

SOUTHERN NEVADA TRAUMA SYSTEM ANNUAL REPORT

2024



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- American College of Surgeons Committee on Trauma
- Nevada State Division of Health
- Regional Trauma Advisory Board
- Trauma Medical Audit Committee
- University Medical Center
- Sunrise Hospital & Sunrise Children's Hospital
- St. Rose Dominican Hospitals – Siena Campus
- Mike O'Callaghan Military Medical Center

Thanks to the members of the Regional Trauma Advisory Board, all SNHD EMS committees, participating trauma center medical directors, program managers, and registrars. Their dedication to continuously improving data collection makes it possible to fully evaluate and advance the Southern Nevada Trauma System.

Southern Nevada Trauma System Review

Introduction

This Southern Nevada Trauma Annual Report comprehensively describes the ongoing development, operation, and maintenance of the Southern Nevada Trauma System using a 5-year calendar review. Since its inception in 2005, trauma system leadership continues to make significant strides to provide a well-coordinated trauma system to serve the trauma transport and treatment of Southern Nevada residents, bordering states, and visitors each year.

The Need for a Trauma System

Trauma systems embody extensive infrastructures designed to deliver top-tier care for injured individuals. They cover a broad range of services, including initiatives for injury prevention, a cohesive network of trauma centers, and coordinated research initiatives. Traumatic injury is the leading cause of death among young people and a significant health threat to Southern Nevada and its millions of visitors each year. Using evidenced based data to recognize top injury mechanisms, preparedness and injury prevention efforts can be directed at decreasing injury before it occurs.

Southern Nevada is an expert in providing care for large scale events, including concerts, conferences, and major sporting events.

What is a Trauma System?

A trauma system is an organized, coordinated, comprehensive injury response network of essential resources that promote injury prevention and control initiatives and provide specialized care for the injured. The system facilitates appropriate triage and transportation of trauma patients through the emergency medical services system to designated health care facilities that possess the capability, competence, and commitment to providing optimum care for trauma victims. It also promotes rehabilitation services to decrease the likelihood of long-term disability and maximize injured patients' potential to return to their prior functional capacity and reintegration into the community.

The goals of a trauma care delivery system are to:

- reduce the incidence and severity of injuries;
- improve the health outcome of those who are injured by ensuring equitable access to the most appropriate healthcare resources promptly;
- promote efficient, cost-effective delivery of care;
- implement performance improvement activities to ensure quality care throughout the system; and
- advocate for sufficient resources to meet the needs of the injured in the community.

Trauma System Components

Prehospital Emergency Medical Services

The prehospital component of the trauma system is designed to provide initial assessment and management of injured patients at the scene of an emergency with safe and efficient transport to the most appropriate health care facility.

Level I

A Level I trauma center provides comprehensive care for the most severely injured patients. The required clinical resources include emergency medicine, general and subspecialty surgical and anesthesia services. A Level I trauma center is expected to provide leadership in trauma system planning, education, and research. The center must also meet specific volume performance standards (at least 1200 patients annually). A 24-hour in-house availability with a 15-minute maximum acceptable response is required for the highest-level trauma activation.

Level II

A Level II trauma center provides comprehensive trauma care based on the environment of the region. In population-dense areas, Level II should supplement the Level I facility's clinical activity and expertise. A Level II trauma center is expected to provide initial and definitive trauma care for severely injured patients, including all the clinical services provided by a Level I trauma center except soft tissue coverage and craniofacial expertise. A 24-hour in-house availability with a 15-minute maximum acceptable response is required for the highest-level trauma activation.

Level III

A Level III trauma center typically serves communities without immediate access to Level I or II resources. When multiple trauma centers function within a community (e.g., metropolitan area), a Level III trauma center may be required to participate within a trauma system (see Level III- Southern Nevada Trauma System). The required resources include emergency medicine and general and orthopedic surgical services to treat and stabilize all the Center for Disease Control guidelines for trauma triage. The other subspecialties are desired but not required. Level III trauma centers then function to transfer injured patients that exceed the facility resources to Level I and Level II trauma centers. As such, participation in a regional trauma system is essential. A 24-hour availability with a 30-minute maximum acceptable response is required for the highest-level trauma activation.

Pediatric Level I or II

A Pediatric Level I or Level II trauma center is a health care facility that has committed the necessary resources and expertise to meet the pediatric population's specialized needs. A pediatric trauma center is expected to assume a leadership role in the care of injured children within their community.

Rehabilitation, Data Collection, Injury Prevention, Performance Improvement

All trauma centers commit to an optimal performance that includes these four key points. The rehabilitation of injured patients reduces costs; each trauma center establishes local agreements with rehabilitation centers to provide post-trauma care. Data collected to analyze and evaluate system performance is used to improve responses, conserve resources, implement prevention strategies, and comply with reporting statutes.

Southern Nevada Trauma System

The establishment of a Trauma System is mandated by Nevada law. The authority to plan, implement, and monitor the Southern Nevada Trauma System was delegated to the Southern Nevada District Board of Health (Board). The Board has established and adopted a comprehensive trauma system plan and regulations. As the leading regulatory agency in Southern Nevada, the Southern Nevada Health District plays a central role in acquiring and analyzing trauma system data. Through the Office of Emergency Medical Services & Trauma System (OEMSTS), the Health District provides a continuous assessment of the trauma system. In addition, the Regional Trauma Advisory Board (RTAB) and Trauma Medical Audit Committee (TMAC) share responsibility for interpreting the data to evaluate the system's efficiency and effectiveness. In Southern Nevada, all trauma centers are verified by the American College of Surgeons Committee on Trauma (ACS-COT) and designated by the Nevada Division of Public and Behavioral Health (DPBS) every three-years. With a population of over 700,000, the Board must participate in the designation process.

Office of Emergency Medical Services & Trauma System

OEMSTS is comprised of a Manager, Supervisor, Regional Trauma Coordinator, EMS Project/Program Coordinators, EMS Field Representatives, and Senior Administrative Assistant. Additionally, the Health District contracts a licensed physician to serve as the EMS Medical Director. OEMSTS receives directions from the District Health Officer and Director of Community Health.

American College of Surgeons Committee on Trauma

ACS-COT focuses on improving injured patients' care. Their guidelines were developed for a verification process whereby a hospital could be evaluated to determine if all the criteria needed to function as a trauma center are being met.

Optimal versus Minimal Standard

The American College of Surgeons Committee on Trauma (ACS-COT) has developed a classification system to verify the necessary resources to provide optimal care to injured patients. It is not a ranking of medical care provided by a health care facility but the recognition of the depth of resources available within the institution. In Nevada, any healthcare facility that has not been verified by the ACS-COT meets a minimum standard, through state and federal industry certifications, and not an optimal standard. Nevada Administration Code (NAC) 450B.819 requires ACS-COT verification to be considered for designation.

Verification versus Designation

Verification: A hospital verified by the ACS-COT demonstrates it meets the criteria contained in *Resources for Optimal Care of the Injured Patient*. This verification process requires a visit by the ACS-COT to determine if all criteria are optimally met. Any hospital seeking to be designated to perform as a Trauma Center in Southern Nevada must be verified.

Designation: The regulatory and bureaucratic process needed by a hospital to be designated as a Trauma Center is performed by the Nevada Division of Public and Behavioral Health of the Department of Health and Human Services. Additionally, in Southern Nevada, as defined by its population, a hospital seeking designation must obtain a letter from the Southern Nevada District Board of Health that provisionally authorizes its designation. To be included in the Southern Nevada Trauma Catchment Areas, a hospital must be designated.

Southern Nevada Verified and Designated Trauma Centers

- University Medical Center Level I and Pediatric Level II Trauma Center
- Sunrise Hospital Level II Trauma Center
- St. Rose Dominican Hospitals – Siena Campus Level III Trauma Center
- Mike O’Callaghan Military Medical Center Level III Trauma Center

Southern Nevada Emergency Medical Services

In Southern Nevada, the public fire departments provide emergency medical services (EMS): Boulder City Fire Department, Clark County Fire Department, Henderson Fire Department, Las Vegas Fire & Rescue, Mesquite Fire & Rescue, and North Las Vegas Fire Department. The private franchised EMS agencies serving the area are American Medical Response, Community Ambulance, Guardian Elite Medical Services, and MedicWest Ambulance. Air ambulance services are provided by Guardian Flight (fixed wing), Optimumedicine (fixed wing), and Mercy Air Service Inc. (rotor wing).

Southern Nevada Trauma Catchment Areas

To facilitate the timely transportation of trauma patients from the scene of an emergency to the closest appropriate trauma center, the Office of Emergency Medical Services & Trauma System (OEMSTS) creates and determines geographic catchment areas (Appendix B). The office monitors trauma patients' distribution to ensure patients are matched with the appropriate resources while providing sufficient volume to each trauma center to provide stability within the trauma system. In 2024, the prehospital emergency services triage for trauma patients was implemented to reflect the CDC’s updated 2021 Guidelines for field triage of injured patients.

Non-Trauma Center Hospitals

The Southern Nevada Trauma System recognizes that hospital facilities that provide emergency services contribute to its inclusive trauma system. These facilities are known as Non-Trauma Center Hospitals and provide prompt assessment, resuscitation, emergency operations, and stabilization and arrange for transfer to a designated trauma center. Most trauma patients arrive at Non-Trauma Center Hospitals by self-delivery or by EMS provider judgment exemptions. If injured patients meet trauma criteria, they may be transferred through inter-local agreements to a designated Trauma Center.

Leadership and Legislation

The Administrator of Nevada's Department of Health and Human Services, in conjunction with the Deputy of the Division of Public and Behavioral Health, has the authority to designate a health care institution as a trauma center based on a proposal that must include a verification of the American College of Surgeons classification system and approval of a district board of health in any county whose population is 700,000 or more. During the 2005 state legislative session, Nevada Revised Statute (NRS) 450B.237 was promulgated, authorizing the Southern Nevada District Board of Health to establish and adopt a comprehensive trauma system plan concerning trauma treatment in Clark County. During the 2020 state legislative session, NRS 450B.237 was altered. The overall designation process remained the same except that approval of a new Level III trauma center must come from the Nevada State Health Division's Administrator after they have conducted a comprehensive assessment of needs. Additionally, the Southern Nevada District Board of Health cannot approve the proposal without having met the criteria outlined.

The Health District's Regional Trauma Coordinator, as part of OEMSTS, provides administrative oversight of the Southern Nevada Trauma System. With the assistance of local trauma leaders and community stakeholders, the Southern Nevada Trauma System regulations were first adopted by the District Board of Health in May 2007.

To assist the District Health Officer and OEMSTS in fulfilling the responsibilities defined in regulations, the RTAB was created. The primary mission of the RTAB is to support the District Health Officer to ensure a quality system of patient care for the victims of trauma within Southern Nevada. The RTAB makes recommendations and assists in the ongoing design, operation, evaluation, and revision of the trauma system from initial patient access to definitive patient care. The members of the RTAB include a trauma surgeon and trauma program manager from each designated trauma center; the chairman of the Health District's Emergency Medical Services Medical Advisory Board; an administrator from a non-trauma hospital; a person representing the public providers of advanced emergency care; a person representing the private franchised providers of advanced emergency care; a person representing health education and prevention services; a person representing the payors of medical benefits for the victims of trauma; and a person representing the general public. RTAB meets, at minimum, quarterly according to the trauma system's needs.

Trauma System Evaluation and Performance Improvement

An essential component of any trauma system is a continuous, comprehensive, multidisciplinary, data-driven assessment process. This process monitors and evaluates the trauma system's structure and outcome measures through all phases of care. The Southern Nevada Trauma System Improvement Plan consists of three major elements: 1) internal performance improvement and patient safety program within each trauma center; 2) scheduled independent evaluations of trauma care by trauma care experts from the American College of Surgeons; and quarterly trauma system review and analysis by the Trauma Medical Audit Committee; and 3) ongoing data collection, management, and analysis at the local, state and national level to ensure system effectiveness and identify trends and needs within the system.

The cornerstone of the Southern Nevada Trauma System medical review process is the Trauma Medical Audit Committee (TMAC). It is a peer review committee that meets quarterly to review, monitor, and evaluate trauma system performance. The TMAC derives its authority and privilege from NRS 49.117 - 49.123; NRS 49.265; and NRS 450B.237. The members of the TMAC include the trauma medical director and program manager from each designated trauma center; the Southern Nevada medical examiner or designee; the Health District's Regional Trauma Coordinator; a neurosurgeon; an anesthesiologist; an orthopedic surgeon; and an emergency physician not affiliated with a trauma center.

Effectively evaluating trauma system performance is contingent upon appropriate data collection, management, analysis, and reporting. NRS 450B.238 requires each designated trauma center to provide data on any person who sustains an acute injury, which has the potential of being fatal or producing major disability to the state trauma registry managed by the State Health Division, Bureau of Health Planning and Statistics. The State Trauma Registry is one source of valuable information needed to describe injured patients with an ISS greater than fifteen within the Southern Nevada Trauma System.

Each designated Trauma Center also submits data to the National Trauma Data Bank (NTDB), which is maintained by the ACS-COT. The NTDB establishes the criteria for inclusion, encompassing patients who have sustained one or more traumatic injuries within 14 days of their initial hospital encounter. To be included, patients must meet specific eligibility requirements.

Additionally, each hospital is required to submit trauma data monthly, including all patients transported to them who meet the Trauma Field Triage Criteria (TFTC). Injury mortality data provided by the Southern Nevada Coroner's Office is also utilized by the TMAC to assess trauma system resource utilization and support planning efforts for improved system effectiveness and efficiency.

Purpose of Southern Nevada Trauma Annual Report

To provide a data-driven assessment of the Southern Nevada Trauma System, the Regional Trauma Coordinator produces the annual Southern Nevada Trauma System Report. Where possible, a five-year data set is used to present the most current information available. All sources are selected to provide an overview of injury and trauma system utilization at the local level. As defined in NRS, the District Board of Health shall consider plans for future county trauma needs, the designation of new trauma centers, and the most effective ways to provide trauma services. This report is intended as a tool for subject-matter experts within the Southern Nevada Trauma System to review the overall system, identify trends, and offer informed guidance to decision-makers.

Data Sources

The Center for Business and Economic Research University of Nevada, Las Vegas

Southern Nevada Department of Comprehensive Planning

Nevada State Trauma Registry

The Nevada Trauma registry is a repository of trauma incident data from across the state. All hospitals within Nevada are required to submit data quarterly. To be classified as a trauma, a series of criteria identified by the American College of Surgeons must be met. For an incident to be classified as a trauma, the patient must have:

- One or more traumatic injuries within 14 days of initial hospital encounter
- At least one diagnostic code for injury:
 - ICD-10 code from the following ranges: S00-S99 (7th Character Modifier A, B, or C), T07, T14, T79.A1-T79.A9 with 7th character modifier of A ONLY (Traumatic Compartment Syndrome—initial encounter)
- Excluding the following isolated injuries:
 - S00 (Superficial injuries of the head)
 - S10 (Superficial injuries of the neck)
 - S20 (Superficial injuries of the thorax)
 - S30 (Superficial injuries of the abdomen, pelvis, lower back and external genitals)
 - S40 (Superficial injuries of shoulder and upper arm)
 - S50 (Superficial injuries of elbow and forearm)
 - S60 (Superficial injuries of wrist, hand and fingers)
 - S70 (Superficial injuries of hip and thigh)
 - S80 (Superficial injuries of knee and lower leg)
 - S90 (Superficial injuries of ankle, foot and toes)
- And must include one of the following in addition to the above:
 - Death resulting from the traumatic injury; or
 - Patient transfer from one acute care hospital to another acute care hospital; or
 - Patients directly admitted to the trauma hospital (exclude patients with isolated injuries admitted for elective and/or planned surgical intervention); or
 - Patients who were an in-patient admission and/or observed.

Trauma Field Triage Criteria (TFTC) 2024 Data

The designated trauma centers in Southern Nevada submit data to the OEMSTS related to patients transported according to the Health District's EMS Operations Trauma Field Triage Criteria Protocol criteria. The TFTC algorithm is a triage decision scheme developed by the American College of Surgeons Committee on Trauma.

Prehospital professionals are trained to perform a physical assessment of trauma patients and recognize specific injuries and injury mechanisms that are likely to cause severe injury. The data, verified through First Watch, includes:

- day and time;
- address with longitude and latitude coordinates;
- injury code;
- EMS response time-stamps;
- transport destinations;
- out-of-area.

Patients are transported to area trauma centers based on these criteria:

Red Mental Status & Vital Signs (Previously Step 1/Physiologic): A trauma patient whose injury is so severe that their vital signs or level of consciousness are abnormal.

Red Injury Patterns (Previously Step 2/Anatomic): A trauma patient whose vital signs and level of consciousness are within normal limits, but they have sustained an obvious serious injury; for example, an open or depressed skull fracture, pelvic fracture, or paralysis.

Yellow Mechanism of Injury (Previously Step 3/Mechanism): A trauma patient whose vital signs and level of consciousness are within normal limits. They do not appear to have an obvious serious injury. Still, they have experienced a high energy impact to the body that may have caused a severe injury that is not immediately obvious.

Yellow EMS Judgement (Previously Step 4/Special Considerations): A trauma patient whose circumstances merit special considerations, for example, older adults, children, anticoagulants/bleeding disorders, and pregnancy.

Limitations

One of the most critical limitations of the trauma system report is the lack of consistency in trauma data collection at the state and local levels. Variability was noted in disease classification coding, case definitions, and inclusion criteria among the organizations that collect injury data.

It is the desire of the OEMSTS and members of the RTAB to be evidence-based in making decisions regarding future planning, development, and modification of the Southern Nevada Trauma System. The stakeholders are working diligently to improve data collection activities specific to Southern Nevada.

Future Plans

The trauma system's future evolution depends on a reliable surveillance system to monitor trends, identify opportunities for improvement, and provide valuable information to health care leaders, emergency managers, and policymakers. Access to quality data contributes to the accurate assessment of current resources and assists in developing comprehensive, evidence-based, and integrated strategic plans to promote effective and efficient emergency medical care for injured patient.

The Office of Emergency Medical System & Trauma System appreciates our community partners' contributions and support in maintaining the Southern Nevada Trauma System and have committed to building on the achievements to date.

Population Data

Intent

The intent of including population data is to examine if there has been statistically significant population growth or decline and determine if population changes will impact patient care. The data is populated to provide evidence of where growth or decline is happening, how fast, and if it is expected to continue. While population changes are not always associated with increased or decreased trauma volumes, the change needs to be identified to consider its impact. When a population change occurs, it congruently may affect but is not limited to roadways, infrastructure, emergency and healthcare providers, and socioeconomic factors.

Clark County Population Forecast: 2025-2060

Year	Population Forecast	Change in Population Forecast	Growth in Population (Percent)
2025	2,443,000**	33,000	1.4%
2026	2,493,000	50,000	2.0%
2027	2,537,000	44,000	1.8%
2028	2,578,000	41,000	1.6%
2029	2,617,000	39,000	1.5%
2030	2,655,000	38,000	1.5%
2031	2,692,000	37,000	1.4%
2032	2,728,000	36,000	1.3%
2033	2,764,000	36,000	1.3%
2034	2,797,000	33,000	1.2%
2035	2,830,000	33,000	1.2%
2036	2,860,000	30,000	1.1%
2037	2,889,000	29,000	1.0%
2038	2,917,000	28,000	1.0%
2039	2,944,000	27,000	0.9%
2040	2,969,000	25,000	0.8%
2041	2,994,000	25,000	0.8%
2042	3,017,000	23,000	0.8%
2043	3,039,000	22,000	0.7%
2044	3,061,000	22,000	0.7%
2045	3,081,000	20,000	0.7%
2046	3,101,000	20,000	0.6%
2047	3,120,000	19,000	0.6%
2048	3,139,000	19,000	0.6%
2049	3,157,000	18,000	0.6%
2050	3,174,000	17,000	0.5%
2051	3,191,000	17,000	0.5%
2052	3,208,000	17,000	0.5%
2053	3,225,000	17,000	0.5%
2054	3,241,000	16,000	0.5%
2055	3,258,000	17,000	0.5%
2056	3,274,000	16,000	0.5%
2057	3,290,000	16,000	0.5%
2058	3,306,000	16,000	0.5%
2059	3,322,000	16,000	0.5%
2060	3,337,000	15,000	0.5%

* SNRPC Census population estimate.

Source: The Center for Business and Economic Research University of Nevada, Las Vegas

Note: The average annual forecasted growth rate is 0.9 percent.

Clark County Historical Population by Zip Code, 2019-2024

ZIP	2019	2020	2021	2022	2023	2024	Absolute Growth 2019-2024	Growth Rate (%) 2019-2024
89002	37,804	38425	38515	38176	38536	38950	1146	3.03
89004	308	303	150	151	153	155	-153	-49.68
89005	16398	16505	15250	14972	15023	15010	-1388	-8.46
89007	1074	1068	991	939	929	945	-129	-12.01
89011	34521	37424	40068	41693	45239	50110	15589	45.16
89012	36360	36607	37311	36366	36697	37413	1053	2.90
89014	42753	42773	42223	42512	42905	42917	164	0.38
89015	42205	42658	43447	41972	42969	45051	2846	6.74
89018	1300	1353	1114	1407	1554	1553	253	19.46
89019	2838	2908	2808	2570	2565	2551	-287	-10.11
89021	3544	3610	2733	3059	3,059	3062	-482	-13.60
89025	1449	1453	1278	1308	1284	1291	-158	-10.90
89027	21020	21955	19703	18673	18,993	19728	-1292	-6.15
89029	10515	10931	9734	9350	9297	9335	-1180	-11.22
89030	56328	56289	56056	50691	50444	50501	-5827	-10.34
89031	72506	73842	76085	78527	79427	80837	8331	11.49
89032	47941	48263	49448	48816	49,669	50565	2624	5.47
89034	3117	3601	3372	3474	3817	4134	1017	32.63
89039	227	231	149	156	154	152	-75	-33.04
89040	3922	4023	3455	3259	3259	3259	-663	-16.90
89044	25971	27455	27551	30804	33,931	36,748	10777	41.50
89046	424	437	485	479	453	460	36	8.49
89052	60356	62576	61276	61079	62031	62623	2267	3.76
89054	102	102	62	66	63	63	-39	-38.24
89074	54863	55749	54376	52941	53002	53030	-1833	-3.34
89081	38840	39622	41804	42546	42706	42808	3968	10.22
89084	29726	32752	37263	38175	40532	43377	13651	45.92
89085	3627	3671	3699	4263	4266	4262	635	17.51
89086	6037	6679	8660	10735	12517	13490	7453	123.46
89101	44179	45257	46728	41479	42513	42428	-1751	-3.96
89102	40100	41080	37782	34614	34204	34341	-5759	-14.36
89103	50396	51624	45150	45170	45303	45463	-4933	-9.79
89104	39691	39826	38337	36516	36449	36439	-3252	-8.19
89106	30087	30767	31678	30811	30796	31223	1136	3.78
89107	39340	39331	38623	38891	39111	40030	690	1.75
89108	78900	79111	78128	76138	76685	76986	-1914	-2.43
89109	6464	6608	7165	6880	6739	6782	318	4.92
89110	80581	80441	78526	74821	74649	74196	-6385	-7.92
89113	33936	34803	34794	37623	40384	44370	10434	30.75
89115	75243	77533	75196	73305	70694	71856	-3387	-4.50
89117	57184	57174	55761	55750	55750	55809	-1375	-2.40

ZIP	2019	2020	2021	2022	2023	2024	Absolute Growth 2019-2024	Growth Rate (%) 2019-2024
89118	26417	27433	26082	26979	27840	28009	1592	6.03
89119	49860	51001	50411	47594	48785	48668	-1192	-2.39
89120	26026	26647	24084	24366	24374	24390	-1636	-6.29
89121	69543	69532	66209	67609	68186	68514	-1029	-1.48
89122	56498	56994	56056	55706	55683	56972	474	0.84
89123	62305	63176	58763	58026	57938	57903	-4402	-7.07
89124	7202	6891	6616	6861	6786	7103	-99	-1.37
89128	39753	39749	39775	38716	38742	38740	-1013	-2.55
89129	54566	55755	55565	54158	54585	54843	277	0.51
89130	32325	32836	32490	32357	32413	32847	522	1.61
89131	50176	50474	50227	50354	50484	50730	554	1.10
89134	25486	25486	24205	23820	23806	23819	-1667	-6.54
89135	32617	33828	33092	32928	34405	34962	2345	7.19
89138	20001	22074	23289	26515	29218	31700	11699	58.49
89139	42064	44127	43112	45600	46376	47703	5639	13.41
89141	40006	43865	41017	43033	45284	48673	8667	21.66
89142	36391	36888	35568	36010	36046	35971	-420	-1.15
89143	13406	13409	13350	13879	15072	16156	2750	20.51
89144	20162	20160	19291	18980	19000	19087	-1075	-5.33
89145	28481	28594	28452	27908	27896	27893	-588	-2.06
89146	19918	20057	18686	19008	18903	19033	-885	-4.44
89147	60183	60934	56287	56070	56253	57192	-2991	-4.97
89148	68749	71877	65967	66568	67827	70159	1410	2.05
89149	43739	44504	42908	44915	45454	47361	3622	8.28
89156	31514	31508	29945	30895	31270	31743	229	0.73
89158	1543	1549	1367	476	736	740	-803	-52.04
89161	502	502	443	0	479	485	-17	-3.39
89166	19253	20957	23425	28834	32921	37375	18122	94.13
89169	27047	28273	26853	25852	24981	25193	-1854	-6.85
89178	38514	40314	41198	43852	45733	46860	8346	21.67
89179	11422	11688	11819	11856	11856	11957	535	4.68
89183	37955	38786	39602	39788	43497	44599	6644	17.50
Total	2,325,798	2,325,798	2,325,798	2,325,798	2,371,586	2,421,685	95,887	4.12

Clark County Department of Comprehensive Planning

Source: Southern Nevada Census Population Estimate, August - Roll Close 2024

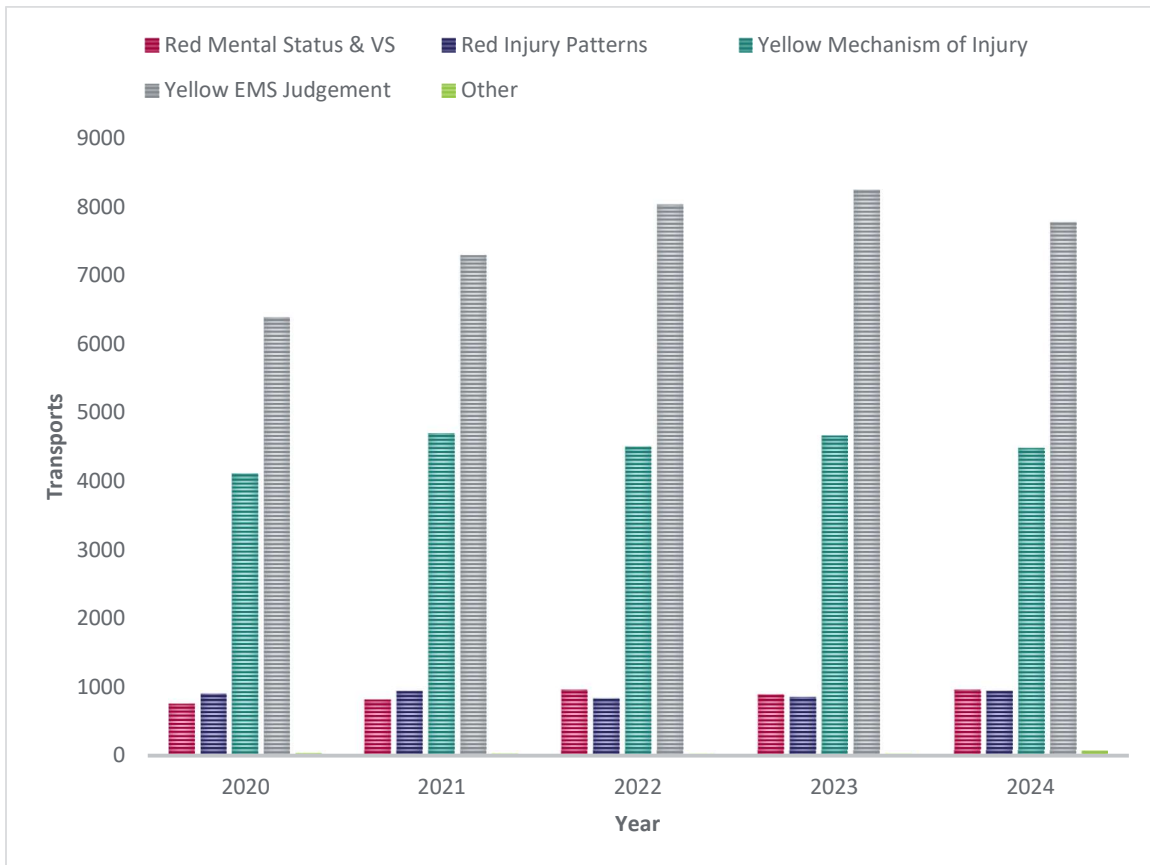
SNHD Trauma Field Triage Criteria (TFTC) Data

Intent

The intent of including TFTC data is to examine and determine the number of reported trauma cases at all designated Trauma Centers in Southern Nevada. This data can then be used to analyze capacity, determine unmet needs, identify negative outcomes, and recognize barriers to access healthcare. TFTC data is abstracted by trained data extractors to be reported, compiled, verified, and generated by a collaborative effort between designated trauma centers and the Office of Emergency Medical Services and Trauma System (OEMSTS). This data is separate from the data criteria required and submitted to the Nevada State Trauma Registry. All data points include a date, time, location, injury code, transporting agency, and receiving facility. Current Southern Nevada TFTC is guidance provided by the CDC and approved by the Medical Advisory Board.

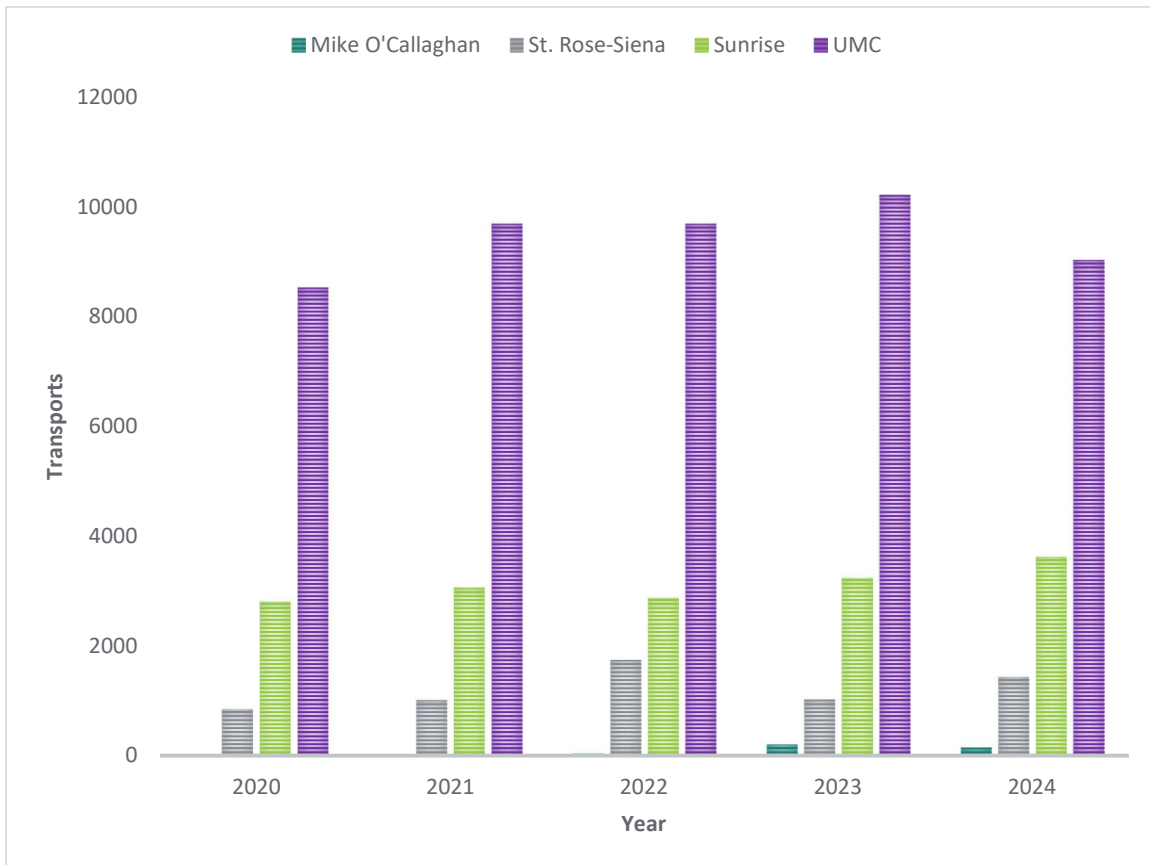
Appendix A: Trauma Field Triage Criteria

Number of TFTC Transports by Category, 2020-2024



TFTC Transports by Category, 2020-2024					
	2020	2021	2022	2023	2024
Red Mental Status & VS (Previously Step 1)	750	819	966	896	964
Red Injury Patterns (Previously Step 2)	904	947	836	857	953
Yellow Mechanism of Injury (Previously Step 3)	4103	4699	4500	4662	4482
Yellow EMS Judgement (Previously Step 4)	6384	7289	8031	8243	7768
Other	34	23	15	20	76
All	12175	13777	14348	14678	14243
<i>Source: SNHD TFTC Data</i>					
<i>Note: Includes all TFTC transports in the Southern Nevada Trauma System.</i>					

TFTC Transports by Trauma Center, 2020-2024



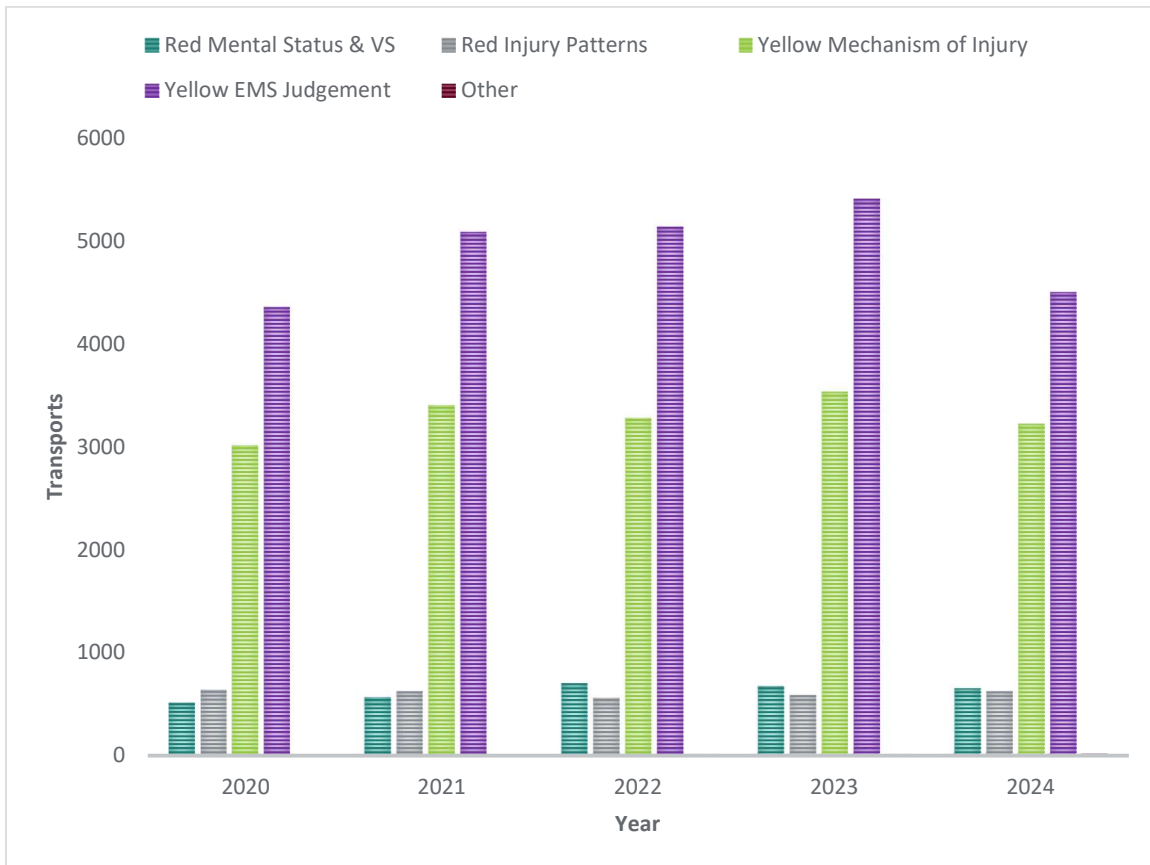
TFTC Transports by Trauma Center, 2020-2024

	2020	2021	2022	2023	2024
Mike O'Callaghan	0	0	37	208	153
St. Rose-Siena	846	1017	1749	1023	1436
Sunrise	2806	3062	2876	3235	3624
UMC	8522	9687	9686	10212	9024
All	12174	13766	14348	14678	14237

Source: SNHD TFTC Data

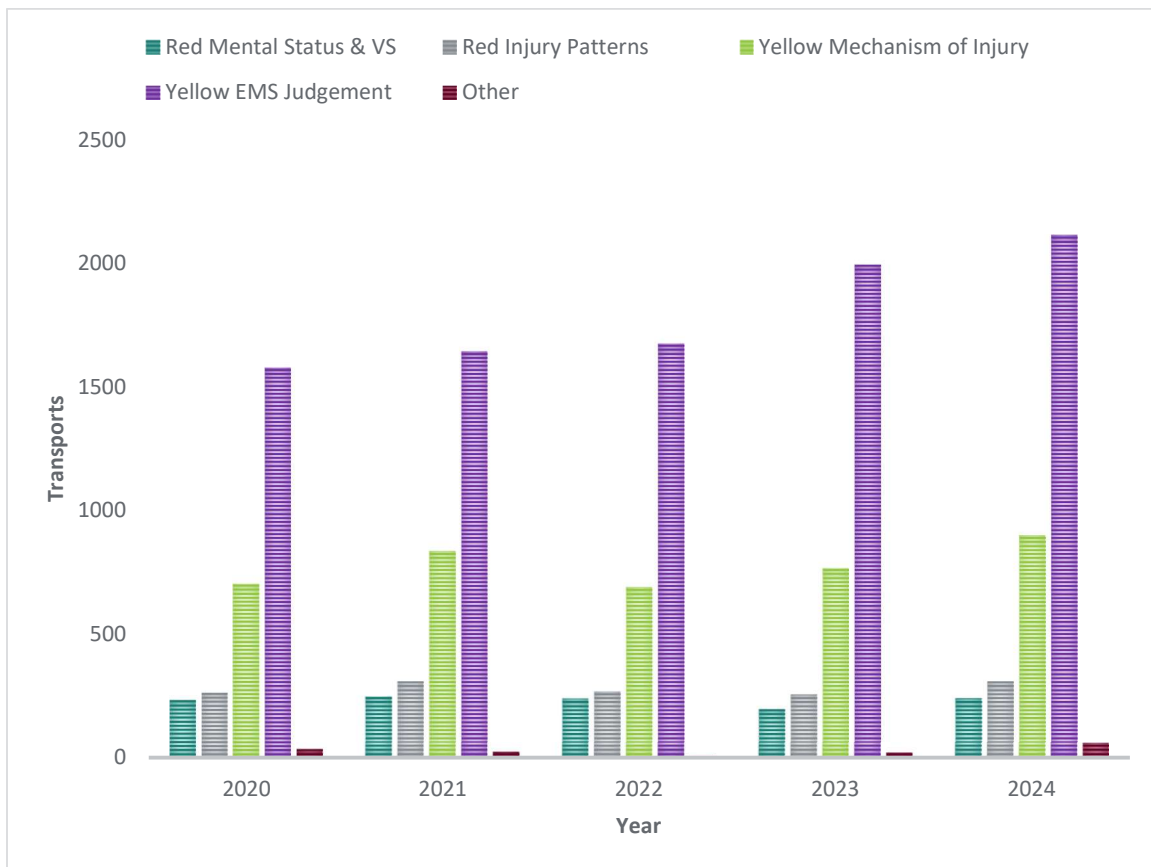
Note: Includes all TFTC transports in the Southern Nevada Trauma System.

UMC TFTC Transports by Category, 2020-2024



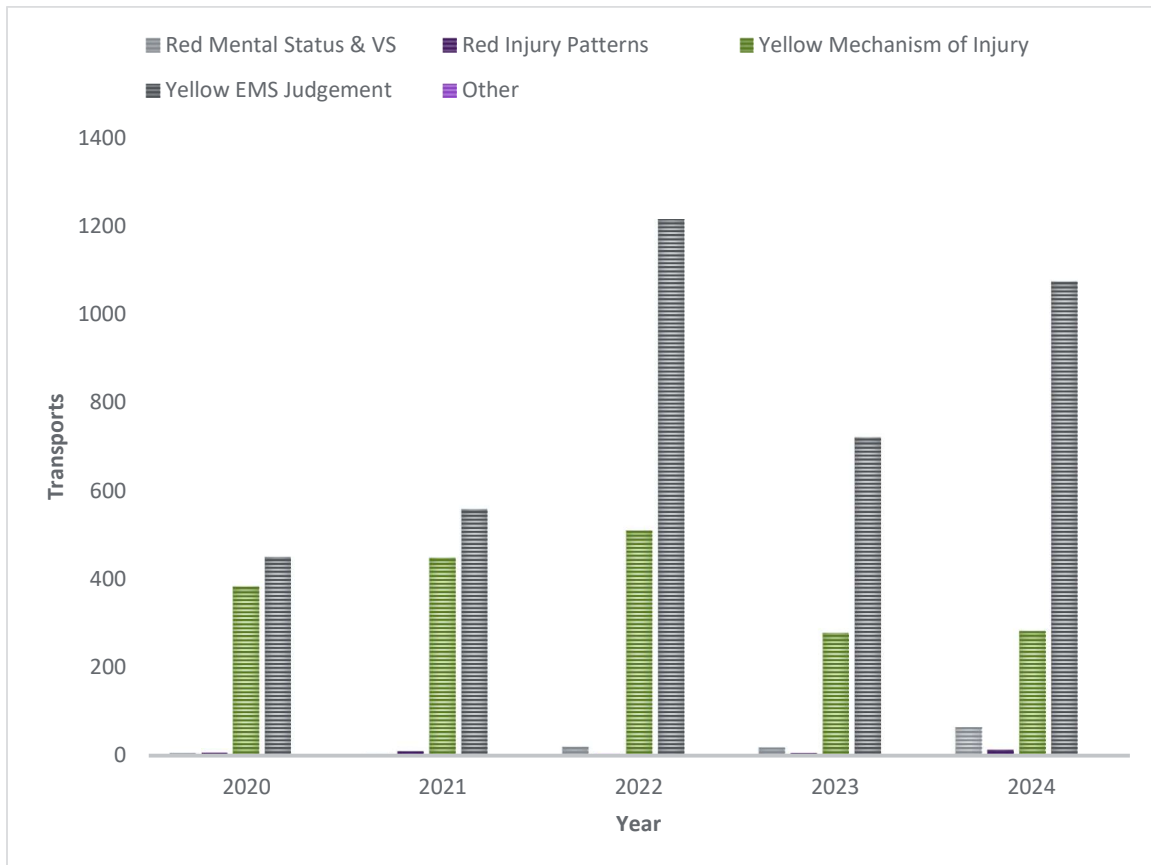
UMC TFTC Transports by Category, 2020-2024					
	2020	2021	2022	2023	2024
Red Mental Status & VS (Step 1)	513	570	705	676	655
Red Injury Patterns (Step 2)	637	627	564	590	627
Yellow Mechanism of Injury (Step 3)	3016	3403	3279	3535	3223
Yellow EMS Judgement (Step 4)	4356	5087	5136	5410	4503
Other	0	0	2	1	16
All	8522	9687	9686	10212	9024
Source: SNHD TFTC Data					
Note: Includes all TFTC transports in the Southern Nevada Trauma System.					

Sunrise TFTC Transports by Category 2020-2024



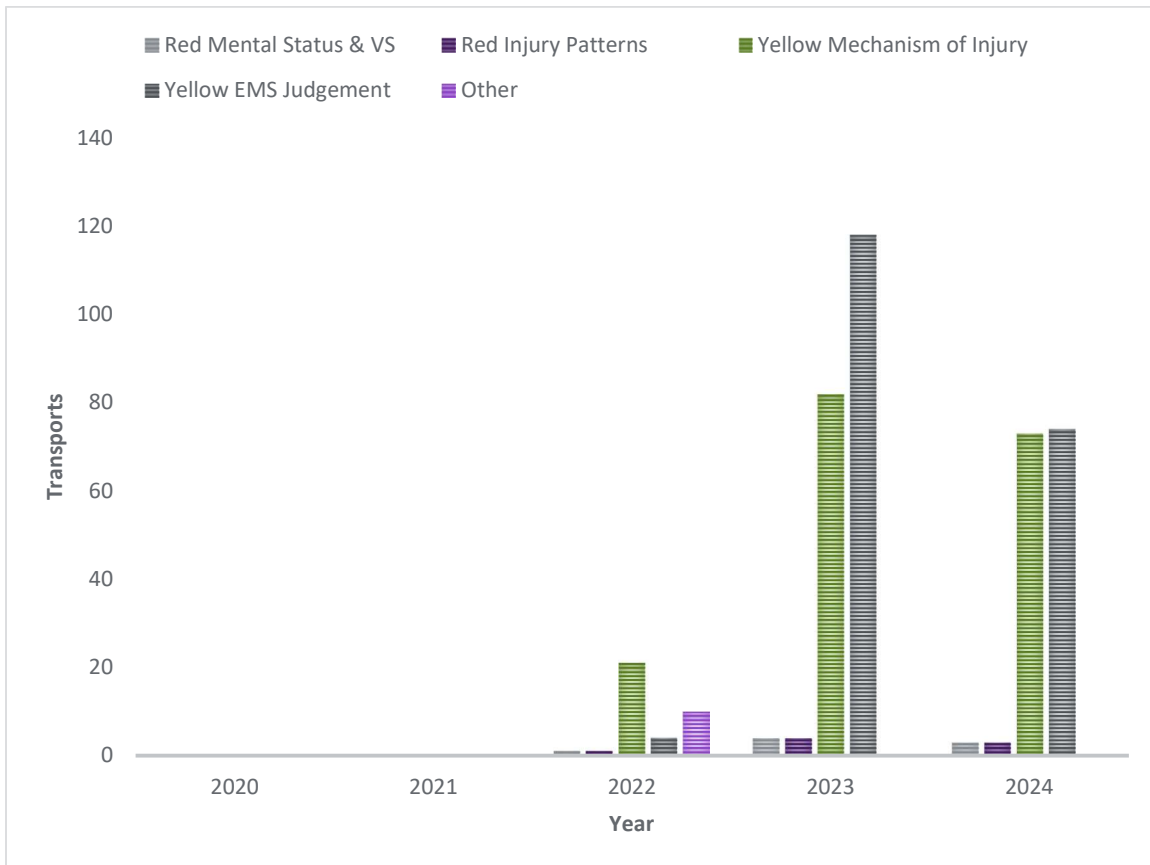
Sunrise TFTC Transports by Category, 2020-2024					
	2020	2021	2022	2023	2024
Red Mental Status & VS (Step 1)	231	248	240	197	241
Red Injury Patterns (Step 2)	261	310	268	257	309
Yellow Mechanism of Injury (Step 3)	702	837	690	767	900
Yellow EMS Judgement (Step 4)	1578	1644	1675	1995	2116
Other	34	23	3	19	58
Total	2806	3062	2876	3235	3624
Source: SNHD TFTC Data					
Note: Includes all TFTC transports in the Southern Nevada Trauma System.					

St. Rose – Siena TFTC Transports by Category, 2020-2024



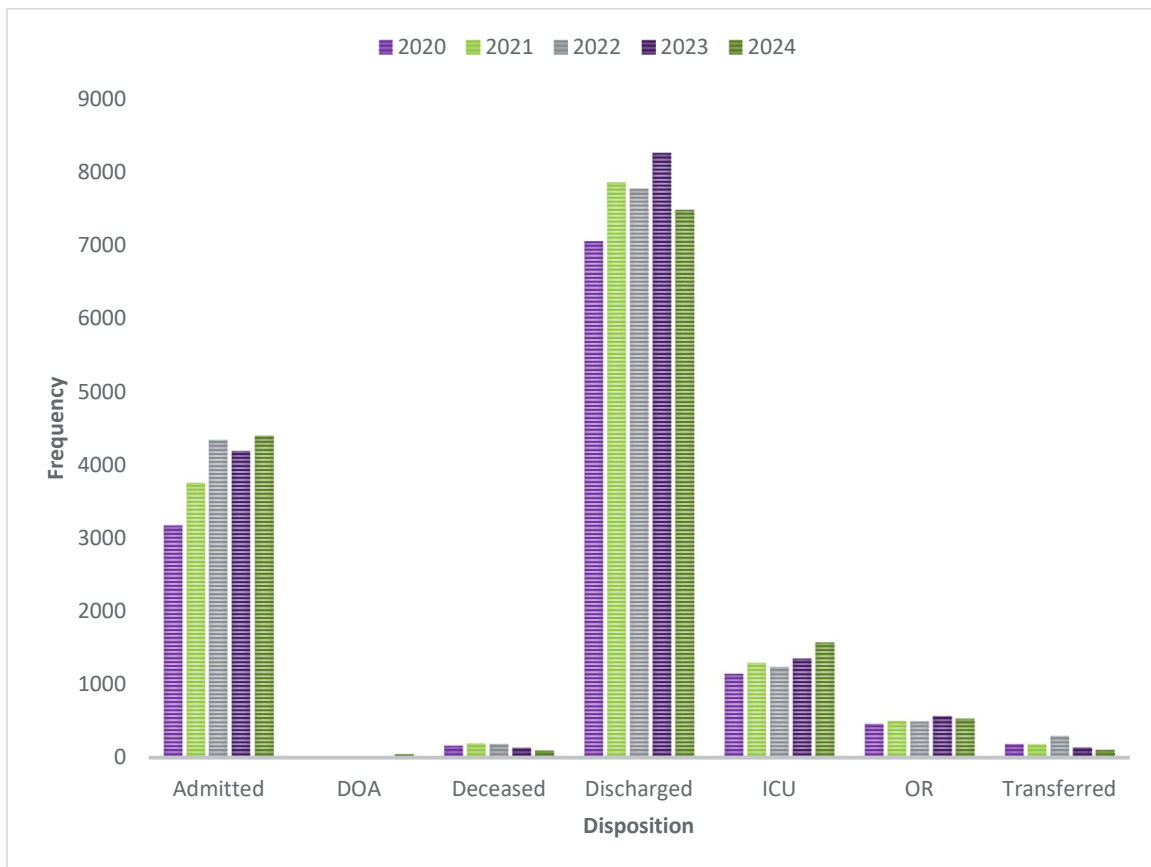
St Rose – Siena TFTC Transports by Category, 2020-2024					
	2020	2021	2022	2023	2024
Red Mental Status & VS (Step 1)	6	1	20	19	65
Red Injury Patterns (Step 2)	6	10	3	6	14
Yellow Mechanism of Injury (Step 3)	384	448	510	278	282
Yellow EMS Judgement (Step 4)	450	558	1216	720	1073
Other	0	0	0	0	2
Total	846	1017	1749	1023	1436
Source: SNHD TFTC Data					
Note: Includes all TFTC transports in the Southern Nevada Trauma System.					

Mike O'Callaghan TFTC Transports by Category, 2020-2024



Mike O'Callaghan TFTC Transports by Category, 2020-2024					
	2020	2021	2022	2023	2024
Red Mental Status & VS (Step 1)	0	0	1	4	3
Red Injury Patterns (Step 2)	0	0	1	4	3
Yellow Mechanism of Injury (Step 3)	0	0	21	82	73
Yellow EMS Judgement (Step 4)	0	0	4	118	74
Other	0	0	10	0	0
Total	0	0	37	208	153
Source: SNHD TFTC Data					
Note: Mike O'Callaghan became a Level III Trauma Center in 2022. Includes all TFTC transports in the Southern Nevada Trauma System.					

TFTC Transports (1-4) by Disposition 2020-2024



TFTC Transports (1-4) by Disposition, 2020-2024					
	2020	2021	2022	2023	2024
Admitted	3169	3753	4338	4188	4396
DOA*	0	0	0	0	44
Deceased	161	193	184	135	98
Discharged	7054	7857	7773	8262	7484
ICU	1144	1293	1237	1357	1576
OR	460	498	495	566	531
Transferred	184	181	291	141	104
All	12173	13775	14318	14649	14233
*DOA was noted as "deceased" prior to 2024					
Source: SNHD TFTC Data					
Note: Includes all TFTC transports in the Southern Nevada Trauma System with a Documented Disposition. Includes 1 unclassified disposition in 2020.					

TFTC Categories by Disposition, 2020-2024						
		2020	2021	2022	2023	2024
Red Mental Status & VS	Admitted	171	153	223	213	248
(Step 1)	DOA	0	0	0	0	32
	Deceased	96	124	136	91	66
	Discharged	125	127	170	168	135
	ICU	291	351	336	325	405
	OR	66	64	96	93	70
	Transferred	1	0	4	5	7
Red Injury Patterns	Admitted	208	215	211	221	259
(Step 2)	DOA	0	0	0	0	10
	Deceased	47	53	33	26	22
	Discharged	318	350	306	283	355
	ICU	118	123	111	116	120
	OR	209	203	170	207	183
	Transferred	4	3	5	3	3
Yellow Mechanism of Injury	Admitted	777	877	837	870	1000
(Step 3)	DOA	0	0	0	0	2
	Deceased	11	10	7	11	7
	Discharged	2865	3366	3264	3343	2957
	ICU	326	313	248	314	386
	OR	88	99	84	91	103
	Transferred	36	34	50	27	22
Yellow EMS Judgement	Admitted	1999	2502	3063	2879	2874
(Step 4)	DOA	0	0	0	0	0
	Deceased	6	5	8	7	3
	Discharged	3732	4004	4024	4459	3998
	ICU	406	501	541	597	647
	OR	96	131	145	175	171
	Transferred	143	144	231	106	72
Other	Admitted	14	6	4	5	15
	DOA	1	1	0	0	0
	Deceased	14	10	9	9	39
	Discharged	3	5	1	5	18
	ICU	1	1	0	0	4
	OR	0	0	1	0	0
	Transferred	14	6	4	5	15
All		12173	13775	14318	14649	14233
Source: SNHD TFTC Data						
Note: Includes all TFTC transports in the Southern Nevada Trauma System with a Documented Disposition. Includes 1 unclassified category in 2020.						

Transport Times

Intent

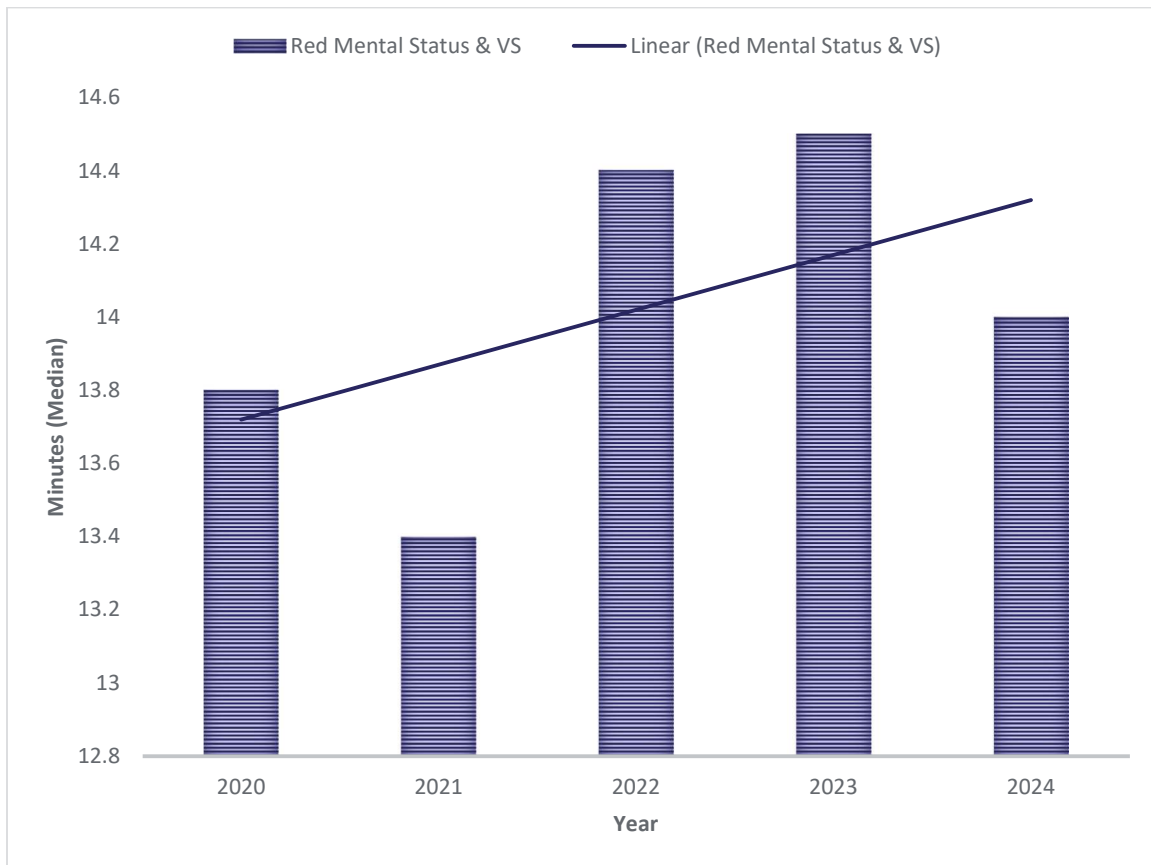
The intent of analyzing Trauma Field Triage Criteria (TFTC) transport times is to evaluate patient transport time to identify if a barrier exists to the prompt treatment of trauma. The goal of a trauma system is to get the right patient the right care in the right place at the right time. Prompt trauma treatment may shorten the recovery period and return a patient to pre-accident functionality. Patients transported by EMS providers to trauma centers must satisfy TFTC. These patients vary in the severity of the mechanisms of injury. The less severe, which represent a larger number of patients, are awake, alert, and have normal vital signs. While they appear less injured, some patients have significant, often occult injuries. Most will be discharged home after evaluation, but some require life-saving interventions identified by expedited resources available at trauma centers. There are no established or scientifically defined optimal transport times. Therefore, for Southern Nevada, transport times are provided to subject-matter experts to allow for analysis based on, but not limited to, geographic layout and infrastructure for the community's needs.

Appendix B: Southern Nevada Trauma Catchment Areas

Southern Nevada Median Transport Time in Minutes by Category, 2020-2024

Southern Nevada Median Transport Time by Category, 2020-2024						
		Year				
		2020	2021	2022	2023	2024
Red Mental Status & VS (Step 1)	N	591	638	743	688	757
	Median (Decimal Time in Minutes)	13.8	13.4	14.4	14.5	14
	Median (Minutes & Seconds)	13m 48s	13m 24s	14m 24s	14m 30s	14m 0s
Red Injury Patterns (Step 2)	N	718	768	663	666	762
	Median (Decimal Time in Minutes)	12.7	13.2	13	13.8	14.2
	Median (Minutes & Seconds)	12m 42s	13m 12s	13m 0s	13m 48s	14m 12s
Yellow Mechanism of Injury (Step 3)	N	3507	3968	3688	3778	3665
	Median (Decimal Time in Minutes)	15.4	15.6	15.8	16.2	16
	Median (Minutes & Seconds)	15m 24s	15m 36s	15m 48s	16m 12s	16m 0s
Yellow EMS Judgement (Step 4)	N	5430	6250	6735	6385	6209
	Median (Decimal Time in Minutes)	15.4	16.2	16.4	17.4	17.2
	Median (Minutes & Seconds)	15m 24s	16m 12s	16m 24s	17m 24s	17m 12s
Other	N	9	2	5	10	38
Source: SNHD TFTC Data						
<p><i>Note: Data not listed if out of state or if zip code is unavailable. Service area for Southern Nevada includes the following zip codes where the injury took place: 89002, 89004, 89005, 89007, 89011, 89012, 89014, 89015, 89018, 89019, 89021, 89027, 89029, 89030, 89031, 89032, 89034, 89039, 89040, 89044, 89046, 89052, 89054, 89074, 89081, 89084, 89085, 89086, 89101, 89102, 89103, 89104, 89106, 89107, 89108, 89110, 89113, 89115, 89117, 89118, 89120, 89121, 89122, 89123, 89124, 89128, 89129, 89130, 89131, 89134, 89135, 89138, 89139, 89141, 89142, 89143, 89144, 89145, 89146, 89147, 89148, 89149, 89156, 89161, 89166, 89178, 89179, and 89183.</i></p> <p><i>Includes TFTC transports with a transport time greater than 0 seconds.</i></p>						

Southern Nevada Red Mental Status & VS (Step 1) Median Transport Time, 2020-2024



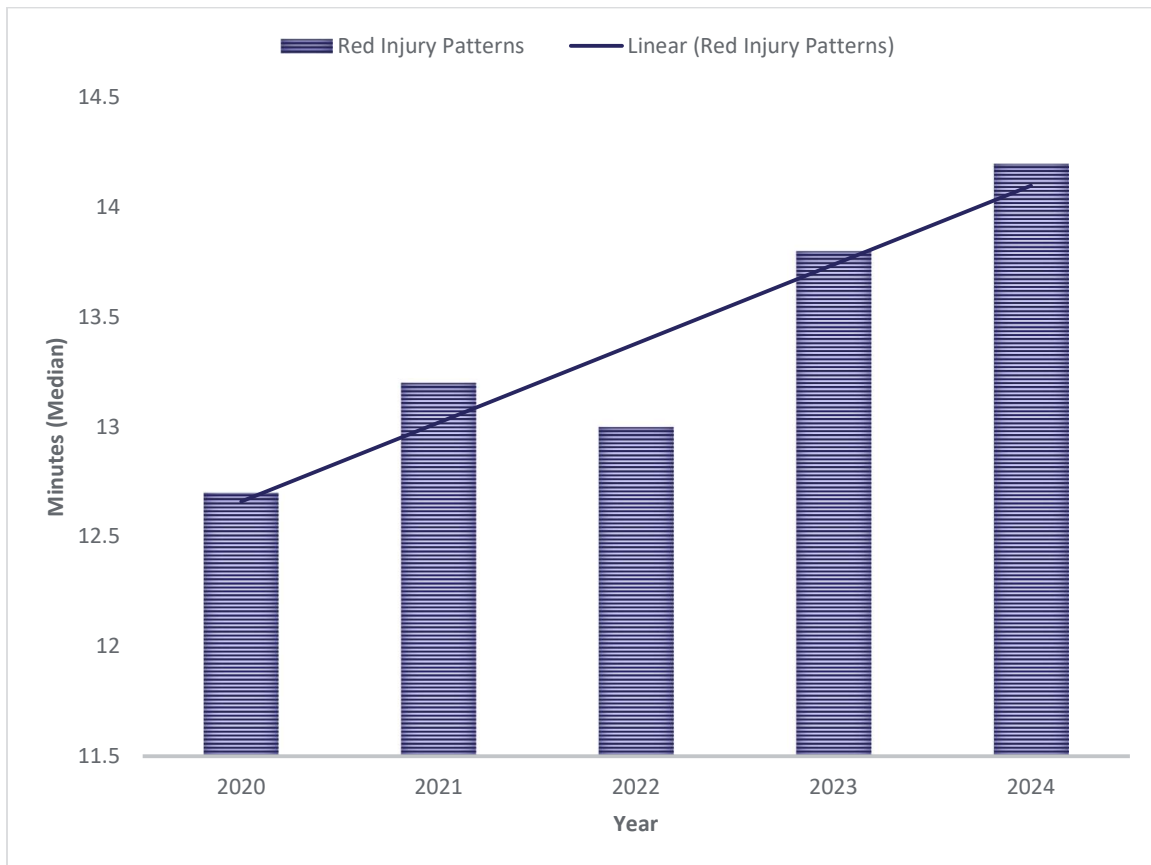
Southern Nevada Red Mental Status & VS Median Transport Time, 2020-2024

		Year				
		2020	2021	2022	2023	2024
Red Mental Status & VS	N	591	638	743	688	757
	Median (Decimal Time in Minutes)	13.8	13.4	14.4	14.5	14
	Median (Minutes & Seconds)	13m 48s	13m 24s	14m 24s	14m 30s	14m 0s

Source: SNHD TFTC Data

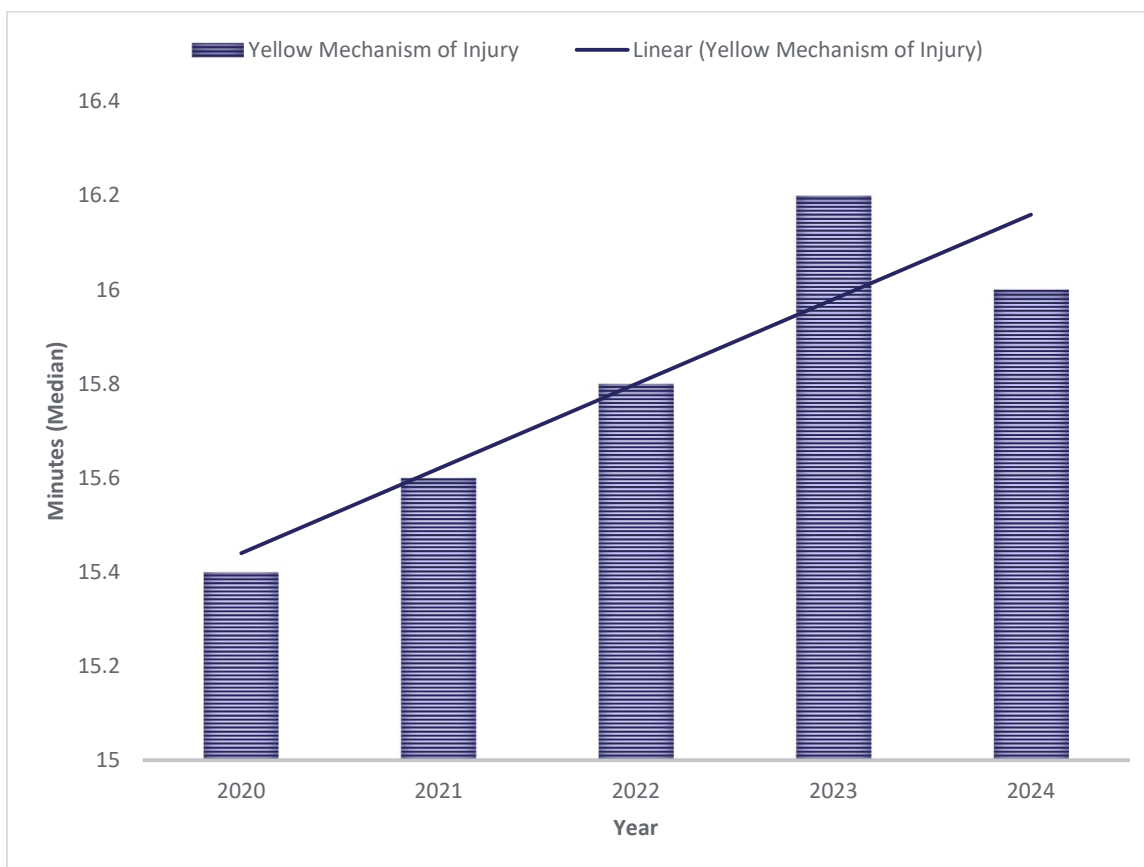
Note: Data not listed if out of state or if zip code is unavailable. Service area for Southern Nevada includes the following zip codes where the injury took place: 89002, 89004, 89005, 89007, 89011, 89012, 89014, 89015, 89018, 89019, 89021, 89027, 89029, 89030, 89031, 89032, 89034, 89039, 89040, 89044, 89046, 89052, 89054, 89074, 89081, 89084, 89085, 89086, 89101, 89102, 89103, 89104, 89106, 89107, 89108, 89110, 89113, 89115, 89117, 89118, 89120, 89121, 89122, 89123, 89124, 89128, 89129, 89130, 89131, 89134, 89135, 89138, 89139, 89141, 89142, 89143, 89144, 89145, 89146, 89147, 89148, 89149, 89156, 89161, 89166, 89178, 89179, and 89183. Includes TFTC transports with a transport time greater than 0 seconds.

Southern Nevada Red Injury Patterns (Step 2) Median Transport Time, 2020-2024



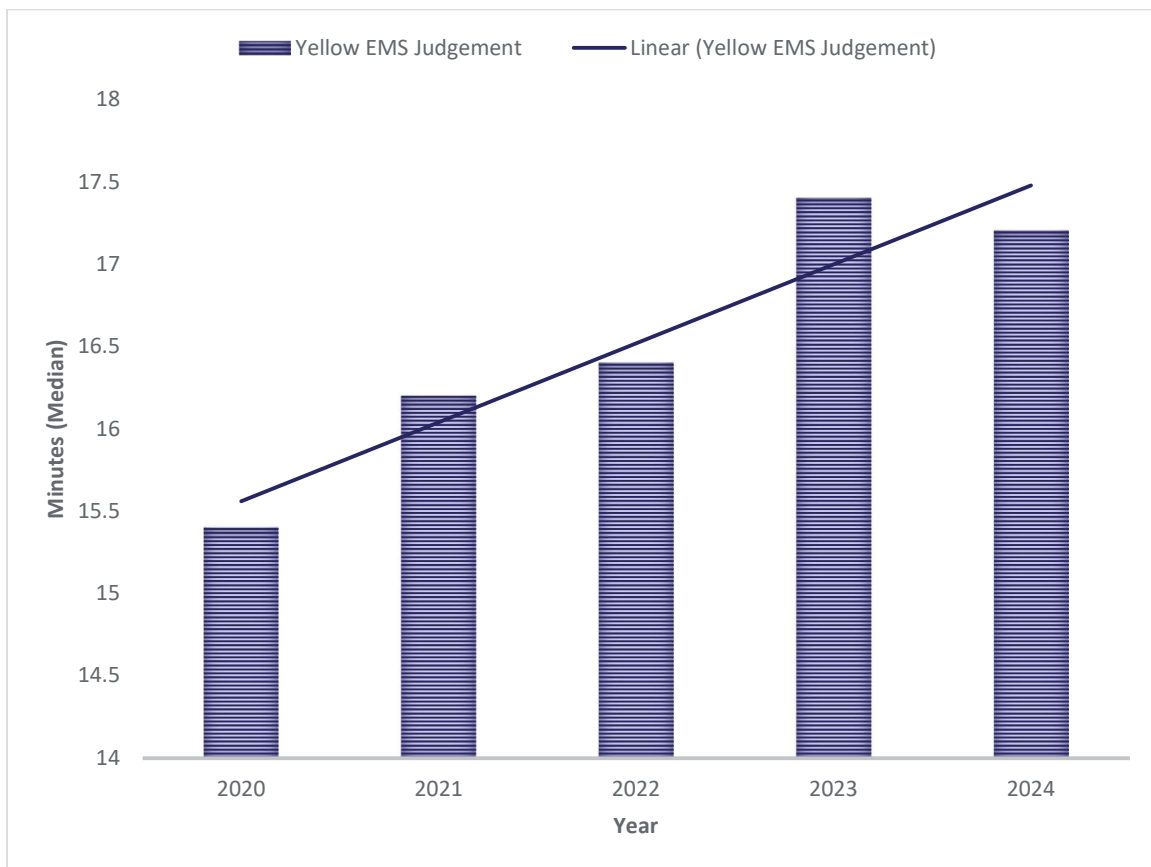
Southern Nevada Red Injury Patterns Median Transport Time, 2020-2024						
		Year				
		2020	2021	2022	2023	2024
Red Injury Patterns	N	718	768	663	666	762
	Median (Decimal Time in Minutes)	12.7	13.2	13	13.8	14.2
	Median (Minutes & Seconds)	12m 42s	13m 12s	13m 0s	13m 48s	14m 12s
Source: SNHD TFTC Data						
Note: Data not listed if out of state or if zip code is unavailable. Service area for Southern Nevada includes the following zip codes where the injury took place: 89002, 89004, 89005, 89007, 89011, 89012, 89014, 89015, 89018, 89019, 89021, 89027, 89029, 89030, 89031, 89032, 89034, 89039, 89040, 89044, 89046, 89052, 89054, 89074, 89081, 89084, 89085, 89086, 89101, 89102, 89103, 89104, 89106, 89107, 89108, 89110, 89113, 89115, 89117, 89118, 89120, 89121, 89122, 89123, 89124, 89128, 89129, 89130, 89131, 89134, 89135, 89138, 89139, 89141, 89142, 89143, 89144, 89145, 89146, 89147, 89148, 89149, 89156, 89161, 89166, 89178, 89179, and 89183. Includes TFTC transports with a transport time greater than 0 seconds.						

Southern Nevada Yellow Mechanism (Step 3) Median Transport Time, 2020-2024



Southern Nevada Yellow Mechanism of Injury Median Transport Time, 2020-2024						
		Year				
		2020	2021	2022	2023	2024
Yellow Mechanism of Injury	N	3507	3968	3688	3778	3665
	Median (Decimal Time in Minutes)	15.4	15.6	15.8	16.2	16
	Median (Minutes & Seconds)	15m 24s	15m 36s	15m 48s	16m 12s	16m 0s
Source: SNHD TFTC Data						
Note: Data not listed if out of state or if zip code is unavailable. Service area for Southern Nevada includes the following zip codes where the injury took place: 89002, 89004, 89005, 89007, 89011, 89012, 89014, 89015, 89018, 89019, 89021, 89027, 89029, 89030, 89031, 89032, 89034, 89039, 89040, 89044, 89046, 89052, 89054, 89074, 89081, 89084, 89085, 89086, 89101, 89102, 89103, 89104, 89106, 89107, 89108, 89110, 89113, 89115, 89117, 89118, 89120, 89121, 89122, 89123, 89124, 89128, 89129, 89130, 89131, 89134, 89135, 89138, 89139, 89141, 89142, 89143, 89144, 89145, 89146, 89147, 89148, 89149, 89156, 89161, 89166, 89178, 89179, and 89183. Includes TFTC transports with a transport time greater than 0 seconds.						

Southern Nevada Yellow EMS Judgement (Step 4) Median Transport Time, 2020-2024



Southern Nevada Yellow EMS Judgement Median Transport Time, 2020-2024

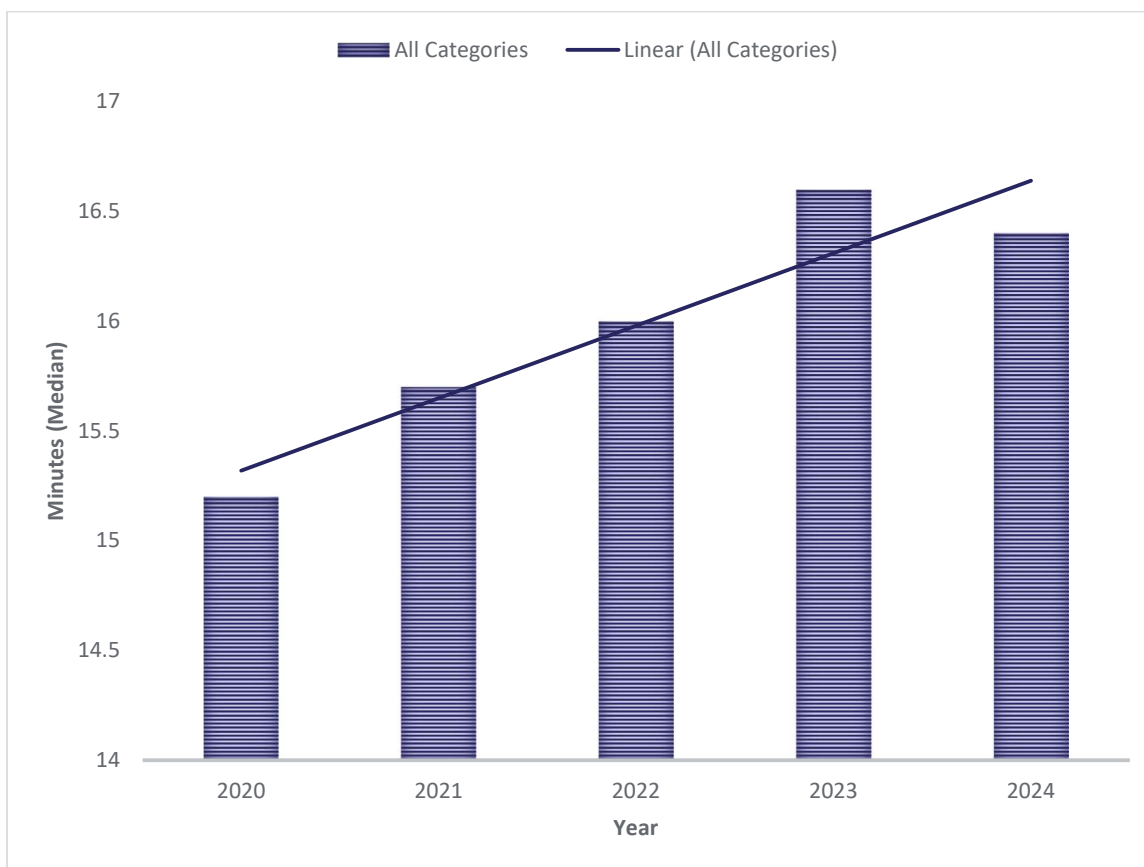
		Year				
		2020	2021	2022	2023	2024
Yellow EMS Judgement	N	5430	6250	6735	6385	6209
	Median (Decimal Time in Minutes)	15.4	16.2	16.4	17.4	17.2
	Median (Minutes & Seconds)	15m 24s	16m 12s	16m 24s	17m 24s	17m 12s

Source: SNHD TFTC Data

Note: Data not listed if out of state or if zip code is unavailable. Service area for Southern Nevada includes the following zip codes where the injury took place: 89002, 89004, 89005, 89007, 89011, 89012, 89014, 89015, 89018, 89019, 89021, 89027, 89029, 89030, 89031, 89032, 89034, 89039, 89040, 89044, 89046, 89052, 89054, 89074, 89081, 89084, 89085, 89086, 89101, 89102, 89103, 89104, 89106, 89107, 89108, 89110, 89113, 89115, 89117, 89118, 89120, 89121, 89122, 89123, 89124, 89128, 89129, 89130, 89131, 89134, 89135, 89138, 89139, 89141, 89142, 89143, 89144, 89145, 89146, 89147, 89148, 89149, 89156, 89161, 89166, 89178, 89179, and 89183.

Includes TFTC transports with a transport time greater than 0 seconds.

Southern Nevada (Composite) Median Transport Time – All Categories, 2020-2024



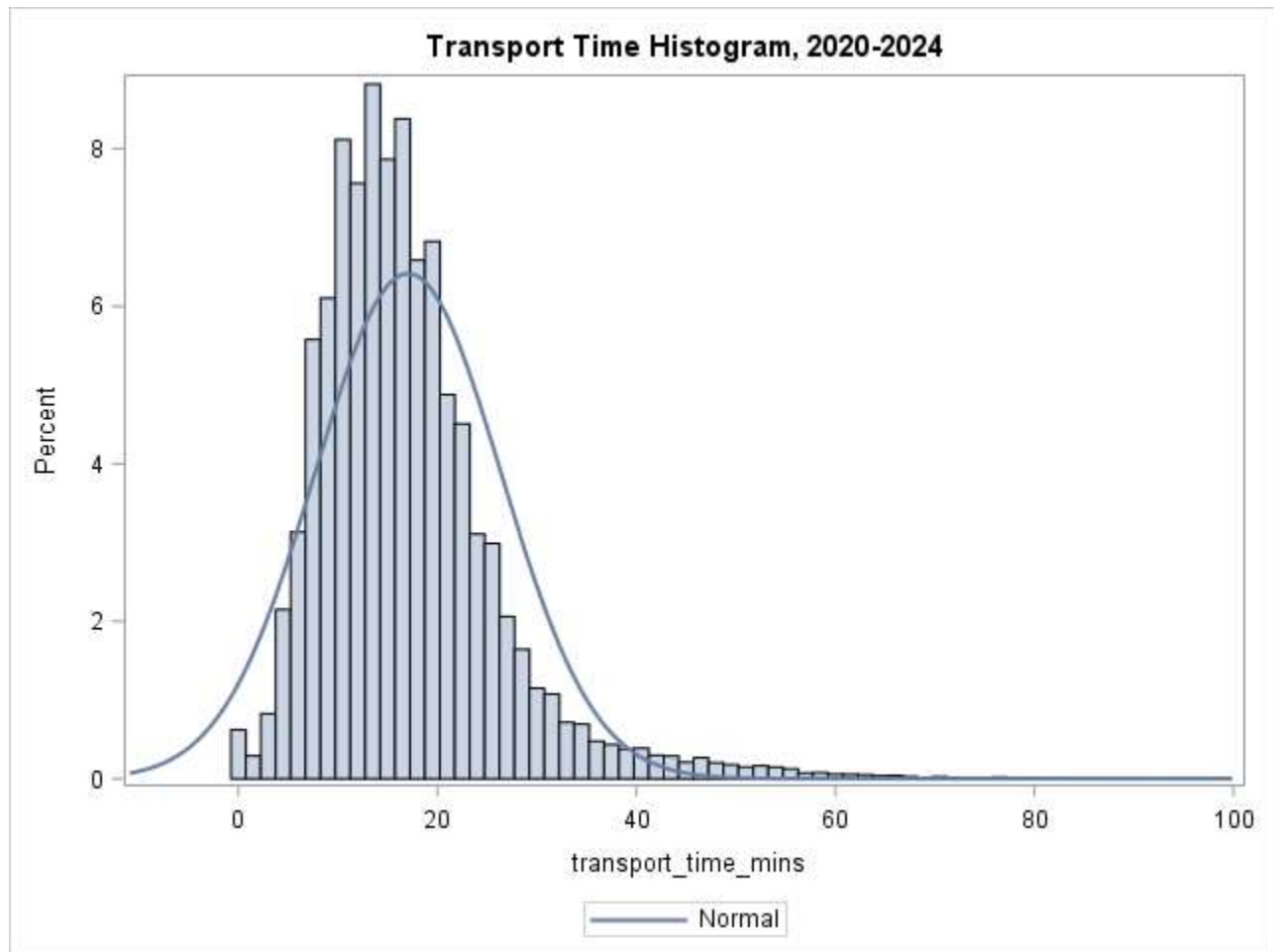
Southern Nevada Median Transport Time – All Categories, 2020-2024

		2020	2021	2022	2023	2024
All Categories	N	10255	11626	11834	11527	11431
	Median (Decimal Time in Minutes)	15.2	15.7	16	16.6	16.4
	Median (Minutes & Seconds)	15m 12s	15m 42s	16m 0s	16m 36s	16m 24s

Source: SNHD TFTC Data

Note: Data not listed if out of state or if zip code is unavailable. Service area for Southern Nevada includes the following zip codes where the injury took place: 89002, 89004, 89005, 89007, 89011, 89012, 89014, 89015, 89018, 89019, 89021, 89027, 89029, 89030, 89031, 89032, 89034, 89039, 89040, 89044, 89046, 89052, 89054, 89074, 89081, 89084, 89085, 89086, 89101, 89102, 89103, 89104, 89106, 89107, 89108, 89110, 89113, 89115, 89117, 89118, 89120, 89121, 89122, 89123, 89124, 89128, 89129, 89130, 89131, 89134, 89135, 89138, 89139, 89141, 89142, 89143, 89144, 89145, 89146, 89147, 89148, 89149, 89156, 89161, 89166, 89178, 89179, and 89183. Includes TFTC transports with a transport time greater than 0 seconds.

Histogram and Interquartile Range of Transport Time, 2020-2024



Interquartile Range of Transport Time, 2020-2024

	Year				
	2020	2021	2022	2023	2024
25th Percentile Transport Time (Minutes)	10m 12s	10m 48s	11m 0s	11m 36s	11m 24s
50th Percentile Transport Time (Minutes)	14m 36s	15m 12s	15m 36s	16m 12s	16m 0s
75th Percentile Transport Time (Minutes)	19m 48s	20m 36s	21m 0s	21m 36s	21m 24s
Quartile Range Transport Time (Minutes)	9m 36s	9m 48s	10m 0s	10m 0s	10m 0s

Source: SNHD TFTC Data

Note: Includes all TFTC transports in the Southern Nevada Trauma System with a transport time greater than 0 seconds. Histogram is restricted to show transport times between values greater than 0 and less than or equal to 100.

TFTC Incidents by Transport Time and Category, 2020-2024

TFTC Incidents by Transport Time and Category, 2020-2024					
	2020	2021	2022	2023	2024
>15 Minutes					
Red Mental Status & VS (1)	254	271	370	350	361
Red Injury Patterns (2)	255	321	278	300	369
Yellow Mechanism of Injury (3)	1943	2264	2154	2260	2165
Yellow EMS Judgement (4)	3035	3869	4261	4341	4181
>20 Minutes					
Red Mental Status & VS (1)	122	135	197	158	170
Red Injury Patterns (2)	120	157	149	140	181
Yellow Mechanism of Injury (3)	1017	1171	1174	1234	1151
Yellow EMS Judgement (4)	1515	2098	2303	2457	2320
>25 Minutes					
Red Mental Status & VS (1)	57	62	84	75	82
Red Injury Patterns (2)	64	83	67	66	85
Yellow Mechanism of Injury (3)	507	613	627	638	595
Yellow EMS Judgement (4)	682	1021	1147	1249	1080
Source: SNHD TFTC Data					
Note: Includes all TFTC transports in the Southern Nevada Trauma System.					

Percentage of TFTC Incidents with Transport Time ≤15, 2020-2024

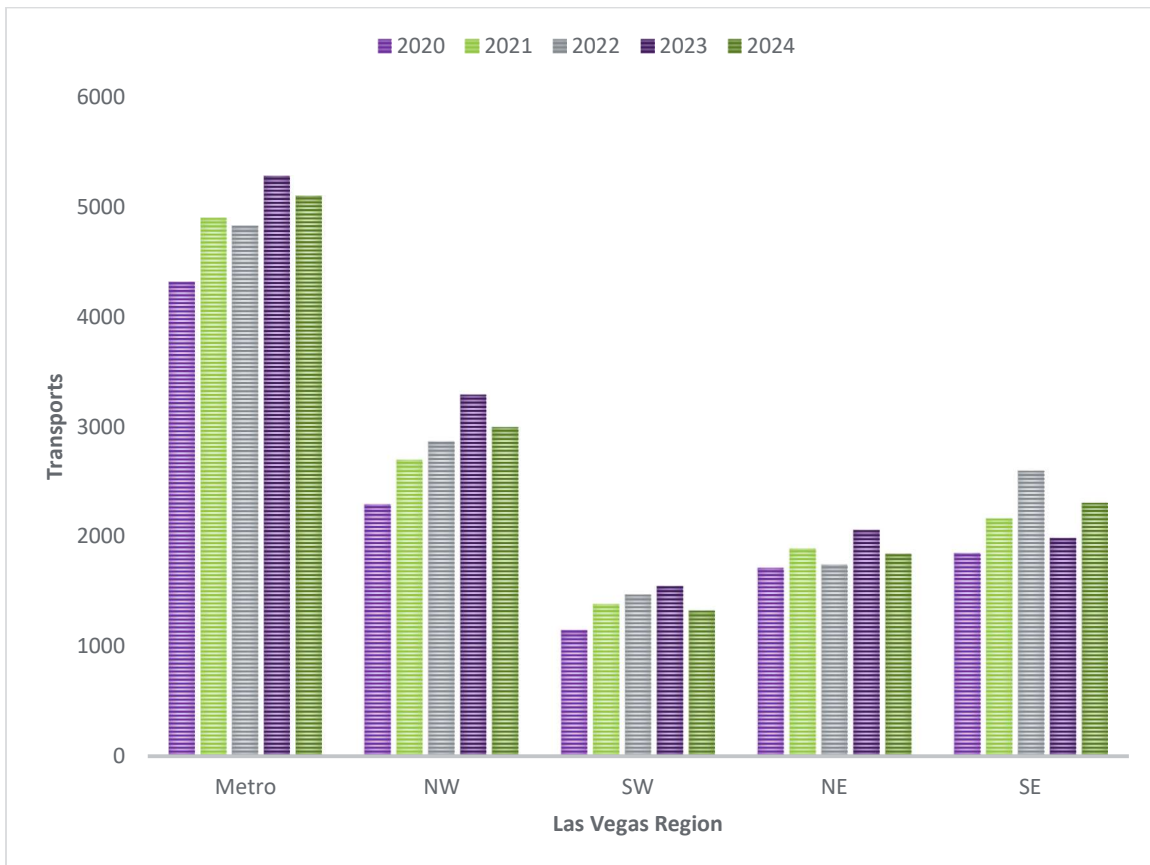
Percentage of TFTC Incidents with Transport Time ≤15 Minutes, 2020-2024					
	2020	2021	2022	2023	2024
≤15 Minutes					
Red Mental Status & VS (1)	433	494	508	426	506
Total	687	765	878	776	867
%	63.03%	64.66%	57.92%	54.90%	58.36%
Red Injury Patterns (2)	608	598	518	452	489
Total	863	919	796	752	858
%	70.45%	65.07%	65.08%	60.11%	56.99%
Yellow Mechanism of Injury (3)	1928	2205	2024	1839	1853
Total	3871	4469	4178	4099	4018
%	49.81%	49.34%	48.46%	44.86%	46.12%
Yellow EMS Judgement (4)	3185	3310	3421	2888	2986
Total	6220	7179	7682	7229	7167
%	51.21%	46.11%	44.53%	39.95%	41.66%
Other	4	2	3	5	25
<i>Source: SNHD TFTC Data</i>					
<i>Note: Includes all TFTC transports in the Southern Nevada Trauma System with a transport time greater than 0 seconds.</i>					

TFTC Regional Incidents

Intent

TFTC Regional Incidents is provided to analyze trauma in Southern Nevada's metropolitan area. Divided into five regions that contain unique geographical, socioeconomic, and infrastructure, the transport times and number of incidents are intended to identify barriers to access to care. This further develops an approach to monitor unmet needs to create new capacity when and where needed. The five regions were agreed upon by the RTAB, TMAC, and generated by OEMSTS. (Note: These regions are not catchment areas.)

TFTC Incident Total by Las Vegas Region, 2020-2024



TFTC Transports by Las Vegas Region, 2020-2024

	2020	2021	2022	2023	2024
Metro	4325	4900	4833	5286	5101
NW	2292	2698	2864	3291	2997
SW	1149	1387	1473	1549	1328
NE	1716	1892	1746	2061	1844
SE	1851	2166	2600	1987	2309
Total	11333	13043	13516	14174	13579

Source: SNHD TFTC Data

Note: Only includes transports with a category designation

TFTC Transports by Las Vegas Region and Category, 2020-2024

TFTC Transports by Las Vegas Region and Category, 2020-2024					
	2020	2021	2022	2023	2024
Red Mental Status & VS (Step 1)					
Metro	254	307	324	317	332
NW	136	138	197	195	177
SW	59	87	79	91	102
NE	106	100	132	139	145
SE	121	124	147	111	158
Red Injury Patterns (Step 2)					
Metro	357	386	353	330	369
NW	149	149	136	143	162
SW	57	54	58	73	60
NE	163	155	130	159	167
SE	125	156	133	114	141
Yellow Mechanism of Injury (Step 3)					
Metro	1158	1408	1377	1475	1537
NW	785	944	882	1026	944
SW	512	539	508	603	488
NE	561	632	557	723	631
SE	684	791	794	617	636
Yellow EMS Judgement (Step 4)					
Metro	2556	2799	2779	3164	2863
NW	1222	1467	1649	1927	1714
SW	521	707	828	782	678
NE	886	1005	927	1040	901
SE	921	1095	1526	1145	1374
<i>Source: SNHD TFTC Data</i>					
<i>Note: Only includes transports with a category designation.</i>					

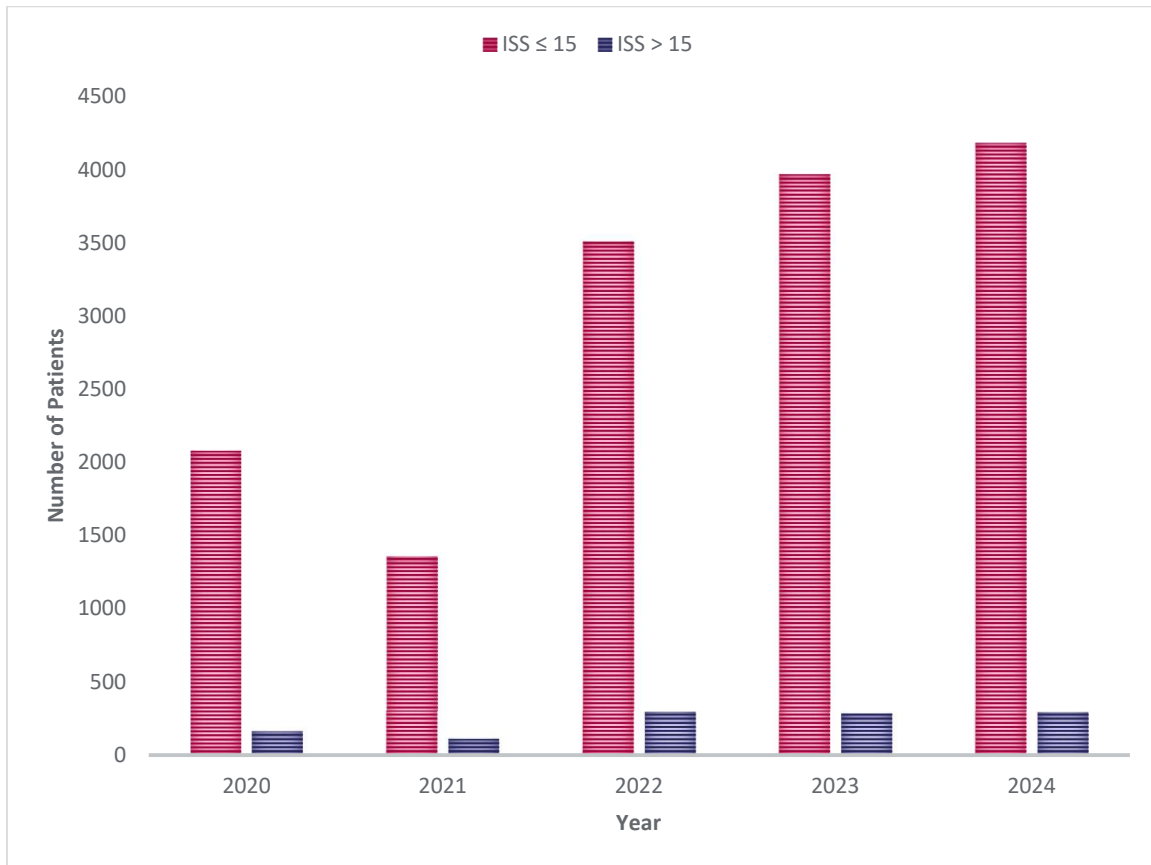
Non-Trauma Center Hospital Data

Intent

Non-Trauma Center Hospital Data is provided to analyze trauma outside of the four designated trauma centers. Due to the inclusion criteria and collection methods, the NV State Trauma Registry and the TFTC Trauma Center Trauma Registry are incompatible. Patients identified as meeting trauma inclusion criteria at non-trauma hospitals are still part of Southern Nevada's inclusive trauma system. Since the two data sets cannot be combined, an accurate calculation of overtriage and undertriage is not possible. Still, it is important to capture and analyze all trauma within our community to determine capacity and injury prevention needs.

Note: The Injury Severity Score (ISS) is a system for numerically stratifying injury severity, which correlates with mortality, morbidity, and other severity measures. The risk of death increases with a higher score. It requires extensive training and experience to calculate and determine the score. This report categorizes an ISS score that is equal to or less than 15 as minor or moderate. A score greater than 15 is considered severe to very severe.

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital by Injury Severity Score (ISS) in Southern Nevada, 2020-2024



Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital by Injury Severity Score (ISS) in Southern Nevada, 2020-2024

	ISS ≤ 15				
	2020	2021	2022	2023	2024
All	2078	1357	3507	3966	4181
	ISS > 15				
	2020	2021	2022	2023	2024
All	162	110	294	282	291
<i>Source: State Trauma Registry data</i>					

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity (ISS) >15 by Facility in Southern Nevada, 2020-2024

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) > 15 by Facility in Southern Nevada, 2020-2024					
	2020	2021	2022	2023	2024
Boulder City Hospital	1	0	1	1	0
Centennial Hills Hospital	4	8	16	23	32
*Desert Springs Hospital Medical Center	0	1	1	1	5
*ER at Valley Vista	0	0	0	0	1
*ER at West Craig	0	0	0	0	2
Henderson Hospital	3	4	1	1	3
*Henderson Hospital - ER at Green Valley	1	0	1	1	0
Mesa View Regional Hospital	1	0	0	6	10
Mountain View Hospital	18	21	45	25	26
*Mountain View Hospital - ER at Aliante	1	0	1	0	1
*Mountain View Hospital - ER at Skye Canyon	0	0	2	0	0
North Vista Hospital	113	68	155	138	148
*Southern Hills - ER at South Las Vegas Blvd.	0	0	0	0	1
*Southern Hills Hospital - ER at the Lakes	1	0	1	2	1
Southern Hills Hospital Medical Center	3	0	1	13	12
*Spring Valley Hospital - ER at Blue Diamond	0	0	0	1	2
Spring Valley Hospital Medical Center	3	1	4	6	3
St. Rose Dominican Hospital - Blue Diamond	0	0	1	10	4
*St. Rose Dominican Hospital - De Lima Campus	0	2	0	1	0
*St. Rose Dominican Hospital - North Las Vegas	0	0	8	16	14
St. Rose Dominican Hospital - San Martin Campus	0	0	3	3	4
*St. Rose Dominican Hospital - West Flamingo	0	0	3	1	6
*St. Rose Dominican Hospital - West Sahara	0	0	2	8	2
Summerlin Hospital Medical Center	9	4	45	19	9
Valley Hospital Medical Center	4	1	3	6	5
All	162	110	294	282	291
Source: State Trauma Registry data					
*Free-Standing Remote ER					

TMAC Review: There has been a notable upward trend in the number of non-trauma center hospitals, increasing from 17 to 25 over the past few years. Additionally, there has been a rise in the number of patients arriving by private vehicle rather than through the EMS system.

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity (ISS) ≤ 15 by Facility in Southern Nevada, 2020-2024

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) ≤ 15 by Facility in Southern Nevada, 2020-2024					
	2020	2021	2022	2023	2024
Boulder City Hospital	42	22	58	52	47
Centennial Hills Hospital	178	103	301	349	447
*Desert Springs Hospital Medical Center	23	19	85	64	25
*ER at Cadence	0	0	0	0	9
*ER at Desert's Edge	0	0	0	0	4
*ER at North Las Vegas	0	0	0	0	8
*ER at Valley Vista	0	0	0	0	56
*ER at West Craig	0	0	0	0	32
Elite Medical Center	0	0	0	0	6
Henderson Hospital	277	130	284	425	449
*Henderson Hospital - ER at Green Valley Ranch	60	27	29	31	22
Mesa View Regional Hospital	22	3	59	49	50
*Mountain View - ER at Aliante	15	2	26	21	27
*Mountain View - ER at Skye Canyon	0	0	11	10	9
Mountain View Hospital	497	358	700	754	717
North Vista Hospital	10	3	5	5	8
*Southern Hills - ER at South Las Vegas Blvd.	0	0	17	26	26
*Southern Hills - ER at the Lakes	7	0	13	31	33
Southern Hills Hospital Medical Center	131	8	295	347	411
*Spring Valley - ER at Blue Diamond	19	7	35	68	39
Spring Valley Hospital Medical Center	399	328	655	785	640
St. Rose Dominican Hospital - Blue Diamond	14	6	35	35	45
*St. Rose Dominican Hospital - De Lima Campus	86	61	104	103	104
*St. Rose Dominican Hospital - North Las Vegas	18	14	70	64	86
St. Rose Dominican Hospital - San Martin Campus	75	43	144	157	176
*St. Rose Dominican Hospital - West Flamingo	4	3	25	25	20
*St. Rose Dominican Hospital - West Sahara	10	4	35	47	49
Summerlin Hospital Medical Center	173	202	480	502	619
Valley Hospital Medical Center	18	14	41	16	17
All	2078	1357	3507	3966	4181
Source: State Trauma Registry data					
*Free-Standing Remote ER					

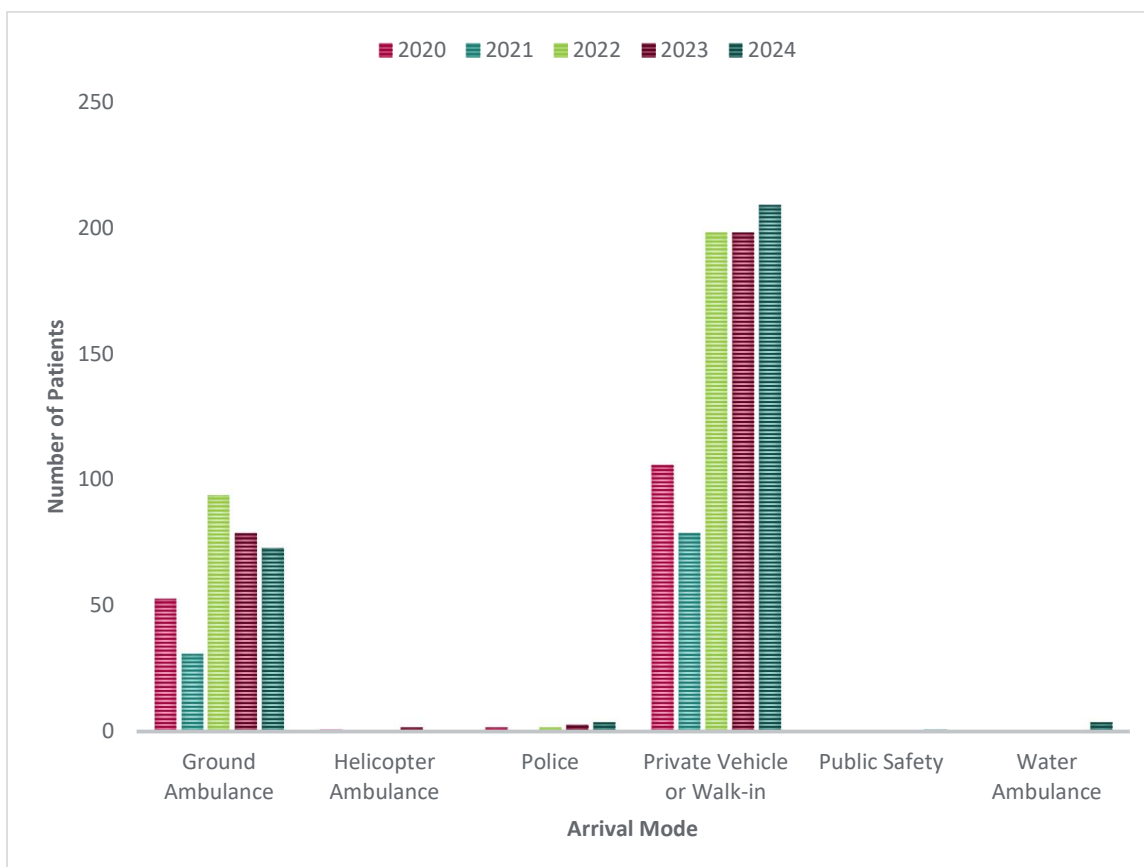
Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital who were Transferred to a Trauma Hospital with an Injury Severity (ISS) >15 by Facility in Southern Nevada, 2020-2024

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital who were Transferred to a Trauma Hospital with an Injury Severity Score (ISS) > 15 by Facility in Southern Nevada, 2020-2024					
	2020	2021	2022	2023	2024
Boulder City Hospital	1	0	1	0	0
Centennial Hills Hospital	4	8	13	11	23
*Desert Springs Hospital Medical Center	0	1	1	1	4
*ER at Valley Vista	0	0	0	0	1
Henderson Hospital	1	1	1	0	1
*Henderson Hospital - ER at Green Valley	1	0	1	1	0
Mesa View Regional Hospital	0	0	0	2	6
*Mountain View Hospital - ER at Aliante	1	0	0	0	0
*Mountain View Hospital - ER at Skye Canyon	0	0	2	0	0
Mountain View Hospital	2	1	3	1	0
North Vista Hospital	108	65	153	137	148
*Southern Hills Hospital - ER at the Lakes	1	0	0	1	0
Southern Hills Hospital Medical Center	1	0	0	1	0
*Spring Valley Hospital - ER at Blue Diamond	0	0	0	1	0
Spring Valley Hospital Medical Center	0	1	0	2	2
St. Rose Dominican Hospital - Blue Diamond	0	0	0	9	4
*St. Rose Dominican Hospital - De Lima Campus	0	2	0	1	0
*St. Rose Dominican Hospital - North Las Vegas	0	0	8	15	13
St. Rose Dominican Hospital - San Martin Campus	0	0	3	3	4
*St. Rose Dominican Hospital - West Flamingo	0	0	3	1	6
*St. Rose Dominican Hospital - West Sahara	0	0	2	7	2
Summerlin Hospital Medical Center	3	3	29	12	7
Valley Hospital Medical Center	4	1	3	6	5
All	127	83	223	212	226
Source: State Trauma Registry data					
*Free-Standing Remote ER					

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital who were Transferred to a Trauma Hospital with an Injury Severity (ISS) ≤ 15 by Facility in Southern Nevada, 2020-2024

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital who were Transferred to a Trauma Hospital with an Injury Severity Score (ISS) ≤ 15 by Facility in Southern Nevada, 2020-2024					
	2020	2021	2022	2023	2024
Boulder City Hospital	25	11	43	31	23
Centennial Hills Hospital	27	29	57	57	51
*Desert Springs Hospital Medical Center	23	19	40	27	11
*ER at Cadence	0	0	0	0	3
*ER at North Las Vegas	0	0	0	0	7
*ER at Valley Vista	0	0	0	0	12
*ER at West Craig	0	0	0	0	7
Elite Medical Center	0	0	0	0	6
Henderson Hospital	61	44	90	75	88
*Henderson Hospital - ER at Green Valley	23	7	15	18	13
Mesa View Regional Hospital	6	1	23	21	15
*Mountain View Hospital - ER at Aliante	6	1	11	0	2
*Mountain View Hospital - ER at Skye Canyon	0	0	2	0	1
Mountain View Hospital	32	24	56	17	7
North Vista Hospital	10	3	5	5	8
*Southern Hills Hospital - ER at South Las Vegas Blvd.	0	0	9	1	0
*Southern Hills Hospital - ER at the Lakes	6	0	5	5	1
Southern Hills Hospital Medical Center	22	7	50	2	2
*Spring Valley Hospital - ER at Blue Diamond	10	2	19	24	14
Spring Valley Hospital Medical Center	42	41	71	72	54
St. Rose Dominican Hospital - Blue Diamond	12	3	30	27	30
*St. Rose Dominican Hospital - De Lima Campus	65	46	77	75	79
*St. Rose Dominican Hospital - North Las Vegas	16	12	61	54	64
St. Rose Dominican Hospital - San Martin Campus	0	0	35	60	73
*St. Rose Dominican Hospital - West Flamingo	3	1	21	15	10
*St. Rose Dominican Hospital - West Sahara	8	4	27	35	37
Summerlin Hospital Medical Center	25	52	93	82	85
Valley Hospital Medical Center	18	14	41	16	17
All	440	321	881	719	720
Source: State Trauma Registry data					
*Free-Standing Remote ER					

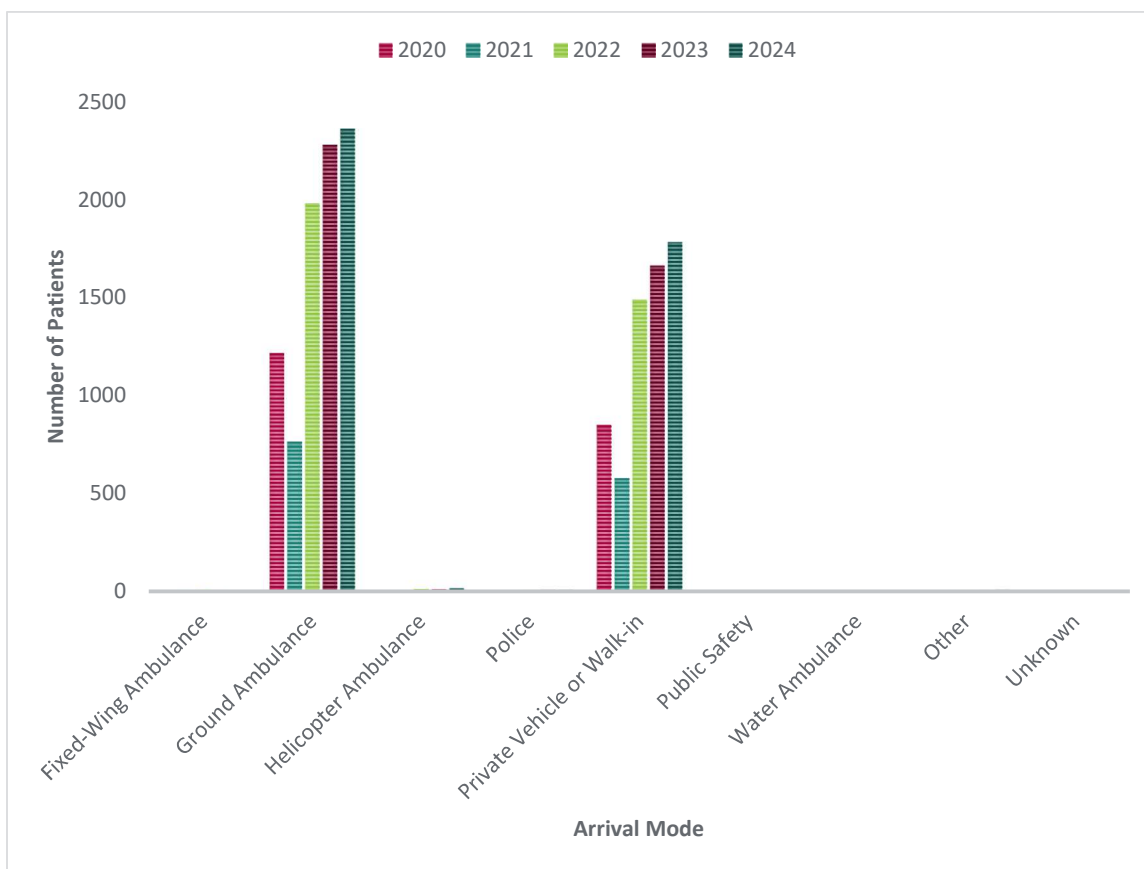
Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) >15 by Arrival Mode in Southern Nevada, 2020-2024



Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) > 15 by Arrival Mode in Southern Nevada, 2020-2024

	2020	2021	2022	2023	2024
Ground Ambulance	53	31	94	79	73
Helicopter Ambulance	1	0	0	2	0
Police	2	0	2	3	4
Private Vehicle or Walk-in	106	79	198	198	209
Public Safety	0	0	0	0	1
Water Ambulance	0	0	0	0	4
All	162	110	294	282	291
Source: State Trauma Registry data					

Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) ≤15 by Arrival Mode in Southern Nevada, 2020-2024

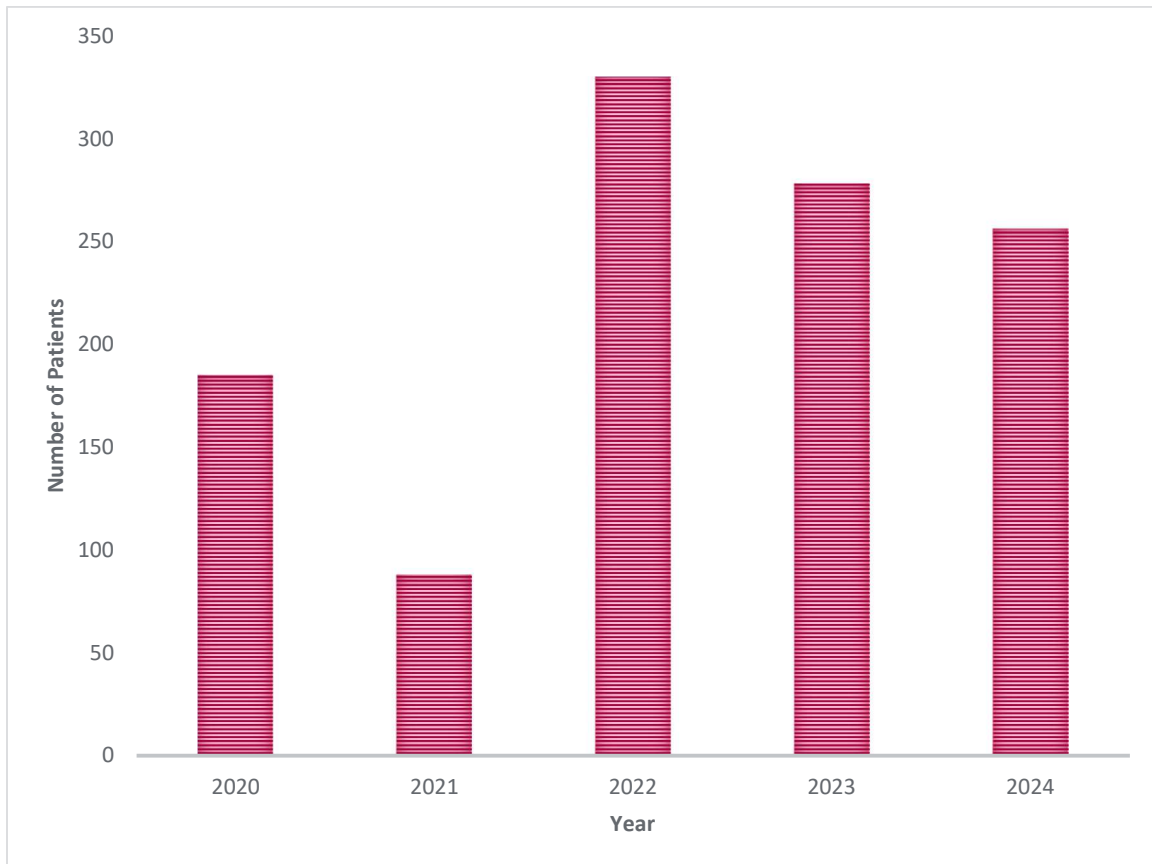


Number of Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) ≤ 15 by Arrival Mode in Southern Nevada, 2020-2024

	2020	2021	2022	2023	2024
Fixed-Wing Ambulance	0	1	7	1	1
Ground Ambulance	1219	768	1982	2281	2363
Helicopter Ambulance	4	3	15	11	19
Police	2	2	6	6	7
Private Vehicle or Walk-in	853	581	1491	1664	1784
Public Safety	0	0	1	0	0
Water Ambulance	0	0	1	0	0
Other	0	2	3	3	6
Unknown	0	0	1	0	1
All	2078	1357	3507	3966	4181

Source: State Trauma Registry data

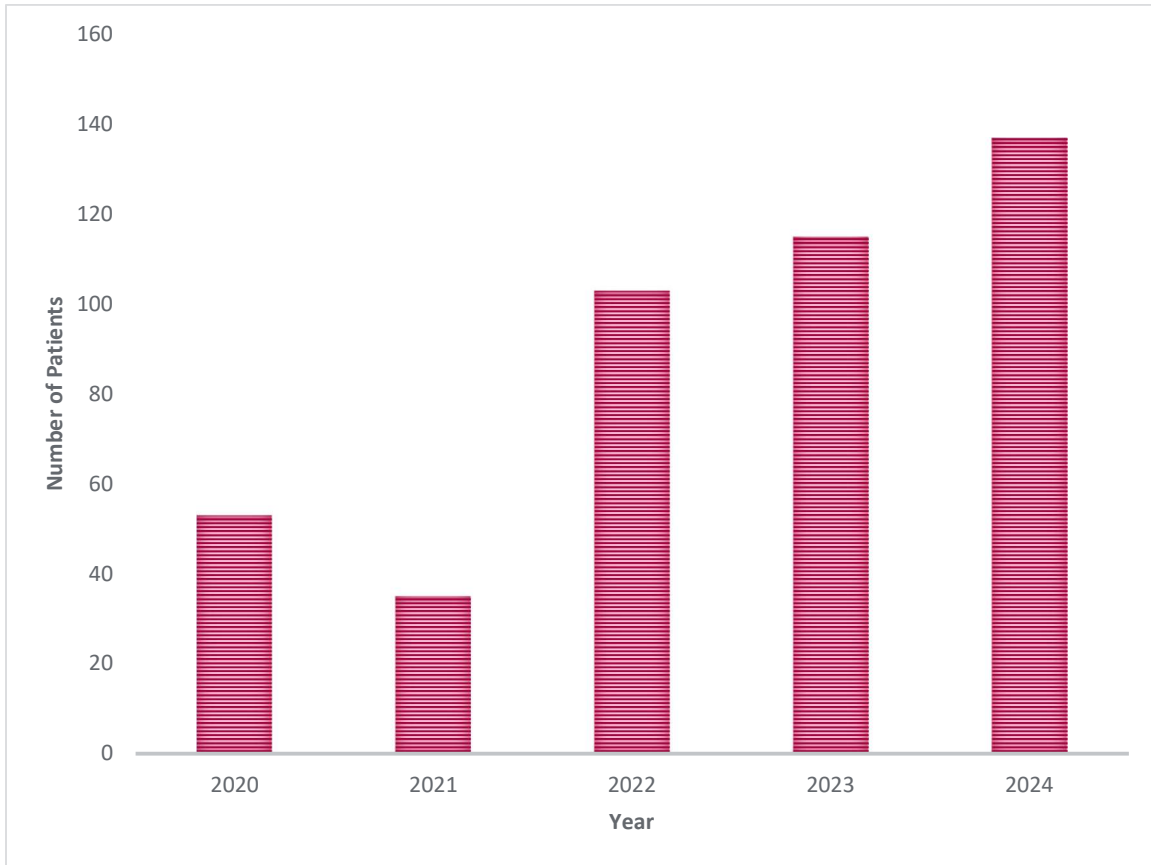
Number of Deceased Patients Meeting Trauma Criteria at a Trauma Hospital with an Injury Severity Score (ISS) >15 in Southern Nevada, 2020-2024



Number of Deceased Patients Meeting Trauma Criteria at a Trauma Hospital with an Injury Severity Score (ISS) >15 in Southern Nevada, 2020-2024

	2020	2021	2022	2023	2024
All	185	88	330	278	256
<i>Source: State Trauma Registry data</i>					

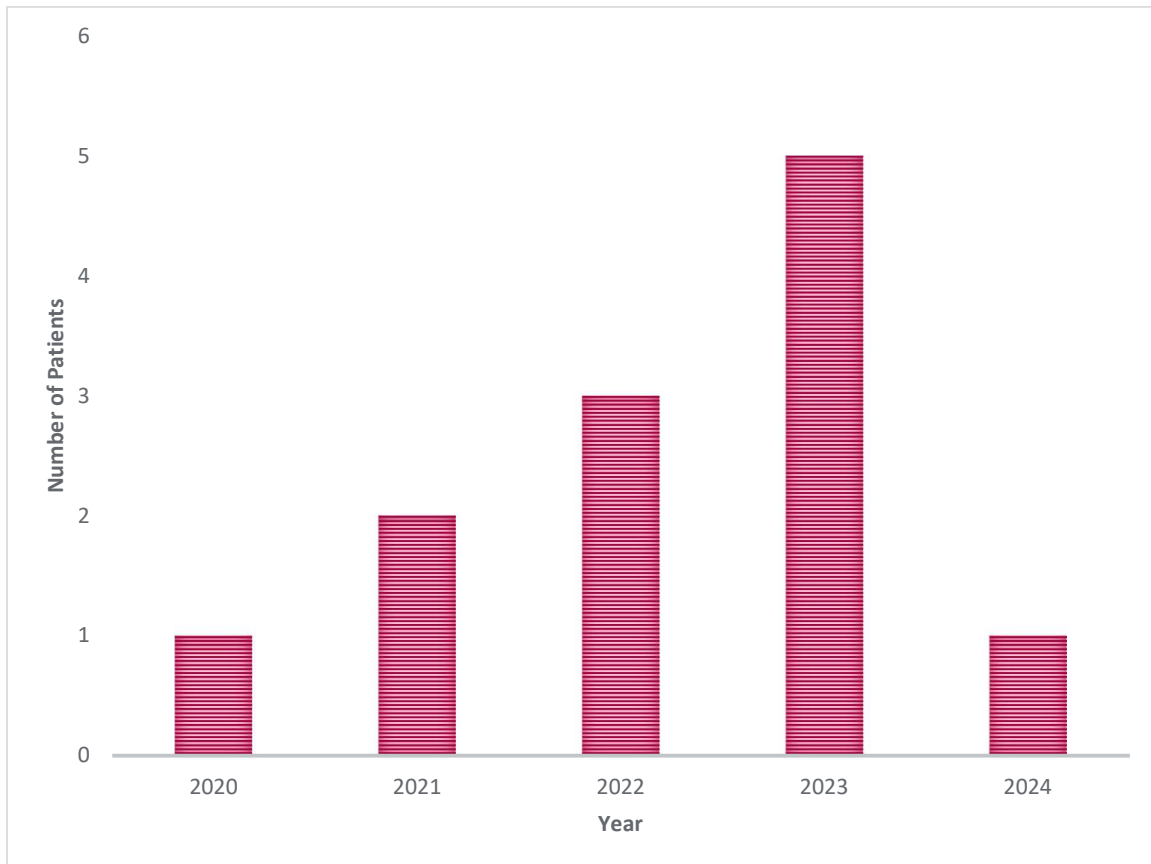
Number of Deceased Patients Meeting Trauma Criteria at a Trauma Hospital with an Injury Severity Score (ISS) ≤ 15 in Southern Nevada, 2020-2024



Number of Deceased Patients Meeting Trauma Criteria at a Trauma Hospital with an Injury Severity Score (ISS) ≤ 15 in Southern Nevada, 2020-2024

	2020	2021	2022	2023	2024
All	53	35	103	115	137
<i>Source: State Trauma Registry data</i>					

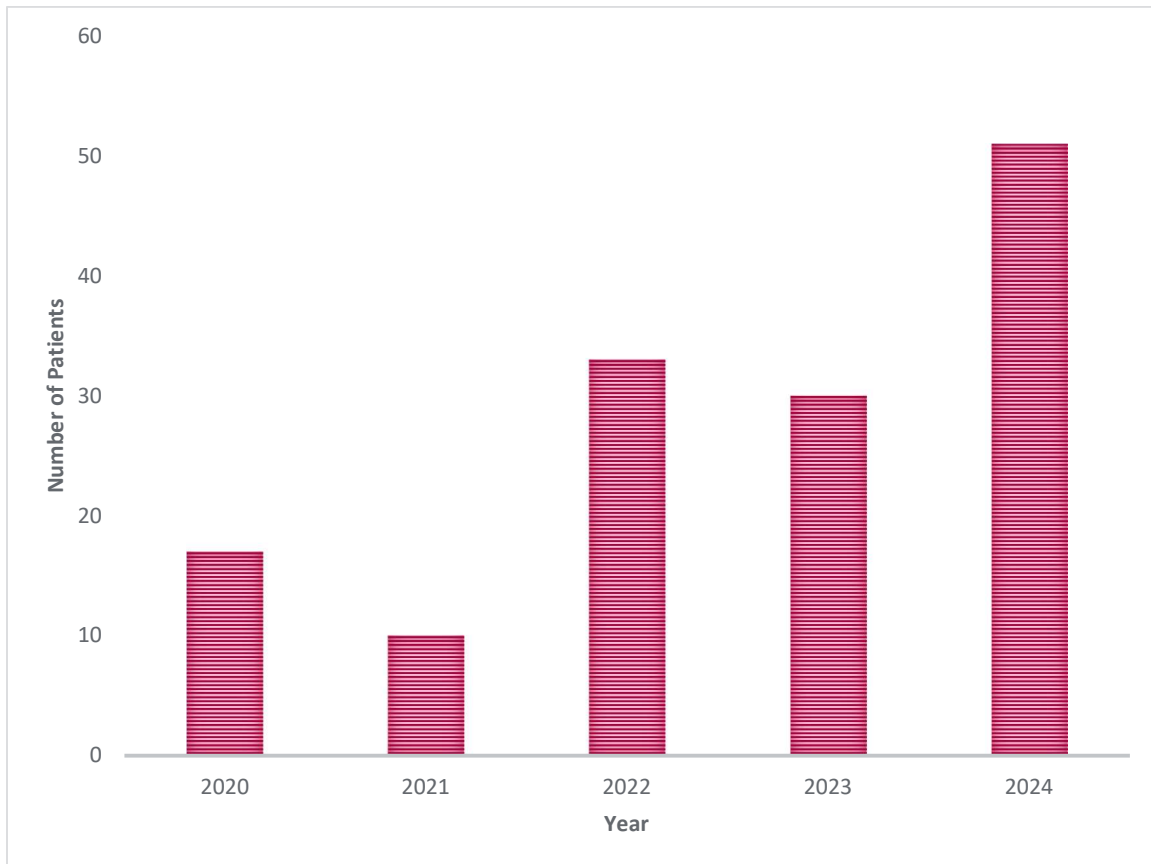
Number of Deceased Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) >15 in Southern Nevada, 2020-2024



Number of Deceased Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) >15 in Southern Nevada, 2020-2024

	2020	2021	2022	2023	2024
All	1	2	3	5	1
Source: State Trauma Registry data					

Number of Deceased Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) ≤ 15 in Southern Nevada, 2020-2024

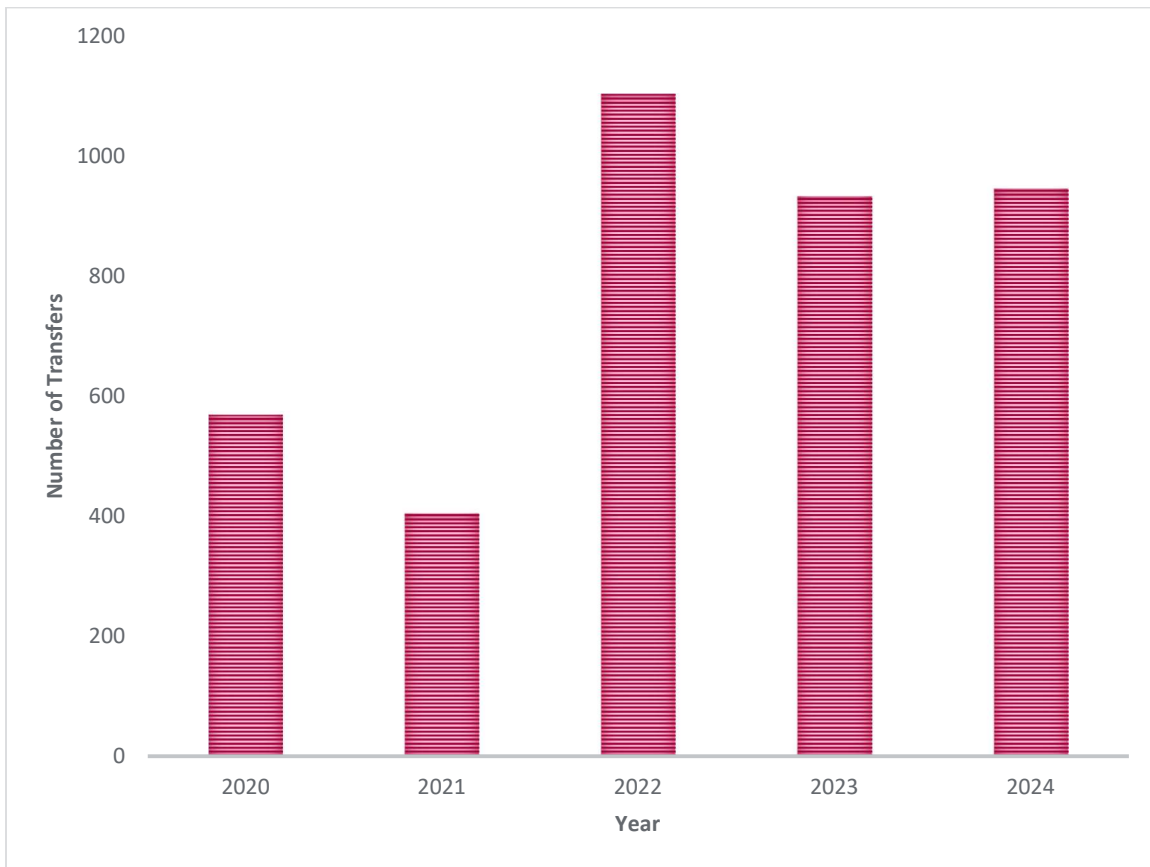


Number of Deceased Patients Meeting Trauma Criteria at a Non-Trauma Hospital with an Injury Severity Score (ISS) ≤ 15 in Southern Nevada, 2020-2024

	2020	2021	2022	2023	2024
All	17	10	33	30	51

Source: State Trauma Registry data

Transfers to Southern Nevada Trauma Centers from Non-Trauma Centers, 2020-2024



Transfers into Southern Nevada Trauma Centers from Non-Trauma Centers, 2020-2024

	2020	2021	2022	2023	2024
All	569	405	1104	933	946

Source: State Trauma Registry data

Emergency Department and Trauma Center Hours, 2020-2024

Intent

Southern Nevada's inclusive trauma system includes designated Trauma Centers and Non-Trauma Center Hospitals (Emergency Departments). Traditionally, Emergency Departments (ED) met the demands of trauma-related injuries. Trauma Centers were developed to provide an expedited resource for the optimal care of trauma patients. When there is a designated Trauma Center, the trauma system is designed to transport the patient to the most appropriate destination, bypassing EDs that may be closer. Most Trauma Centers are integrated into EDs but function separately. All hospitals (EDs & Trauma Centers) must develop protocols to manage a crisis that may require closure. The crisis may be that capacity is met, and no additional patients can be received, or that an internal disaster/failure (e.g., infrastructure, technology, medical professionals) requires closure. The protocols developed to manage the closure of an ED and Trauma Center are separate. An ED may declare it is on Internal Disaster, but that declaration would never include the Trauma Center. A Trauma Center, even if an integrated part of an ED, will remain open and be able to receive trauma patients while the ED is closed. When a Trauma Center closes, it is called Trauma Bypass. It is rare for a Trauma Center to close. As part of the ACS-COT verification process, a Trauma Center must not be on bypass more than 5 percent of the time.

Definitions specific to Southern Nevada Trauma System and Emergency Medical System:

Trauma Bypass- Closure of a Trauma Center. If Trauma Bypass, which is a mandated reported requirement, the center cannot take patients. All EMS agencies can view this real-time status via telemetry. The time spent on trauma bypass is regularly reviewed at TMAC and is part of ACS-COT criteria.

Internal Disaster- Closure of an Emergency Department. If on Internal Disaster, the ED is not able to take patients. All EMS agencies can view this real-time status via telemetry.

Operational Hours for Emergency Departments and Trauma Centers, 2020-2024

* Source: Juvare EMS Data System

University Medical Center					
	2020	2021	2022	2023	2024
ED Open Total Hours	8634	8510	8518	8440	8517
ED Closed Total Hours	149	250	242	320	267
ED % of Total Hours Open	98%	97%	97%	96.3%	97.0%
Trauma Center Bypass Event Hours	0	0	0	0	0
Trauma Center % Open	100%	100%	100%	100%	100%

Sunrise Hospital					
	2020	2021	2022	2023	2024
ED Open Total Hours	8784	8760	8760	8760	8784
ED Closed Total Hours	0	0	0	0	0
ED % of Total Hours Open	100%	100%	100%	100%	100%
Trauma Center Bypass Event Hours	0	0	0	0	0
Trauma Center % Open	100%	100%	100%	100%	100%

St. Rose Siena					
	2020	2021	2022	2023	2024
ED Open Total Hours	8400	8188	8480	8708	8783
ED Closed Total Hours	383	572	280	52	1
ED % of Total Hours Open	95%	94%	97%	99.4%	99.99%
Trauma Center Bypass Event Hours	0	0	0	0	0
Trauma Center % Open	100%	100%	100%	100%	100%

Michael O'Callaghan					
	2020	2021	2022	2023	2024
ED Open Total Hours	N/A	N/A	8732	8746	8745
ED Closed Total Hours	N/A	N/A	28	14	39
ED % of Total Hours Open	N/A	N/A	99%	99.8%	99.6%
Trauma Center Bypass Event Hours	N/A	N/A	0	15	35
Trauma Center % Open	N/A	N/A	100%	99.8%	99.6%

Southern NV Hospitals					
	2020	2021	2022	2023	2024
ED Open Total Hours	236k	243k	269k	262k	278K
ED Closed Total Hours	1330	3073	2245	3639	648
ED % of Total Hours Open	99%	98%	99%	98.6%	99.8%
Trauma Centers Bypass Event Hours	0	0	0	15	35
Trauma Centers % Open	100%	100%	100%	99.9%	99.9%

Trauma Medical Audit Committee

The Trauma Medical Audit Committee (TMAC) is a multidisciplinary, closed medical peer review committee of the District Board of Health that meets quarterly. Its purpose is to evaluate the Southern Nevada trauma system by reviewing trauma care, monitoring trends, and recommending system improvements.

For 2024, the Audit Committee has completed its review of the annual report. We have examined the data over the five-year period and are satisfied with the overall accuracy and completeness of the information.

- TMAC did not identify any significant variances from established trauma protocols or regulations.
- TMAC did not observe any delays in trauma care services.
- No aberrations were observed in out-of-hospital deaths or prehospital services.

However, during the five-year period, we have observed possible changes in system performance trends, specifically related to mortality in non-trauma center hospitals. We are actively analyzing the data to better understand these developments and will continue to monitor the situation closely to determine any necessary follow-up actions.

We commend all involved in compiling this report and remain committed to promoting transparency, accountability, and continuous improvement within the trauma system.

Lisa Rogge, RN

TMAC Chair

Appendix A: Trauma Field Triage Criteria

Trauma Field Triage Criteria

RED INJURY PATTERNS

- Penetrating injuries to head, neck, torso, and proximal extremities
- Skull deformity, suspected skull fracture
- Suspected spinal injury with new motor or sensory loss
- Chest wall instability, deformity, or suspected flail chest
- Suspected pelvic fracture
- Suspected fracture of two or more proximal long bones
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Active bleeding requiring a tourniquet or wound packing with continuous pressure

RED MENTAL STATUS & VITAL SIGNS

All Patients

- Unable to follow commands (GCS Motor <6)
- RR <10 or > 29 breaths/min
- Respiratory distress or need for respiratory support
- Room-air pulse oximetry < 90%
- The following vital signs fall into Red criteria when found in the presence of traumatic mechanism:
 - Age 0-9 years
 - SBP < 70 mm Hg + (2 x age years)
 - Age 10-64 years
 - SBP < 90 mm Hg or
 - HR > SBP
 - Age > 65 years
 - SBP < 110 mm Hg or
 - HR > SBP

YELLOW MECHANISM OF INJURY

- High-Risk Auto Crash:
 - Partial or complete ejection
 - Significant intrusion (including roof) of >12 inches on occupant site OR >18 inches on any site OR need for extrication for entrapped patient
 - Death in passenger compartment
 - Child (Age 0-9) unrestrained or in unsecured child safety seat
 - Vehicle telemetry data consistent with severe injury
- Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc)
- Pedestrian/bicycle rider thrown, run over, or with significant impact
- Fall from height > 10 feet (all ages)

YELLOW EMS JUDGMENT

Consider risk factors, including:

- Low-level falls in young children (age 5 or less) or older adults (age 65 or older) with suspected head injury
- Anticoagulant/Antiplatelet use
- Suspicion of child abuse
- Special, high-resource healthcare needs
- Pregnancy > 20 weeks

If concerned, take to a trauma center

