBLE MOTION**

Should the Board agree with staff's recommendation, a possible motion would be "Move to nominate and elect \_\_\_\_\_ for Emergency Medical Services Advisory Board Vice Chair."

**STAFF REPORT  
EMERGENCY MEDICAL SERVICES ADVISORY BOARD  
MEETING DATE: August 4<sup>th</sup>, 2022**

**TO:** EMS Advisory Board Members

**FROM:** Andrea Esp, Public Health Preparedness and EMS Program Manager  
775-326-6042, aesp@washoecounty.gov

**SUBJECT:** **EMS Oversight Program and Performance Data Updates** – Joint Advisory Committee Activities, Special Projects, EMS Planning, Data Performance, REMSA Franchise Agreement Updates, REMSA Exemption Requests, Mass Gatherings and Special Events Reviews

EMS Partners – Joint Advisory Committee (JAC)

The EMS Oversight Program meets bi-weekly with the JAC (REMSA Health, Reno Fire Department, Sparks Fire Department, and Truckee Meadows Fire and Rescue), to develop processes and protocols to accomplish the goals of the Washoe County EMS Strategic Plan (2019-2023).

A summary of the current Goals and Objectives in the Strategic Plan that have been addressed include:

- Goal 7; Objective 7.1: Research legal protection for all agencies to ensure staff understand their legal protection.

Many of the pending Goals and Objectives have been paused due to ongoing regionalization conversations and the potential impact on these.

Special Projects

A new EMSAB Report template was approved for use at the last EMSAB. The intended follow up was to meet with each reporting agency (Truckee Meadows Fire and Rescue, Reno Fire Dept., Sparks Fire Dept. and REMSA Health) and better understand the metrics each agency finds valuable sharing with EMSAB and other partners. After compiling this information, the Program intended to bring this information back to EMSAB and allow EMSAB to make a final determination of metrics to be included in the report. Due to regionalization discussions, this follow up has been paused. The impact of the regionalization decisions may directly impact the metrics available and necessary. After the regionalization discussions have occurred, the Program will schedule follow ups with each agency.

Boundary drops study and review has been completed by the program. EMS Statistician presented the study results and findings on June 20<sup>th</sup>, 2022, at the Joint Advisory Committee meeting.

EMS Planning

The Washoe County Multi-Casualty Incident Plan (MCIP) and associated Alpha Plan annex were updated. These updates focused on adding the Burn Response Plan and associated burn resources, updating alpha kit locations and supply lists, and updating ER Baseline Capacity numbers and maps of area hospitals (including the ER at McCarran NW and Northern Nevada Sierra Medical Center). This was signed by the Inter-Hospital Coordinating Council Chair, Brian Taylor, and District Health Officer, Kevin Dick, on June 30<sup>th</sup>, 2022. It will become effective on September 1<sup>st</sup>, 2022, to allow partners time to train their staff.

Data Performance:

The EMS Oversight Program conducts data analysis on response and jurisdictional performance. The Program received several data requests from fire agencies in the last quarter. The details and summary of those requests are outlined in the following table.

| <b>Table 1: Data Performance Reports</b> |  |                        |                          |
|--|--|------------------------|--------------------------|
| <b>Requestor</b>                         | <b>Summary of request</b>                      | <b>Date of request</b> | <b>Request completed</b> |
| Sparks Fire Department                   | Performance Measures January and February 2022 | 3/22/2022              | 4/19/2022                |
| Truckee Meadows Fire and Rescue (TMFR)   | Mutual Aid Response Analysis                   | 5/19/2022              | 6/6/2022                 |
| EMS Program                              | Boundary Drop – Mapping and Analysis           | 4/1/2022               | 6/16/2022                |

REMSA Franchise Agreement Updates

Currently the JAC has a workgroup focused on the potential revision to Franchise Agreement Section 2.3 specific to Level of Care. The workgroup convened in April of 2022 at the request of the District Board of Health. Members include co-response partners from: Truckee Meadows Fire and Rescue, Reno Fire Department, Sparks Fire Department, Reno-Tahoe Airport Fire Department, REMSA Health with facilitation by the EMS Oversight Program. The EMS Oversight Program has also been providing updates to the DBOH for the past few months.

REMSA Exemption Requests

REMSA has seen a decline in Status 99 delays. Table 2 summarizes REMSA Exemption Requests.

| <b>Table 2: REMSA Exemption Requests FY 2021-22</b> |                        |                  |                |              |                 |
|---|------------------------|------------------|----------------|--------------|-----------------|
| <b>Exemption</b>                                    | <b>System Overload</b> | <b>Status 99</b> | <b>Weather</b> | <b>Other</b> | <b>Approved</b> |
| July 2021   | 68                     | 5                | -              | -            | 73              |
| August 2021   | 121                    | 111              | -              | -            | 232             |
| September 2021                                      | 115                    | 224              | -              | -            | 339             |



Subject: EMS Oversight Program and Performance Data Updates

Date: November 5, 2021

Page 3 of 3

|               |    |     |                 |                |     |
|---------------|----|-----|-----------------|----------------|-----|
| October 2021  | 71 | 120 | -               | -              | 191 |
| November 2021 | 24 | 41  | -               | -              | 65  |
| December 2021 | 36 | -   | 64 <sup>a</sup> | 1 <sup>b</sup> | 101 |
| January 2022  | 55 | 82  | -               | -              | 137 |
| February 2022 | -  | -   | 15 <sup>c</sup> | -              | 15  |
| March 2022    | 8  | -   | -               | -              | 8   |
| April 2022    | 10 | -   | -               | -              | 10  |
| May 2022      | 17 | 3   | -               | -              | 20  |
| June 2022     | 43 | -   | -               | -              | 43  |

<sup>a</sup> A total of 64 late calls resulted from 4 Blanket Weather Exemption incidences.

<sup>b</sup> Individual weather exemptions are approved by REMSA, not WCHD, per the Exemption Guidelines. These are short-lived incidences that do not greatly impact the community

<sup>c</sup> A total of 15 late calls resulted from 3 Blanket Weather Exemption incidences.

#### Community Services Department (CSD) – Memo Review

The EMS Oversight Program staff reviews and analyzes project applications received from the Planning and Building Division of the CSD and provides feedback. Program staff reviewed nineteen (19) project applications for the second quarter of calendar year 2022 and had no comments and/or concerns for any regarding impact on EMS response.

#### Special Events/Mass Gatherings Applications

The EMS Oversight Program received nine (9) Mass Gatherings applications for review in the second quarter of calendar year 2022. Only one (1) met the minimum number of attendees for a mass gathering and the EMS Oversight Program made recommendations according to guidelines.





**STAFF REPORT  
EMERGENCY MEDICAL SERVICES ADVISORY BOARD  
MEETING DATE: August 4, 2022**

**TO:** EMS Advisory Board Members  
**FROM:** Anastasia Gunawan, EMS Statistician  
[agunawan@washoecounty.us](mailto:agunawan@washoecounty.us)  
**SUBJECT:** Presentation of the Washoe County Special Trauma Report 2021

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**SUMMARY**

The EMS Oversight Program Statistician is providing a summary of purpose for the special trauma report, a descriptive analysis of trauma and injury from Calendar Year 2021 in Washoe County

**District Health Strategic Priorities supported by this item:**

- 4. Impactful Partnerships:** Extend our impact by leveraging partnerships to make meaningful progress on health issues.

**PREVIOUS ACTION**

No previous action.

**BACKGROUND**

The Washoe County Trauma Data report provides summary and assessment of trauma and injuries that meets the National Trauma Data Standards and Nevada Trauma Registry reporting guidelines established under NRS 450B.238, and NAC 450B. According to most recent statistics published by the Centers for Disease Control and Prevention, injuries are the leading cause of deaths among persons 1 to 45 years of age, accounting for 59% of deaths in that age group in the United States.

Based on the analysis of 1,391 trauma cases reported to the Nevada Trauma Registry, the rate of traumatic injuries for 2021 is 286.7 per 100,000 population, a 4% increase from the previous year 2020. Unintentional injuries accounted for 93% of trauma incidents in Washoe County, with a reported case fatality rate of 4.7 per 100 trauma patients. Intentional injuries make up less than 10% of total trauma incidents, with a reported case fatality rate of 8.3 per 100 trauma patients. In 2021, unintentional and intentional injuries case fatality rate increased in Washoe County compared to case fatality rates in 2020.

**FISCAL IMPACT**

There is no fiscal impact.

# WASHOE COUNTY HEALTH DISTRICT

ENHANCING QUALITY OF LIFE

## Washoe County 2021 Trauma Data Report

Published June 2022



**Public Health**  
Prevent. Promote. Protect.

## Introduction

The purpose of this report is to highlight prevalence, morbidity, and mortality associated with patterns of fatal and non-fatal injuries due to trauma, as defined by The American College of Surgeons (ACS) in Washoe County. Assessment of trauma and injuries presented in this report utilizes the [Nevada Trauma Registry \(NTR\)](#) standardized dataset established under NRS 450B. 238, and NAC 450B. 768. This report provides characteristics and trends for specific trauma and injuries during the Declaration of Emergency related to the COVID-19 pandemic.

This report is divided into section(s) with background on patient trauma care in Washoe County with accompanying information on:

- a) demographic distribution of injuries in Washoe County;
- b) specific mechanisms causing the injury;
- c) severity of the injury;
- d) place of the injury; and
- e) length of hospital stay in the intensive care unit (ICU).

These section(s) were curated to augment the Washoe County Health District strategic priority to promote impactful partnership with stakeholders in the community and mission to protect and enhance the well-being and quality of life for all in Washoe County.

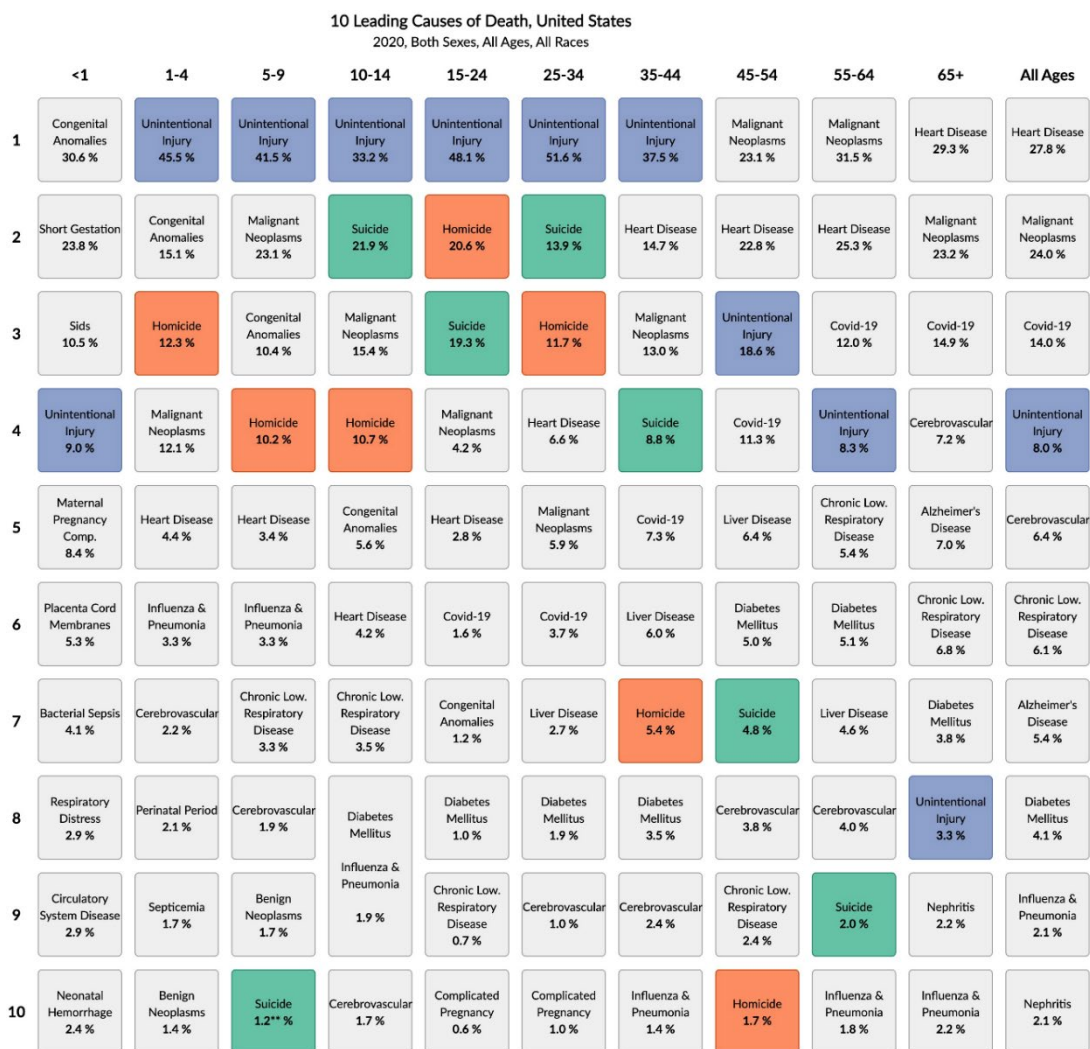
## Traumatic Injury in Washoe County during COVID-19

The Coronavirus Disease (COVID-19) pandemic continued to impact healthcare systems nationwide in 2021. In addition to the cycles of COVID-19 incidence and hospitalizations, traumatic injuries continue to be a growing health concern in Washoe County between 2020-2021. Domestic migration changes in the U.S. dramatically increased between 2020-2021 and are likely being driven by the pandemic's impact. On average, census reported that smaller counties observed higher net domestic migration, while larger counties of 500,000 population or more observed decreases in net domestic migration. Based on the migration calculations released on Vintage 2020 population estimates, Washoe County net domestic migration rate was in the 10.1 to 50.0 per 1,000 population range. However, those rates increased based on Vintage 2021 population estimates with net migration rate of 50.0 or more per 1,000 population<sup>1</sup>. With continued positive net domestic migration in Washoe County, the odds and patterns of injury will likely change in Washoe County. Also, increased population mobility due to lifting COVID-related restrictions will likely affect the number of injuries occurring in a growing community.

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<sup>1</sup> Bureau, U.S. Census. "New Data Reveal Continued Outmigration from Some Larger Combined Statistical Areas and Counties." Census.gov, 13 Apr. 2022, <https://www.census.gov/library/stories/2022/03/net-domestic-migration-increased-in-united-states-counties-2021.html>.

According to the Centers for Disease Control and Prevention, unintentional injuries are the leading cause of deaths among persons 1 to 44 years of age, accounting for half of deaths in that age group in the United States (Appendix A). In addition to those that survive, millions of people still suffer from injuries each year<sup>2</sup>. The combined economic cost of fatal and non-fatal preventable injury-related to employee uninsured costs, vehicle damage, fire costs, medical costs, work productivity, live lost, and quality of life in the United States was \$6.2 trillion in 2020, which is 47.2% increase in costs compared to 2019 (\$4.2 trillion)<sup>3</sup>.



Appendix A. Ten Leading Causes of Death, United States. Source: WISQARS Centers for Disease Control and Prevention

<sup>2</sup> "FASTSTATS - Injuries." Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 12 May 2016, <https://www.cdc.gov/nchs/fastats/injuries.htm>.

<sup>3</sup> Peterson C, Miller GF, Barnett SB, Florence C. Economic Cost of Injury — United States, 2019. MMWR Morb Mortal Wkly Rep 2021;70:1655–1659. DOI: <http://dx.doi.org/10.15585/mmwr.mm7048a1external icon>

Injuries are categorized into three major types, 1) unintentional; 2) intentional; and 3) undetermined injuries. Unintentional poisoning, unintentional motor vehicle traffic incidents, unintentional drowning and unintentional falls related injuries make up the largest proportion of traumatic unintentional injuries and associated emergency department visitation costs in the region and the United States for population aged 1 to 44 years old. Meanwhile, homicide and suicide accounts for most traumatic intentional injuries. Reducing the risk of unintentional injury involves understanding basic preventive mechanisms, such as implementing robust [transportation safety and primary seat belt](#) laws<sup>4</sup>. The State of Nevada under NRS 484D.495 enforces seat belt use under a non-moving, secondary violation. Under current statutes, including in Washoe County, seat belt use violation does not affect driver's license points or suspension. Effective transportation safety and restraint use policies have been shown to significantly reduced the risk of serious injuries and deaths by half in motor vehicle related incidents. Other methods of risk reduction to address the likelihood of high impact falls among seniors include the promotion of [evidence-based falls prevention programs](#)<sup>5</sup> such as STEADI - Stopping Elderly Accidents, Deaths and Injuries endorsed by the CDC National Center for Injury Prevention and Control.

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<sup>4</sup> Transportation Safety Centers for Disease Control and Prevention. Source: <https://www.cdc.gov/transportationsafety/seatbelts/states.html>

<sup>5</sup> Falls Prevention and Programs National Council on Aging. Source: <https://www.ncoa.org/article/about-evidence-based-programs>

## Trauma Centers in the United States

Designation and verification of trauma centers are two separate independent activities directed to assist hospitals to enhance and optimize trauma care. The designation of trauma facilities in the U.S. is a geopolitical process by which empowered entities, government or otherwise, are authorized to designate<sup>6</sup>. Although the ACS does not designate trauma centers, the ACS conducts consultation and verification activities through ACS Verification, Review, and Consultation (VRC) programs. Designated trauma centers may receive certification through voluntary review of essential elements such as trained and capable personnel, adequate facilities, and performance improvement to confirm resource capability readiness as a Trauma Center<sup>7</sup>. Trauma Centers are classified into various Levels (Level I, II, III, IV, or V), based on the kinds of resources available in the facility and the number of patients admitted annually<sup>8</sup>.

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<sup>6</sup> American College of Surgeons. Verification, Review and Consultation (VRC) Program. Source: <https://www.facs.org/quality-programs/trauma/tqp/center-programs/vrc/about>

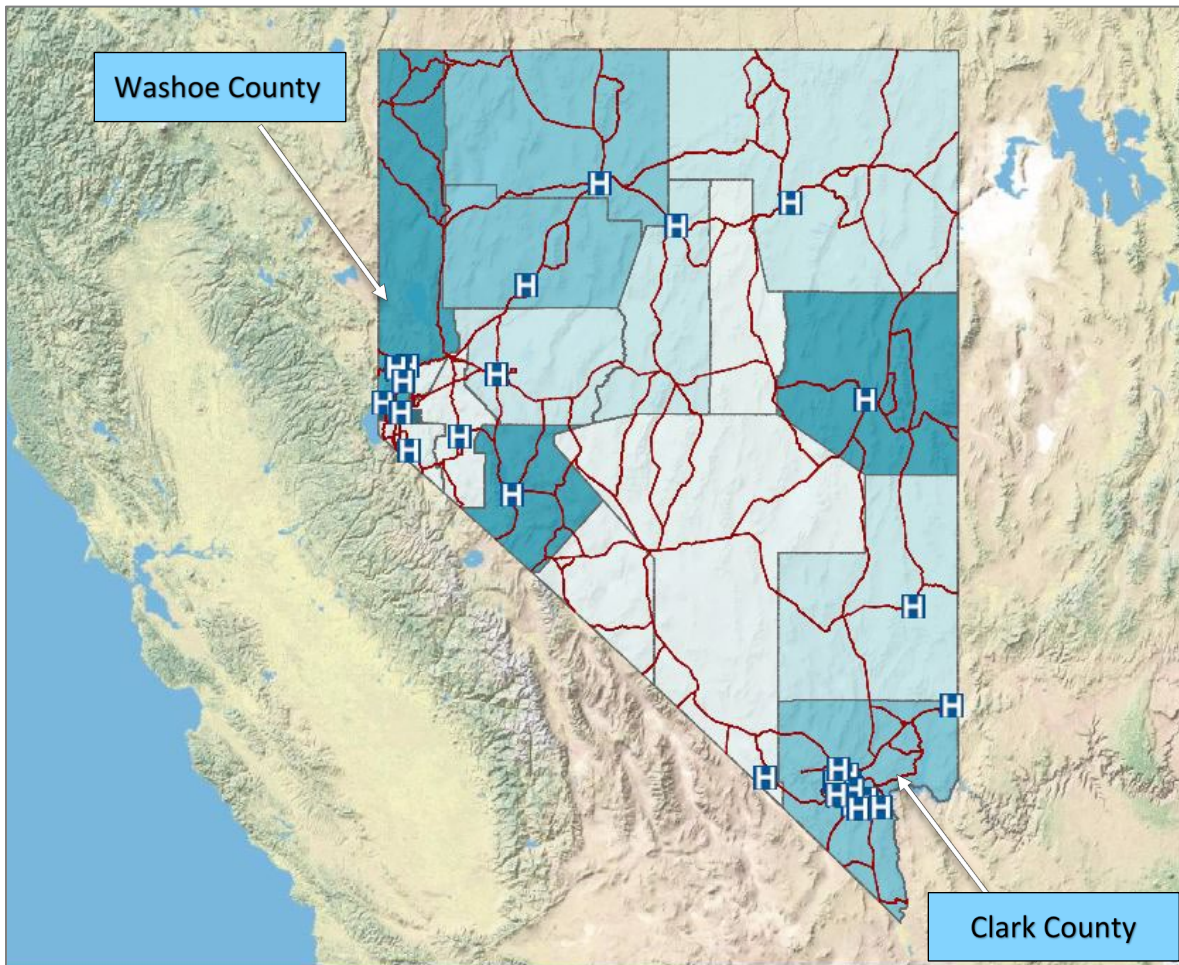
<sup>7</sup> American College of Surgeons. Resource for Optimal Care of the Injured Patient 6<sup>th</sup> edition. Source: <https://www.facs.org/Quality-Programs/Trauma/TQP/center-programs/VRC/resources>

<sup>8</sup> Trauma Center Levels and Capabilities. Washoe County 2017 Trauma Data Report. Source: <https://www.washoecounty.us/health/files/ephp/emergency-medical-services/>



## Trauma Centers in Nevada

Nevada Trauma Centers are located in the most populated counties in Nevada: Clark County and Washoe County (Appendix B). Level I Adult Trauma Center and Level II Pediatric Trauma Center are located in Las Vegas, Clark County. Renown Regional Medical Center (RRMC) is a Level II Trauma center and St. Mary's Medical Center located in Reno, Washoe County (Appendix B). Trauma Level III Center is located throughout Las Vegas, Clark County. Patients with traumatic injury may arrive at a facility which is not a designated Trauma Center. Medical personnel make an informed decision as to whether a patient should be transferred to a designated Trauma Center in the region<sup>9</sup>.



Appendix B. Licensed Community Hospitals in Nevada. Source: <https://med2.unr.edu/SI/CountyData/atlas.html>

<sup>9</sup> Trauma Center Levels and Capabilities. Washoe County 2017 Trauma Data Report. Source: <https://www.washoecounty.us/health/files/ehp/emergency-medical-services/>



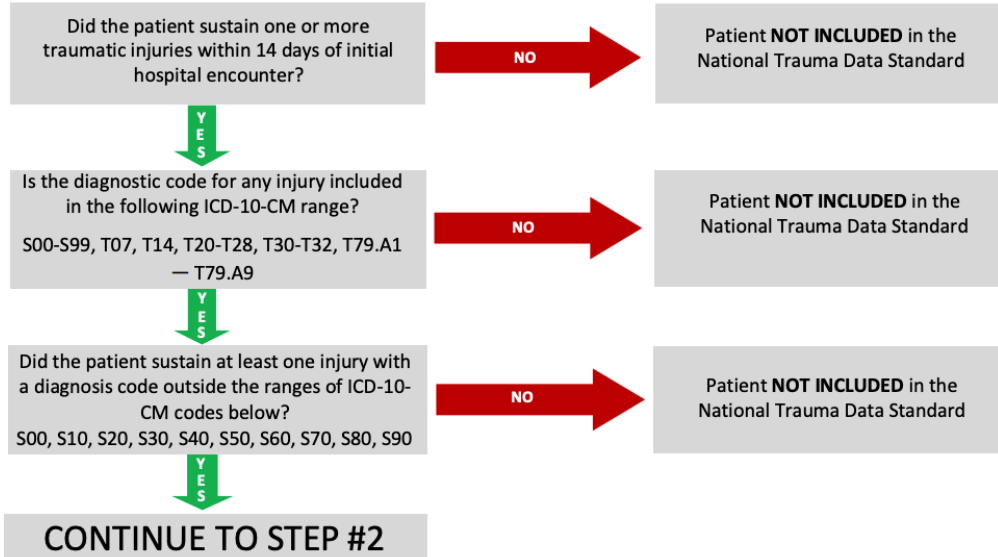
## Trauma Reporting in Washoe County

The National Trauma Data Bank (NTDB) is the largest combined trauma registry in the United States. Healthcare facilities across the nation report patient level trauma information to the NTDB that range from basic demographics to quantitative, and qualitative data describing the nature of the injury, level of care received, and the outcome of the injury. The National Trauma Data Standard defines a standardized set of data variables to capture and report to Nevada Trauma Registry (Appendix C). A facility does not have to be designated or a verified Trauma Center to report data on a patient experiencing traumatic injury to the Nevada Trauma Registry. Patient level trauma data is reported to Nevada Trauma Registry (NTR) by five healthcare facilities in Washoe County: Emergency Room (ER) at McCarran Northwest, an extension of Northern Nevada Medical Center, Incline Village Community Hospital, Northern Nevada Medical Center, Renown Regional Medical Center, Renown South Meadows Medical Center, and Saint Mary's Regional Medical Center. Reporting facilities also admit trauma patients who sustained injuries in location(s) outside Washoe County. The NTR does capture patient level information for trauma patients transported from Northern California region(s) to healthcare facilities in Washoe County. Appendix C illustrates inclusion criteria that a patient must meet to be reported to the NTR.

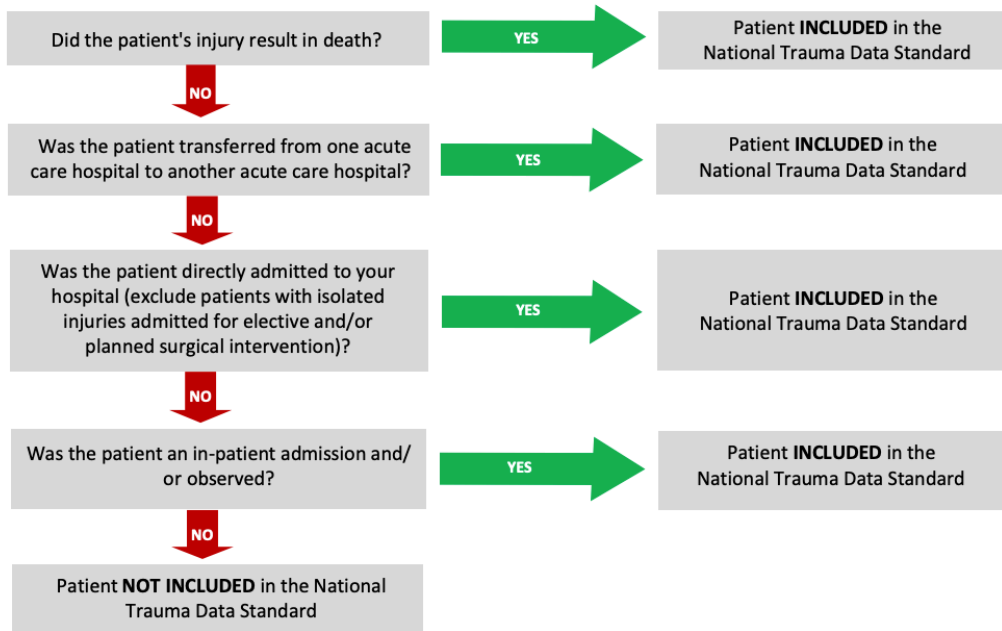
For the purpose of consistency in data reporting, the Washoe County Trauma 2021 report does not exclude out-of-state patients treated in Washoe County facilities. We intend to continue to report incidences based on injury location, and the utilization and demand of resources (EMS and hospital) in the region regardless of residency.

## NTDS PATIENT INCLUSION CRITERIA

### STEP #1:



### STEP #2:



Appendix C. National Trauma Data Standard Data Dictionary 2020 Admissions. Source: <https://www.facs.org/quality-programs/trauma/tqp/center-programs/ntdb/ntds>

## Traumatic Injuries in Washoe County

Table 3a depicts the trend of trauma cases reported in Washoe County to the Nevada Trauma Registry from 2018 to 2021. The rate of injury classified as traumatic that were reported by Washoe County facilities increased by 3.7% (286.7 per 100,000 population) compared to the previous year in 2020 (276.3 per 100,000 population). The trend follows closely to previous year as population in Washoe County increase post-pandemic. Nevada Trauma Registry does not mandate compliance tracking by facilities pursuant to NRS 450B.238, and NAC 450B.768. Facilities that do report trauma cases to the registry are encouraged by the state to conduct internal data check independently.

| <b>Table 3a: Number &amp; Rate of Trauma Incidents by Year, Washoe County, 2018-2021</b> |                            |                                    |
|--|----------------------------|------------------------------------|
| <b>Year</b>  | <b>Number of Incidents</b> | <b>Rate per 100,000 population</b> |
| 2018   | 2,130                      | 463.99                             |
| 2019   | 1,501                      | 320.19                             |
| 2020   | 1,324                      | 276.31                             |
| 2021   | 1,391                      | 286.73                             |

| <b>Table 3b: Race Specific Rate of Trauma Incidents, Washoe County, 2021</b> |                                |   |
|--|--------------------------------|---|
| <b>Year</b>  | <b>Number (%) of Incidents</b> | <b>Race Specific Rate per 100,000 population <sup>a</sup></b> |
| White, non-Hispanic  | 1,103 (79.3%)                  | 370.17  |
| Black, non-Hispanic  | 37 (2.7%)                      | 294.63  |
| American Indian, non-Hispanic  | 26 (1.9%)                      | 351.16  |
| Asian/Pacific Islander, non-Hispanic   | 41 (3.0%)                      | 116.95  |
| Hispanic   | 131 (9.4%)                     | 102.35  |

<sup>a</sup> Source population for race-specific race from ASHRO Estimates and Projections Summary Without Group Quarters Estimates 2000 to 2039.

## Demographic Characteristics

Table 4 depicts demographic characteristics of trauma patients by age, and gender. In 2021, nearly eight out of ten (79.3%) trauma patients were white, non-Hispanic. Hispanics of any race accounted for 9.4%, while 3.0% were Asian/Pacific Islander, non-Hispanic 2.7% were African American, non-Hispanic, 2% were American Indian, non-Hispanic (Figure 1). Race-specific rate calculated for trauma reveal trauma incidents affecting American Indian population disproportionately compared to other races in Washoe County (Table 3b). Although the Hispanic is the second largest race/ethnicity population in Washoe County, the data suggest that the Hispanic population has the lowest traumatic injury rate compared to all other reported race/ethnicity.

Almost half (48%) of the trauma incidents reported in 2021 captured trauma patients in the 1 to 44 years old age group (Table 4). The distribution of injury by age group reveals notable increase in trauma among the population 0 to 4 years old and 65-74 years old in 2021 compared to 2020 (Figure 2). Case Fatality Rate (CFR) per 100 trauma patients in Washoe County increased overall in all age groups in 2021 (Figure 3). Compared to 2020, case fatality rate increased significantly by 40% in 2021; 3.5 per 100 trauma patients (2020) to 4.9 per 100 trauma patients (2021) (Figure 3). The largest decrease in fatality rate was observed among trauma patients in the 34-44 years age group; CFR: 4.03 per 100 trauma patients in 2020 compared to 2021; CFR: less than 1 per 100 trauma patients (Figure 3).

**Table 4. Number & Percent of Patients by Sex & Age Group, Washoe County, 2021**

| Age Group    | All Incidents |             | Male       |             | Female     |             | Unknown  |             |
|--------------|---------------|-------------|------------|-------------|------------|-------------|----------|-------------|
|              | Number        | Percent     | Number     | Percent     | Number     | Percent     | Number   | Percent     |
| 1-4 years    | 25            | 2%          | 19         | 2%          | 6          | 1%          | 0        | -           |
| 5-9 years    | 20            | 1%          | 15         | 2%          | 5          | 1%          | 0        | -           |
| 10-14 years  | 37            | 3%          | 21         | 3%          | 16         | 3%          | 0        | -           |
| 15-19 years  | 74            | 5%          | 52         | 6%          | 22         | 4%          | 0        | -           |
| 20-24 years  | 88            | 6%          | 63         | 8%          | 25         | 5%          | 0        | -           |
| 25-34 years  | 166           | 12%         | 129        | 15%         | 36         | 7%          | 1        | 100%        |
| 35-44 years  | 124           | 9%          | 89         | 11%         | 35         | 6%          | 0        | -           |
| 45-54 years  | 130           | 9%          | 92         | 11%         | 38         | 7%          | 0        | -           |
| 55-64 years  | 178           | 13%         | 120        | 14%         | 58         | 10%         | 0        | -           |
| 65-74 years  | 224           | 16%         | 115        | 14%         | 109        | 20%         | 0        | -           |
| 75-84 years  | 183           | 13%         | 75         | 9%          | 108        | 20%         | 0        | -           |
| 85+ years    | 142           | 10%         | 47         | 6%          | 95         | 17%         | 0        | -           |
| <b>Total</b> | <b>1,391</b>  | <b>100%</b> | <b>837</b> | <b>100%</b> | <b>553</b> | <b>100%</b> | <b>1</b> | <b>100%</b> |

**Table 5: Rate of Fatality Among Trauma Patients by Age Group, Washoe County, 2021**

| Age Group    | Number of Incidents | Percent of Incidents | Number of Deaths | Case Fatality Rate <sup>a</sup> |
|--------------|---------------------|----------------------|------------------|---------------------------------|
| 0-4 years    | 25                  | 2%                   | -                | -                               |
| 5-9 years    | 20                  | 1%                   | -                | -                               |
| 10-14 years  | 37                  | 3%                   | 2                | 2.70                            |
| 15-19 years  | 74                  | 5%                   | 3                | 3.41                            |
| 20-24 years  | 88                  | 6%                   | 5                | 3.01                            |
| 25-34 years  | 166                 | 12%                  | 7                | 5.65                            |
| 35-44 years  | 124                 | 9%                   | 1                | 0.77                            |
| 45-54 years  | 130                 | 9%                   | 1                | 5.00                            |
| 55-64 years  | 178                 | 13%                  | 16               | 8.99                            |
| 65-74 years  | 224                 | 16%                  | 14               | 6.25                            |
| 75-84 years  | 183                 | 13%                  | 10               | 5.46                            |
| 85+ years    | 142                 | 10%                  | 10               | 7.04                            |
| <b>Total</b> | <b>1,391</b>        | <b>100%</b>          | <b>69</b>        | <b>4.96</b>                     |

<sup>a</sup> Rate per 100 trauma patients

Figure 1: Percent of Trauma Patients by Race/Ethnicity, Washoe County, 2021

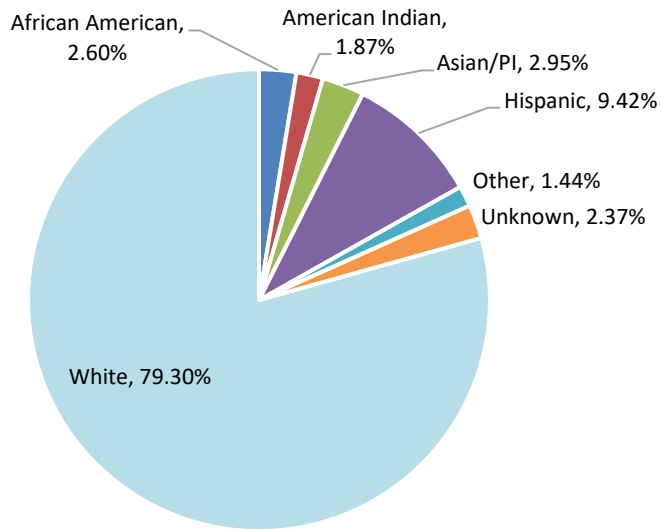


Figure. 2: Percent of Trauma Patients by Age Group, Washoe County, 2018 - 2021

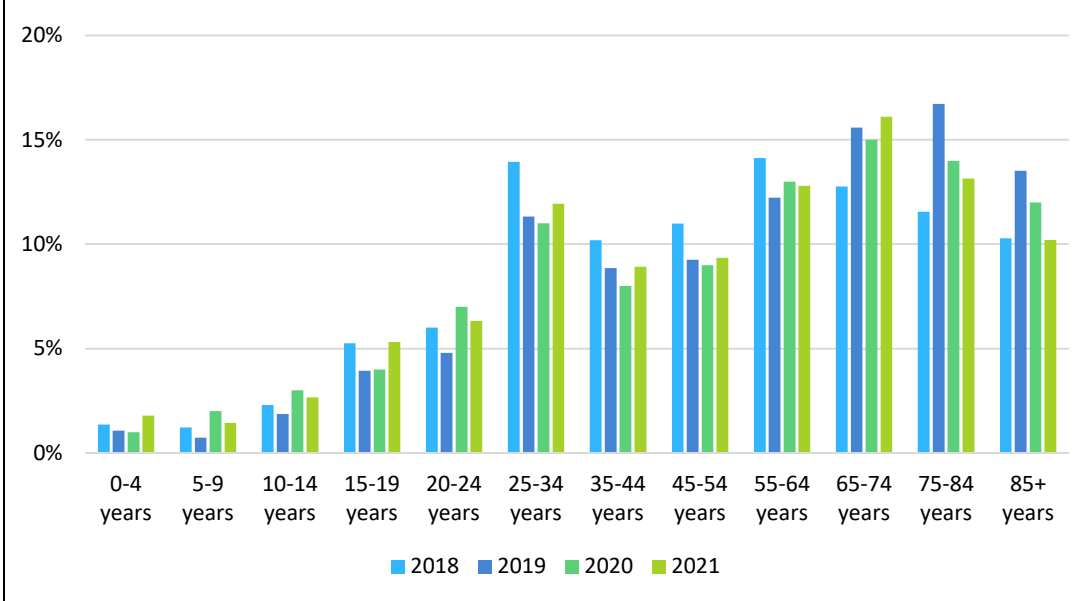
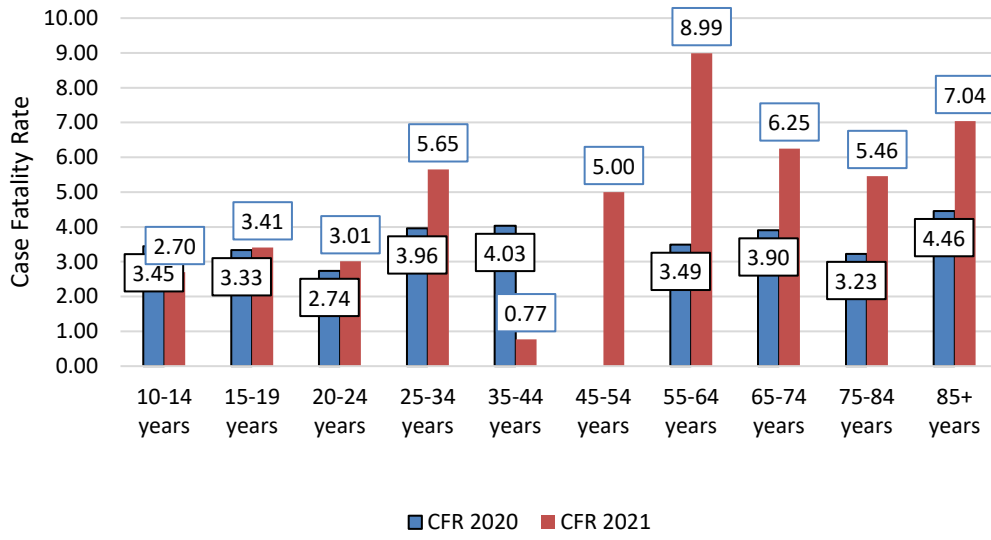


Figure 3: Case Fatality Rate per 100 Trauma Patient in Washoe County 2020 - 2021



## Injury Characteristics

### Intent of Injury

Unintentional injuries accounted for 93.0% of trauma, with reported case fatality rate of 4.7 per 100 trauma patients. Intentional injury accounted for 6.9% of overall trauma reported, with case fatality rate of 8.5 per 100 trauma patients (Table 6). The intent of injury reported over the span of four years from 2018 – 2021 has predominantly captures unintentional injuries.

Intentional injuries make up 6.9% of all trauma incidents, with fatality rate higher than unintentional injuries fatalities in 2021 (Table 6).

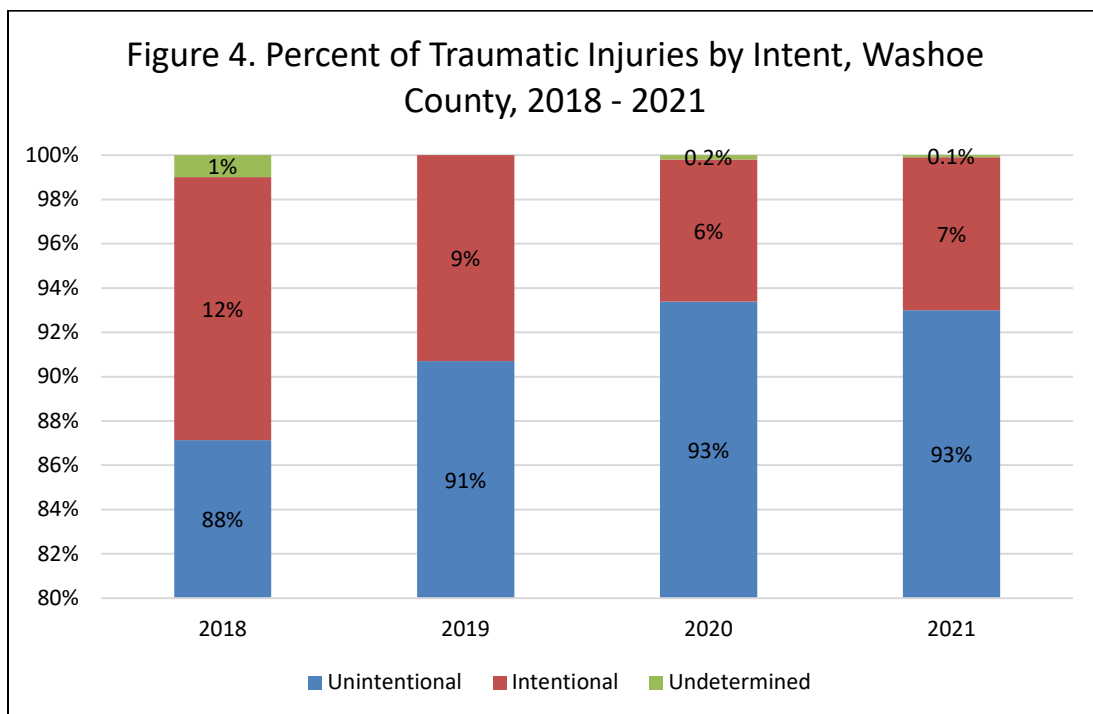
| <b>Intent of Injury</b> | <b>Number</b> | <b>Percent of Total</b> | <b>Deaths</b> | <b>Case Fatality Rate <sup>a</sup></b> |
|-------------------------|---------------|-------------------------|---------------|--|
| Unintentional           | 1,293         | 93.0%                   | 61            | 4.7                                    |
| Intentional             | 96            | 6.9%                    | 8             | 8.3                                    |
| Undetermined            | 1             | 0.1%                    | 0             | -                                      |
| <b>Total</b>            | <b>1,390</b>  | <b>100%</b>             | <b>69</b>     | <b>4.9</b>                             |

<sup>a</sup> Rate per 100 trauma patients



## Mechanism of Injury

Mechanism of injury (MOI) was determined by the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD10-CM) primary external cause code (e-code) reported as the main cause of the injury. ICD10-CM is a standardized classification system of diagnosis in medical reporting for healthcare systems in the United States. The percentage of reported unintentional injuries have increased, and meanwhile reported intentional injuries have decreased since 2018 (Figure 4). The highest number of intentional injuries reported in Washoe County was due to assaults from unarmed brawl or fight. Intentional self-harm was second highest category for intentional injury and specifically self-harm by knife accounted for the common MOI in this category (Table 7). Based on analysis of ICD10-CM, two out five unintentional traumatic injuries in Washoe County (41.6%) were due to falls. The second highest contributing factor to unintentional traumatic injuries in Washoe County involved occupants in transportation or motor vehicles collisions (Table 8).



**Table 7: Rate of Fatality Among Trauma Patient Due to Intentional Injuries, Washoe County, 2021**

| <b>Mechanism of Injury (MOI)</b>            | <b>Number</b> | <b>Percent of Total</b> | <b>Deaths</b> | <b>Case Fatality Rate <sup>a</sup></b> |
|---|---------------|-------------------------|---------------|--|
| <b>Asphyxiation</b>                         |               |                         |               |  |
| Mechanical threat to breathing              | 4             | 4.2%                    | 1             | 25.0                                   |
| <b>Intentional (combined)</b>               |               |                         |               |  |
| Collision of motor vehicles                 | 1             | 1.1%                    | -             | -                                      |
| Self-harm by handgun discharge              | 4             | 4.2%                    | -             | -                                      |
| Self-harm by jumping from a high place      | 2             | 2.1%                    | -             | -                                      |
| Self-harm by knife                          | 11            | 11.6%                   | -             | -                                      |
| Self-harm by other sharp object             | 2             | 2.1%                    | -             | -                                      |
| Self-harm by other specified means          | 1             | 1.1%                    | -             | -                                      |
| Self-harm by unspecified firearm discharge  | 1             | 1.1%                    | -             | -                                      |
| <b>Assault (combined)</b>                   |               |                         |               |  |
| Assault by handgun discharge                | 11            | 11.6%                   | 3             | 27.2                                   |
| Assault by knife                            | 16            | 16.8%                   | 1             | 6.3                                    |
| Assault by other bodily force               | 2             | 2.1%                    | -             | -                                      |
| Assault by sharp glass                      | 1             | 1.1%                    | -             | -                                      |
| Assault by strike against by another person | 3             | 3.2%                    | 1             | 33.3                                   |
| Assault by strike by sport equipment        | 2             | 2.1%                    | -             | -                                      |
| Assault by sword or dagger                  | 1             | 1.1%                    | -             | -                                      |
| Assault by unarmed brawl or fight           | 18            | 18.9%                   | 1             | 5.5                                    |
| Assault by unspecified firearm discharge    | 2             | 2.1%                    | -             | -                                      |
| Assault by unspecified means                | 2             | 2.1%                    | -             | -                                      |
| Assault by unspecified sharp object         | 10            | 10.5%                   | 1             | 10.0                                   |
| Physical abuse, suspected                   | 1             | 1.1%                    | -             | -                                      |
| <b>Total</b>                                | <b>96</b>     | <b>100.0%</b>           | <b>8</b>      | <b>8.3</b>                             |

<sup>a</sup> Rate per 100 trauma patients

**Table 8: Rate of Fatality Among Trauma Patient Due to Unintentional Injuries,  
Washoe County, 2021**

| Mechanism of Injury (MOI)                         | Number | Percent of Total | Deaths | Case Fatality Rate <sup>a</sup> |
|---|--------|------------------|--------|---------------------------------|
| <b>Accidents</b>                                  |        |                  |        |                                 |
| Aircraft causing injury to occupant               | 2      | 0.16%            | -      | -                               |
| Accidental discharge from firearms                | 1      | 0.08%            | 1      | 100.0                           |
| Accidental hit, strike, kick, twist, bite         | 2      | 0.16%            | -      | -                               |
| Accidental striking against by another            | 4      | 0.32%            | -      | -                               |
| <b>Animal-rider injured in transport accident</b> | 16     | 1.27%            | -      | -                               |
| <b>Car occupant(s)</b>                            |        |                  |        |                                 |
| Collision with car, pick-up truck or van          | 79     | 6.28%            | 6      | 7.6                             |
| Collision with fixed or stationary object         | 37     | 2.94%            | 1      | 2.7                             |
| Collision with heavy transport vehicle or bus     | 5      | 0.40%            | -      | -                               |
| Collision with pedestrian or animal               | 1      | 0.08%            | -      | -                               |
| Non-collision transport accident                  | 76     | 6.04%            | 6      | 7.9                             |
| <b>Other and unspecified transport accidents</b>  | 2      | 0.16%            | -      | -                               |
| <b>Caught in or between objects</b>               | 6      | 0.48%            | -      | -                               |
| <b>Contact with specified object</b>              |        |                  |        |                                 |
| Contact with dog                                  | 2      | 0.16%            | -      | -                               |
| Contact with hot engines, machinery               | 1      | 0.08%            | -      | -                               |
| Contact with lifting and transmission devices     | 2      | 0.16%            | -      | -                               |
| Contact with other mammals                        | 4      | 0.32%            | -      | -                               |
| Contact with other sharp objects                  | 1      | 0.08%            | -      | -                               |
| Contact with sharp glass                          | 3      | 0.24%            | -      | -                               |
| <b>Exposure to highly flammable material</b>      | 1      | 0.08%            | -      | -                               |
| <b>Falls</b>                                      |        |                  |        |                                 |
| Fall due to ice and snow                          | 31     | 2.46%            | 1      | 3.2                             |
| Fall from bed                                     | 21     | 1.67%            | 2      | 9.5                             |
| Fall from chair                                   | 11     | 0.87%            | -      | -                               |
| Fall from cliff                                   | 5      | 0.40%            | -      | -                               |
| Fall from non-moving wheelchair or scooter        | 2      | 0.16%            | -      | -                               |
| Fall from other furniture                         | 8      | 0.64%            | -      | -                               |
| Fall from tree home while engaged in sports       | 2      | 0.16%            | -      | -                               |
| Fall from, out of or through building             | 17     | 1.35%            | -      | -                               |
| Fall on and from ladder                           | 17     | 1.35%            | 1      | 5.9                             |
| Fall on and from playground equipment             | 6      | 0.48%            | -      | -                               |
| Fall on and from scaffolding                      | 5      | 0.40%            | 1      | 20.0                            |
| Fall on and from stairs and steps                 | 37     | 2.94%            | 7      | 18.9                            |
| Fall from slipping, tripping and stumbling        | 329    | 26.15%           | 12     | 3.6                             |

**Table 8 (cont'd): Rate of Fatality Among Trauma Patient Due to Unintentional Injuries, Washoe County, 2021**

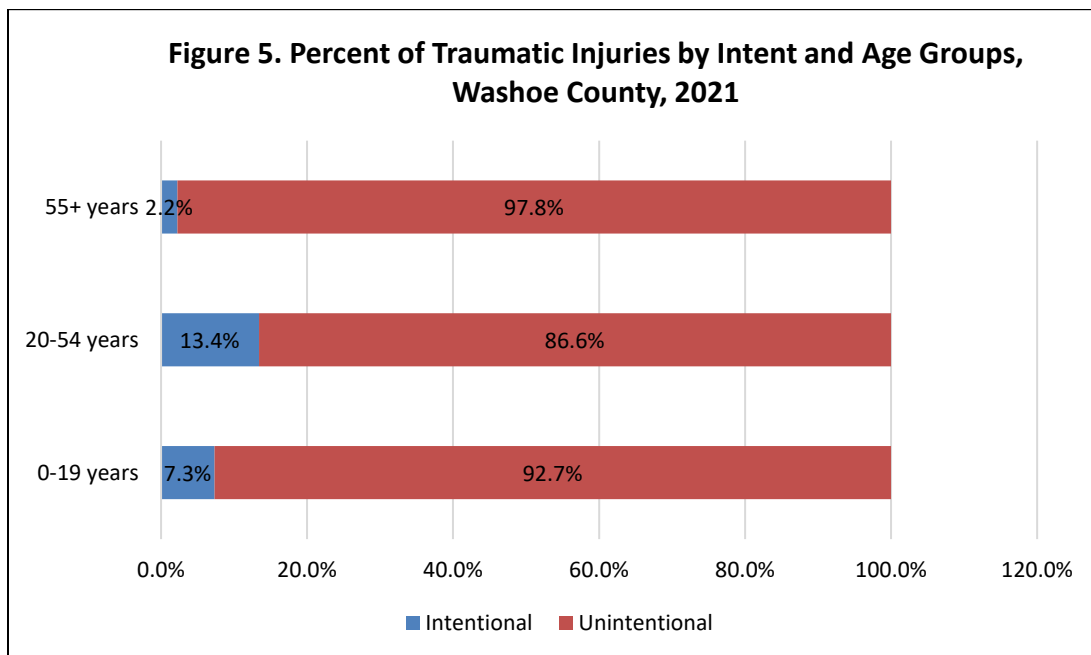
|  |              |               |           |            |
|--|--------------|---------------|-----------|------------|
| Fall, jump or diving into water                    | 1            | 0.08%         | -         | -          |
| Unspecified fall                                   | 32           | 2.54%         | 4         | 12.5       |
| <b>Motorcycle rider</b>                            |              |               |           |            |
| Collision with car, pick-up truck or van           | 31           | 2.46%         | 2         | 6.5        |
| Collision with fixed or stationary object          | 10           | 0.79%         | 1         | 10.0       |
| Collision with heavy transport vehicle or bus      | 2            | 0.16%         | -         | -          |
| Collision with pedestrian or animal                | 2            | 0.16%         | -         | -          |
| Collision with two- or three-wheeled motor vehicle | 2            | 0.16%         | -         | -          |
| Non-collision transport accident                   | 50           | 3.97%         | 1         | 2.0        |
| Other and unspecified transport accidents          | 3            | 0.24%         | -         | -          |
| <b>Occupant in transport accidents</b>             |              |               |           |            |
| Heavy vehicle injured in non-collision             | 14           | 1.12%         | 1         | 7.1        |
| Pick-up truck or van injured in collision          | 6            | 0.48%         | 1         | 16.7       |
| Special all-terrain or other off-road motor        | 66           | 5.25%         | -         | -          |
| Collision with fixed or stationary object          | 1            | 0.08%         | -         | -          |
| Collision with heavy transport vehicle/bus         | 2            | 0.16%         | -         | -          |
| <b>Other specified incidents</b>                   |              |               |           |            |
| Other fall from one level to another               | 28           | 2.23%         | -         | -          |
| Other slipping, tripping, and stumbling            | 61           | 4.85%         | -         | -          |
| Other fall on same level due to collision          | 1            | 0.08%         | -         | -          |
| <b>Pedal cycle rider</b>                           |              |               |           |            |
| Collision with car, pick-up truck or van           | 8            | 0.64%         | -         | -          |
| Collision with fixed or stationary                 | 6            | 0.48%         | -         | -          |
| Collision with other pedal cycle                   | 3            | 0.24%         | -         | -          |
| Non-collision transport accident                   | 39           | 3.40%         | -         | -          |
| Other and unspecified transport accidents          | 3            | 0.24%         | -         | -          |
| <b>Pedestrian</b>                                  |              |               |           |            |
| Conveyance accident                                | 96           | 7.63%         | 2         | 2.1        |
| Collision with car, pick-up truck or van           | 41           | 3.26%         | 3         | 7.3        |
| Other and unspecified transport accidents          | 1            | 0.24%         | -         | -          |
| <b>Striking against or struck by other objects</b> |              |               |           |            |
| Striking against or struck by other objects        | 8            | 0.48%         | 1         | -          |
| <b>Contact with venomous animals or plant</b>      |              |               |           |            |
| Contact with venomous animals or plant             | 1            | 0.08%         | -         | -          |
| <b>Total</b>                                       | <b>1,258</b> | <b>100.0%</b> | <b>59</b> | <b>4.7</b> |

<sup>a</sup> Rate per 100 trauma patients

### Mechanism of Injury by Age Group

Table 9 indicates the top three mechanisms of intentional and unintentional traumatic injury by selection of age groups: 0-19 years, 20-54 years old, and 55 years and older. Pedestrian, falls and motor vehicles accidents were among the top three mechanisms of injury across all age groups. Injuries by intent observed in 2021 is consistent with previous year observations. Transportation and motor vehicle injuries were the top mechanism for populations in the 0-19 years age group. Intentional assault reported varies in mechanism of injury from assaults due unarmed brawl or fight (18.9%), and by sharp object and knife (2.1%). Pedestrian related injuries were among the top three unintentional injuries across all age group with a case fatality rate of 9.4 per 100 trauma patients (Table 8).

| <b>Table 9: Top 3 Mechanisms of Injury by Number of Incidents by Age Group in Washoe County, 2021</b> |                         |                         |                            |
|---|-------------------------|-------------------------|----------------------------|
| <b>Rank</b>   | <b>0-19 years</b>       | <b>20-54 years</b>      | <b>55+ years</b>           |
| 1   | Transport/Motor Vehicle | Transport/Motor Vehicle | Falls, Stumbling, Slipping |
| 2   | Pedestrian              | Pedestrian              | Transport/Motor Vehicle    |
| 3   | Unintentional Falls     | Intentional Assault     | Pedestrian                 |



## Place of Injury

The Nevada Trauma Registry database captures place of injury through ICD-10-CM codes, which allows for detailed classification of the place of injury. Approximately 15.0% of all injuries that occurred in Washoe County in 2021 took place on the interstate highway, followed by other places in an apartment (9.0%) and parking lot (6.8%) (Table 10).

| <b>Place of Injury</b>                                       | <b>Number</b> | <b>Percent</b> |
|--|---------------|----------------|
| Airplane as the place of occurrence of the external cause    | 1             | 0.08%          |
| Airport as the place of occurrence of the external cause     | 2             | 0.16%          |
| Baseball field   | 1             | 0.08%          |
| Bathroom in apartment  | 5             | 0.41%          |
| Bathroom in mobile home                                      | 1             | 0.08%          |
| Bathroom in nursing home                                     | 7             | 0.58%          |
| Bathroom in other non-institutional residence                | 1             | 0.08%          |
| Bathroom in other specified residential institution          | 3             | 0.25%          |
| Bathroom of single-family (private) house                    | 34            | 2.80%          |
| Bathroom of unspecified private residence single family      | 5             | 0.41%          |
| Beach as the place   | 4             | 0.33%          |
| Bedroom in apartment   | 8             | 0.66%          |
| Bedroom in nursing home                                      | 14            | 1.15%          |
| Bedroom of single-family (private) house                     | 43            | 3.54%          |
| Bedroom of unspecified non-institutional (private) residence | 3             | 0.25%          |
| Bike path  | 1             | 0.08%          |
| Bus station  | 1             | 0.08%          |
| Cell of prison   | 2             | 0.16%          |
| Daycare center   | 1             | 0.08%          |
| Derelict house   | 6             | 0.49%          |
| Desert   | 50            | 4.11%          |
| Dining room of single-family (private) house                 | 4             | 0.33%          |
| Driveway of nursing home                                     | 1             | 0.08%          |
| Driveway of other non-institutional residence                | 1             | 0.08%          |
| Elementary school  | 1             | 0.08%          |
| Exit ramp or entrance ramp of street or highway              | 6             | 0.49%          |
| Football field   | 1             | 0.08%          |
| Forest   | 17            | 1.4%           |
| Garden or yard in single-family (private) house              | 32            | 2.63%          |
| Garden or yard of mobile home                                | 2             | 0.16%          |

**Table 10: Detailed Place of Injury, Washoe County, 2021 (cont'd)**

| <b>Place of Injury</b>                                       | <b>Number</b> | <b>Percent</b> |
|--|---------------|----------------|
| Garden or yard of other non-institutional residence          | 1             | 0.08%          |
| Garden or yard of unspecified private residence              | 6             | 0.49%          |
| Health care provider office                                  | 4             | 0.33%          |
| Ice skating rink (indoor) (outdoor)                          | 1             | 0.08%          |
| Interstate highway   | 182           | 14.97%         |
| Kitchen in apartment   | 4             | 0.33%          |
| Kitchen in nursing home                                      | 4             | 0.33%          |
| Kitchen in other non-institutional residence                 | 19            | 1.56%          |
| Kitchen in other specified residential institution           | 1             | 0.08%          |
| Kitchen of single-family (private) house                     | 2             | 0.16%          |
| Kitchen of unspecified non-institutional (private) residence | 1             | 0.08%          |
| Local residential or business street                         | 33            | 2.71%          |
| Other paved roadways   | 1             | 0.08%          |
| Other place in apartment                                     | 110           | 9.05%          |
| Other place in nursing home                                  | 21            | 1.73%          |
| Other place in other specified residential institution       | 27            | 2.22%          |
| Other place in prison  | 1             | 0.08%          |
| Other place in single-family (private) house                 | 1             | 0.08%          |
| Other place in unspecified non-institutional private house   | 1             | 0.08%          |
| Other public administrative building                         | 6             | 0.49%          |
| Other recreation area  | 4             | 0.33%          |
| Other wilderness area  | 1             | 0.08%          |
| Parking lot  | 83            | 6.83%          |
| Parkway  | 3             | 0.25%          |
| Patient room in hospital                                     | 1             | 0.08%          |
| Private driveway to single-family (private) house            | 19            | 1.56%          |
| Private garage of single-family (private) house              | 8             | 0.66%          |
| Public park  | 19            | 1.56%          |
| Railroad track   | 3             | 0.25%          |

**Table 10: Detailed Place of Injury, Washoe County, 2021 (cont'd)**

| <b>Place of Injury</b>                                       | <b>Number</b> | <b>Percent</b> |
|--|---------------|----------------|
| Restaurant or café   | 10            | 0.82%          |
| Shop (commercial)  | 10            | 0.82%          |
| Sidewalk   | 35            | 2.88%          |
| State road   | 33            | 2.71%          |
| Supermarket, store or market                                 | 5             | 0.41%          |
| Train  | 1             | 0.08%          |
| Unspecified place in apartment                               | 18            | 1.48%          |
| Unspecified place in mobile home                             | 1             | 0.08%          |
| Unspecified place in nursing home                            | 18            | 1.48%          |
| Unspecified place in other non-institutional residence       | 4             | 0.33%          |
| Unspecified place in other specified residential institution | 3             | 0.25%          |
| Unspecified place in prison                                  | 6             | 0.49%          |
| Unspecified place in school dormitory                        | 1             | 0.08%          |
| Unspecified place in single-family (private) house           | 108           | 8.88%          |
| Unspecified place in unspecified private residence           | 39            | 3.21%          |
| Unspecified street and highway                               | 81            | 6.66%          |
| Zoological garden (Zoo)                                      | 1             | 0.08%          |
| Missing or unspecified                                       | 180           | 12.90%         |
| <b>Total</b>   | <b>1,391</b>  | <b>87.1%</b>   |



## Injury Severity

The Injury Severity Score (ISS) is an ordinal anatomical scoring system that provides an overall score for patients with multiple injuries. The score may range from 1-75. The ISS score is calculated as the sum of the squares of the highest Abbreviated Injury Score (AIS) for the three most severely injured region out of six AIS grouped regions: head or neck, face, chest, abdominal, or pelvic contents, extremities or pelvic girdle, and external<sup>10</sup>. The category of the injury severity is minor, moderate, severe, or very severe. Categories were derived based on the 2016 National Trauma Data Bank Annual Report, which assigns ISS into the groups identified in Table 11.

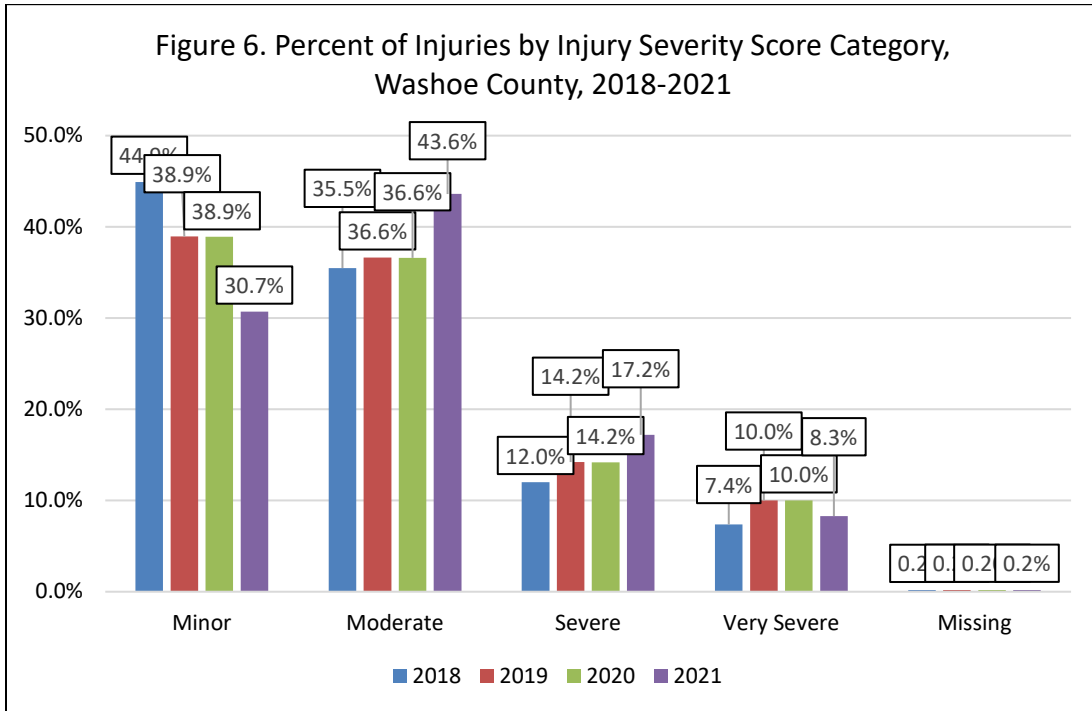
| <b>Injury Severity Score (ISS)</b> | <b>ISS Category</b> |
|------------------------------------|---------------------|
| 1 to 8                             | Minor               |
| 9 to 15                            | Moderate            |
| 16 to 24                           | Severe              |
| 25 or higher                       | Very Severe         |

| <b>Injury Severity Score Category</b> | <b>Number of Injuries</b> | <b>Percent of Injuries</b> | <b>Number of Deaths</b> | <b>Case Fatality Rate*</b> |
|---------------------------------------|---------------------------|----------------------------|-------------------------|----------------------------|
| Minor                                 | 427                       | 30.7%                      | 6                       | 1.4                        |
| Moderate                              | 606                       | 43.6%                      | 13                      | 2.1                        |
| Severe                                | 239                       | 17.2%                      | 14                      | 5.9                        |
| Very Severe                           | 116                       | 8.3%                       | 36                      | 31.0                       |
| Missing                               | 3                         | 0.2%                       | 0                       | 0.0                        |
| <b>Total</b>                          | <b>1,391</b>              | <b>100%</b>                | <b>69</b>               | <b>4.9</b>                 |

<sup>a</sup> Rate per 100 trauma patients

Almost three fourths of all injuries in Washoe County were categorized as minor or moderate injuries (Table 12). While nearly one in ten incidents were categorized as very severe. The case fatality rate increases dramatically with each increase in ISS category. In 2021, trauma cases with very severe injuries accounted for more than half of deaths reported.

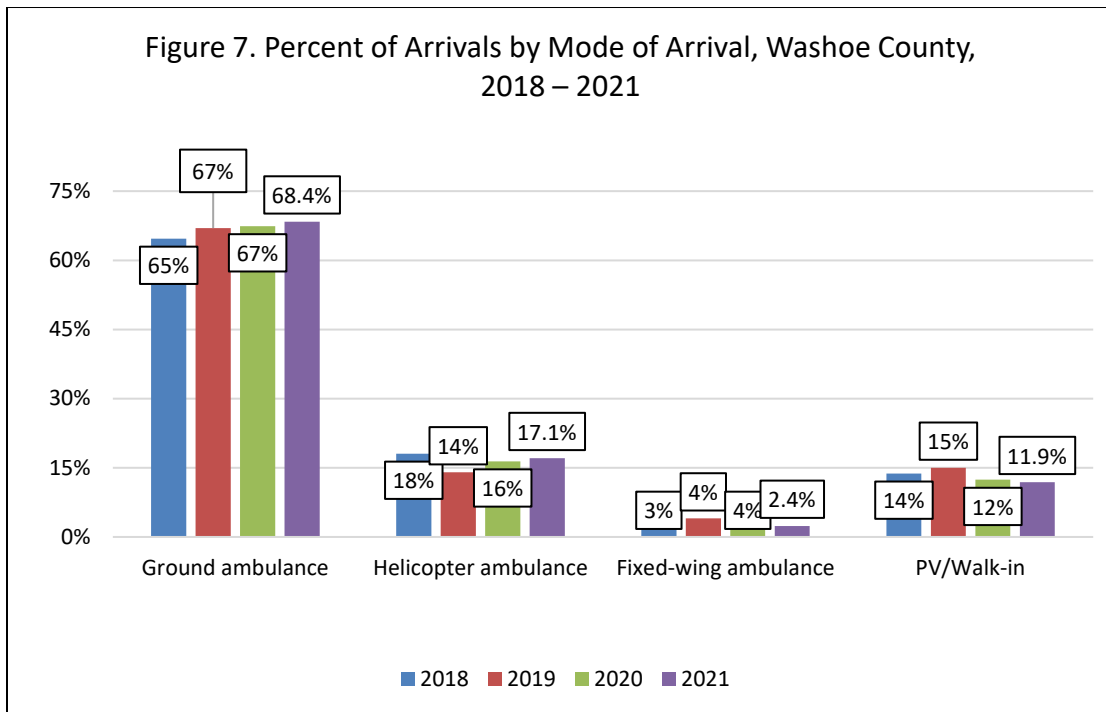
<sup>10</sup> An overview of the injury severity score and the new injury severity score. BMJ Injury Prevention. Accessed <https://injuryprevention.bmj.com/content/7/1/10>

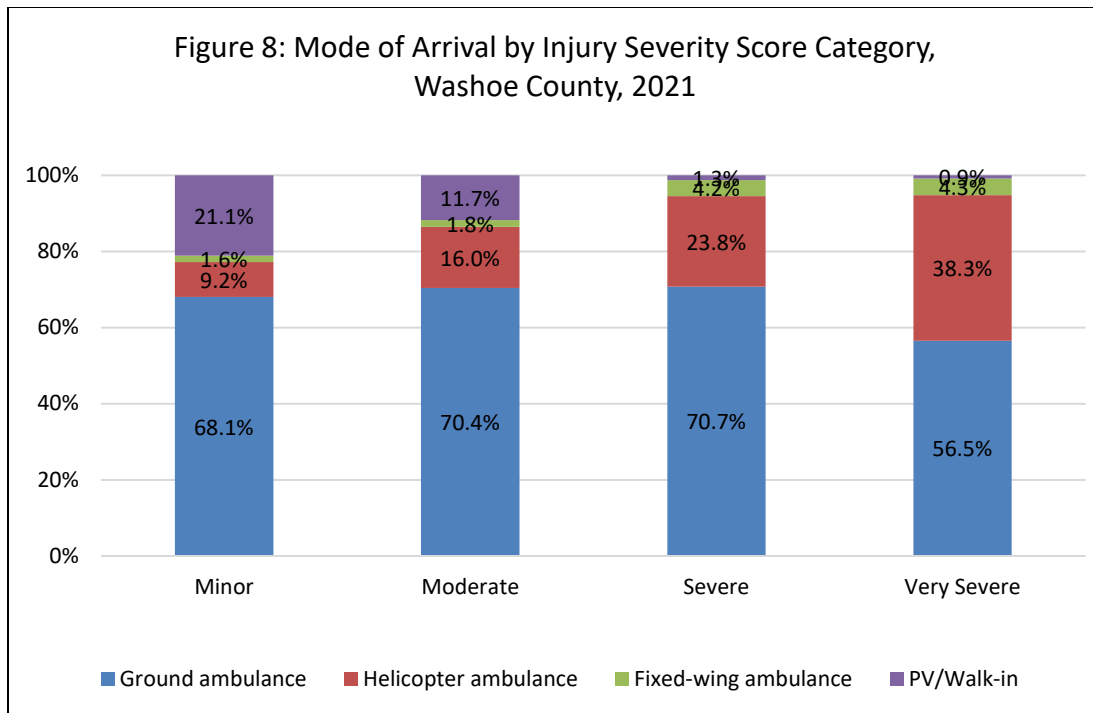


Over the span of 2018 – 2021, the trends for minor injuries based on ISS decreased from 44.8% to 30.7% and very severe injuries decreased from 10.0% to 8.3% in Washoe County. Moderate and severe injuries increased by 3.0% to 10% over the span of three years from 2018 – 2021 (Figure 6).

## Prehospital Characteristics

Figure 7 summarizes the distribution of transport by mode of arrival from 2018 – 2021. Majority of trauma patients in Washoe County was transported by ground ambulance (68.4%), followed by Private Vehicle/Walk in (12%), and by helicopter ambulance (17.1%). In 2021, half of patients with very severe injury score was transported via ground ambulance, with consistent increase in helicopter ambulance utilization as injury severity score increases (Figure 8).





Highest case fatality rate reported in Washoe County were among trauma patients transported by fixed wing, and helicopter ambulance [CFR:9.2]. Case fatality rate (CFR) by transport doubles among patients transported in helicopter ambulance compared to ground ambulance [CFR:4.7] (Table 13). Approximately 12% of patients opted for private vehicle or walk in to be seen by ER clinicians and providers in Washoe County.

| Mode of Arrival         | Number of Incidents | Percent of Incidents | Number of Deaths | Case Fatality Rate <sup>a</sup> |
|-------------------------|---------------------|----------------------|------------------|---------------------------------|
| Ground ambulance        | 951                 | 68.4%                | 45               | 4.7                             |
| Helicopter ambulance    | 238                 | 17.1%                | 22               | 9.2                             |
| Fixed-wing ambulance    | 33                  | 2.4%                 | 1                | 3.0                             |
| Private Vehicle/Walk-in | 166                 | 11.9%                | 1                | 0.6                             |
| Missing                 | 3                   | 0.2%                 | -                | -                               |
| <b>Total</b>            | <b>1,391</b>        | <b>100%</b>          | <b>0</b>         | <b>5.0</b>                      |

<sup>a</sup> Rate per 100 trauma patients

## Substance Use

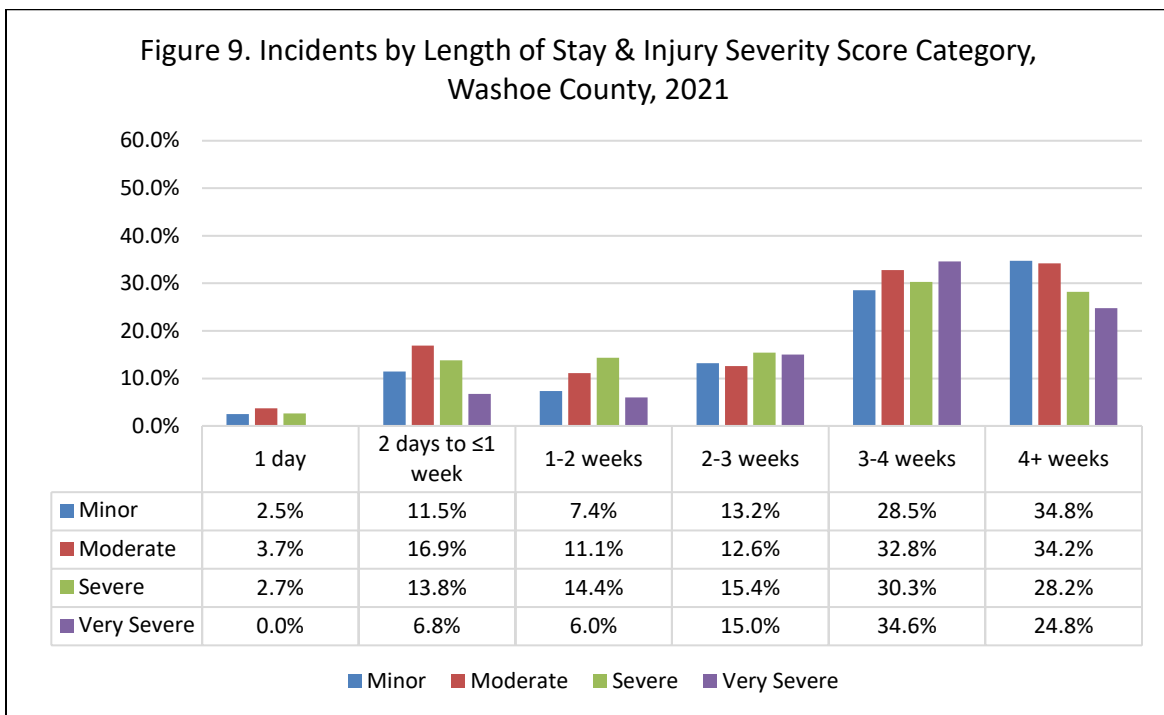
As noted in Table 14, approximately 38.9% of patients with traumatic injury in Washoe County were not tested for alcohol use in 2021. Among those patients who were tested for alcohol use, less than 15% had alcohol detected in their system via trace levels or tested above the legal limit.

| Table 14: Detected Substance Use Among Trauma Patients, Washoe County, 2018 – 2021 |        |         |        |         |        |         |        |         |
|--|--------|---------|--------|---------|--------|---------|--------|---------|
| Alcohol Use  | 2018   |         | 2019   |         | 2020   |         | 2021   |         |
|  | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| No/Not Tested  | 834    | 39.20%  | 719    | 47.90%  | 589    | 44.50%  | 541    | 38.89%  |
| No/Confirmed by Test   | 841    | 39.50%  | 535    | 35.60%  | 515    | 38.90%  | 611    | 43.93%  |
| Yes/Confirmed by Test, Trace Levels  | 196    | 9.20%   | 116    | 7.70%   | 63     | 4.70%   | 42     | 3.02%   |
| Yes/Confirmed by Test, > Legal Limit <sup>a</sup>                                  | 256    | 12.00%  | 129    | 8.60%   | 154    | 11.60%  | 193    | 13.87%  |
| Unknown  | 3      | <1%     | 1      | <1%     | 1      | 0.10%   | 4      | 0.29%   |

<sup>a</sup> Legal alcohol limit less than **0.08 blood alcohol limit NRS 484C.110**

## Patient Outcomes

Patient outcomes highlighted in this section include median length of stay spent in an intensive care unit, total length of stay by ISS category and top ten highest median length of stay by MOI. Twelve percent of patients with traumatic injury classified as minor were discharged within a week. The length of stay increases as the severity of the injury increases, as demonstrated by nearly 28.2% of patients with severe traumatic injury, and 24.8% of patients with very severe traumatic injuries being hospitalized up to four weeks (Figure 9).



## Intensive Care Unit

The median number of days spent in an intensive care unit (ICU) increased as the severity of injury increased every year (Table 15) incidents intentional self-harm had the longest median length of stay in an ICU of 30 days (Table 16). Among the top 10 highest median length of stay, injury involving pedal cycle rider, transport accidents, motor vehicle accidents are injuries related to longer ICU days and hospitalizations in Washoe County.

**Table 15: Incidents by Injury Severity Score and Median Days in ICU, Washoe County, 2018 - 2021**

| ISS Category | 2018 | 2019 | 2020 | 2021 |
|--------------|------|------|------|------|
| Minor        | 0    | 0    | 0    | 0    |
| Moderate     | 2    | 2    | 2    | 2    |
| Severe       | 4    | 4    | 4    | 4    |
| Very Severe  | 6    | 4    | 6    | 5    |
| Missing      | -    | -    | -    | -    |

**Table 16: Top Ten Highest Median Length of Stay (LOS) Mechanism of Injury ICD-10 Code, Washoe County, 2021**

| Mechanism of Injury  | 2021 (LOS) |
|--|------------|
| Other and unspecified effects of external causes (T66-T78) | 31.0       |
| Intentional self-harm                                      | 29.5       |
| Pedal cycle rider injured in transport accident (V10-V19)  | 27.0       |
| Other land transport accidents (V80-V89)                   | 25.0       |
| Motorcycle rider injured in transport accident (V20-V29)   | 24.0       |
| Contact with heat and hot substances (X10-X19)             | 24.0       |
| Slipping, tripping, stumbling and falls (W00-W19)          | 23.0       |
| Event of undetermined intent (Y21-Y33)                     | 23.0       |
| Car occupant injured in transport accident (V40-V49)       | 21.0       |
| Exposure to inanimate mechanical forces (W20-W49)          | 21.0       |

## Conclusion

On May 2021, Washoe County released a local authority plan to enter recovery phase of the COVID-19 mitigation measures. While under the Declaration of Emergency related to COVID-19, re-opening of normal business activities and large gathering allowed population mobility to gradually meet the mobility criteria observed during pre-pandemic periods. More vehicles occupied the roads as workers, residents, and tourists filled streets and interstate highway. Motor vehicle and transport related accidents continues to be a common preventable unintentional injury in Washoe County. According to [Zero Fatalities report](#) produced by Nevada Department of Transportation, about 42.7% of total fatalities in Nevada is due to impaired driving where substances are involved and lane departures. Higher fatalities observed among incidences where substances are involved in motor vehicle accidents occurring during the night. The most common type of crash fatalities in the Reno Sparks area involve sideswipe, overtaking vehicles moving in the same direction.

In addition to motor vehicle injuries in Washoe County, there were observed increases by two folds in case fatality rates among individuals 55 years old and older. The number of injuries is following trend to previous year, however data suggest that fatalities are on the rise for the older population group in Washoe County.

## Suggested Citation

Washoe County Health District, Division of Epidemiology and Public Health Preparedness. (June 2022). Washoe County 2021 Trauma Data Report. Reno, NV.

## Additional Information

For additional information regarding the Washoe County Trauma Report contact

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**STAFF REPORT**  
**EMERGENCY MEDICAL SERVICES ADVISORY BOARD**  
**MEETING DATE: August 4, 2022**

**TO:** EMS Advisory Board Members  
**FROM:** Adam Heinz, Executive Director, REMSA Health  
**SUBJECT:** REMSA Health EMSAB Report

**SUMMARY**

Update of the emergency medical services (EMS) operations for the 2<sup>nd</sup> quarter of 2022.

**DATA PERFORMANCE REPORTS**

|                                | April 2022                    | May 2022                      | June 2022                     | TOTAL                         |
|--------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| TOTAL EMS RESPONSES            | 7291                          | 7685                          | 7927                          | 22903                         |
| TOTAL EMS TRANSPORTS           | 4465                          | 4676                          | 4767                          | 13908                         |
| TOTAL EMS RESPONSES CANCELLED  | 2826                          | 3009                          | 3160                          | 8995                          |
| MUTUAL AID RESPONSES           | Unavailable at time of report | Unavailable at time of report | Unavailable at time of report | Unavailable at time of report |
| MUTUAL AID TRANSPORTS          | Unavailable at time of report | Unavailable at time of report | Unavailable at time of report | Unavailable at time of report |
| MUTUAL AID RESPONSES CANCELLED | Unavailable at time of report | Unavailable at time of report | Unavailable at time of report | Unavailable at time of report |

**EMS OPERATIONS UPDATES**

**REMSA Health in the News**

In late June, REMSA Health hosted a press conference to share a variety of hot-weather and water safety messages. A paramedic crew performed a mock scenario of a pediatric drowning and leaders from our education department shared information about the dangers of leaving children in hot cars, how to watch for signs of heat-related illness and the importance of designating a Water Watcher whenever children are near a body of water. These messages and the related giveaway items including water watcher whistles, water bottles, sun hats, spf-rated shirts, sunblock and Look Before You Lock window decals are provided by and funded through our partnership with the Washoe County Health District.



### **Community News**

The “Choose The Right Care” campaign - intended to build awareness and adoption of alternative patient navigation pathways - continues to roll out information to community members about our Assess and Refer, Nurse Health Line, Alternate Destination Transport and telehealth protocols through email blasts, media pitches and community presentations, paid advertisements, and sponsorships

### **Employee News**

In celebration of EMS Week, REMSA Health hosted events that included a hosted food truck, a co-first response partner barbecue, an employee/family bowling event, and the Employee Awards and Appreciation luncheon event where we distributed 15 awards and 60 certificates of recognition. Plus, twice during the week, our Ground Operations, Dispatch and Clinical leaders hosted made-to-order breakfast burritos and grilled cheese sandwiches from 0330 - 0900. That was a huge hit! Executive leaders met up with crews where they spend time during their shift - at the hospitals. They rounded with providers to deliver refreshments, chat, answer questions and express appreciation.

### **Industry News**

In mid-April, REMSA Health’s medical director, Dr. Jenny Wilson along with our Senior Procurement Specialist, Josh Duffy and our Logistics Supervisor, Jake Duffy were part of a panel on a national webinar hosted by the Academy International Mobile Health Integration (AIMHI). Their topic was Mitigating Supply Chain Shortages. They received outstanding feedback and did an excellent job representing our region.

REMSA Health is pleased to announce that Adam Heinz, REMSA Health’s Executive Director of Integrated Healthcare, has been appointed to the board of the National Registry of Emergency Medical Technicians (NREMT). As the NREMT board member serving on behalf of the American Ambulance Association (AAA), Adam will represent the interests, standards and policies of the AAA while collaborating with the NREMT to advance quality patient care and public protection. The NREMT board is composed of some of the most prominent figures from all segments of the Emergency Medical Services (EMS) community.

**STAFF REPORT**  
**EMERGENCY MEDICAL SERVICES ADVISORY BOARD**  
**MEETING DATE: \_\_\_\_\_ , \_\_\_\_\_**

Item 8B

**TO:** EMS Advisory Board Members

**FROM:**

**SUBJECT:** EMSAB Report

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**SUMMARY**

Update of the emergency medical services (EMS) operations for the \_\_\_\_\_ quarter of \_\_\_\_\_.

**DATA PERFORMANCE REPORTS**

|                                   |  |  |  | TOTAL |
|-----------------------------------|--|--|--|-------|
| TOTAL EMS RESPONSES               |  |  |  |       |
| TOTAL EMS TRANSPORTS              |  |  |  |       |
| TOTAL EMS RESPONSES<br>CANCELLED  |  |  |  |       |
| MUTUAL AID RESPONSES              |  |  |  |       |
| MUTUAL AID TRANSPORTS             |  |  |  |       |
| MUTUAL AID RESPONSES<br>CANCELLED |  |  |  |       |

**EMS OPERATIONS UPDATES**



**STAFF REPORT  
EMERGENCY MEDICAL SERVICES ADVISORY BOARD  
MEETING DATE: August 4th, 2022**

**TO:** EMS Advisory Board Members  
**FROM:** Joe Kammann, Division Chief  
Truckee Meadows Fire Rescue  
**SUBJECT:** Truckee Meadows Fire and Rescue EMSAB Report

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**SUMMARY**

Update of the emergency medical services (EMS) operations for the 2<sup>nd</sup> quarter of 2022.

**DATA PERFORMANCE REPORTS**

|                                | April | May | June | TOTAL |
|--------------------------------|-------|-----|------|-------|
| TOTAL EMS RESPONSES            | 784   | 900 | 879  | 2563  |
| TOTAL EMS TRANSPORTS           | 209   | 202 | 230  | 641   |
| TOTAL EMS RESPONSES CANCELLED  | 139   | 166 | 140  | 445   |
| MUTUAL AID RESPONSES           | 9     | 3   | 21   | 33    |
| MUTUAL AID TRANSPORTS          | 1     | 0   | 0    | 1     |
| MUTUAL AID RESPONSES CANCELLED | 0     | 0   | 2    | 2     |

**EMS OPERATIONS UPDATES**

Clinical Accomplishments – 9 additional probationary Firefighter/EMTs have passed our rigorous internal Paramedic Assessment Center and have been promoted to the role of Firefighter/Paramedic. Truckee Meadows Fire and Rescue (TMFR) maintains a high standard of clinical excellence for any employee that functions at an Advanced Life Support capacity on our apparatus. The training program incorporates up to 12 months of intensive training and mentorship with a TMFR Paramedic Preceptor and includes advanced medical and trauma scenarios, ambulance operations, and a comprehensive evaluation upon conclusion of training.

Wildfire Preparedness – TMFR has trained 40 Firefighter/Paramedics as Wildland Fireline Medics. These personnel are available to be deployed and provide Advanced Life Support care to patients and firefighters on both local wildfires as well as those occurring throughout the country.

Ambulance Operations – TMFR is continuing to run 3 full time ambulances serving Washoe Valley, Sun Valley, and Spanish Springs. Throughout the region, supply chain difficulties are making it tough to manage normal logistical issues as they arise, TMFR is no exception. We were fortunate enough to receive a donation of a Freightliner ambulance from local Washoe County resident Jeremy Renner. This unit will be placed in reserve status and will be utilized in the event of a frontline unit going out of service. We are very appreciative of Mr. Renner’s generosity.

Training Update – TMFR was the recipient of multiple grant awards to assist with the training of our employees and the community. These grants have allowed the purchase of 5 low-fidelity adult training manikins, 2 pediatric manikins, 3 adult advanced airway trainers, and 3 infant airways training aids. TMFR is also partnering with the Washoe County School District to assist with completing emergency bleeding control training to all of their staff who requires it. Our joint hybrid paramedic program with Truckee Meadows Community College is set to begin August 22<sup>nd</sup>. Multiple local agencies have personnel enrolled for this program including 6 of our own Advanced EMTs



**STAFF REPORT**  
**EMERGENCY MEDICAL SERVICES ADVISORY BOARD**

Item 8D

MEETING DATE: August 4, 2022

TO: EMS Advisory Board Members

FROM: Cindy Green, EMS Chief

SUBJECT: City of Reno Fire Department EMSAB Report

**SUMMARY**

Update of the emergency medical services (EMS) operations for the second quarter of 2022.

**DATA PERFORMANCE REPORTS**

|                                | April | May  | June | TOTAL |
|--------------------------------|-------|------|------|-------|
| TOTAL EMS RESPONSES            | 2490  | 2561 | 2720 | 7,771 |
| TOTAL EMS TRANSPORTS           | 6     | 4    | 11   | 21    |
| TOTAL EMS RESPONSES CANCELLED  | 482   | 489  | 571  | 1542  |
| MUTUAL AID RESPONSES           | 15    | 46   | 42   | 103   |
| MUTUAL AID TRANSPORTS          | 6     | 4    | 11   | 21    |
| MUTUAL AID RESPONSES CANCELLED | 6     | 8    | 7    | 21    |

**EMS OPERATIONS UPDATES**

Reno Fire Department graduated two fire recruit academies. In those academies we had a total of 32 recruits of which six are Paramedics, four are AEMTs and the remaining are EMT level EMS providers. Additionally we provided a department wide EMS division level training which included topics on Nevada Donor Network notifications in the field setting and peer review of a call that was run in-house. Our medical director, Dr. Watson delivered training on new protocol information changes in-person to all line personnel. Lastly we provided CPR, AED and First Aid certification training to 45 City of Reno employees and hands-only CPR training at the City of Reno field day.

Current EMS RFD Staffing:

Paramedic - 69

AEMT - 105

EMT - 78