1/25/2024

GEORGIA TRAUMA REGISTRY

2022 ANNUAL REPORT

GEORGIA DEPARTMENT OF PUBLIC HEALTH

CONTENTS

INTRODUCTION

The Georgia Trauma Annual Report 2022 is a demographic epidemiological analysis of the Georgia Trauma Registry data from the Georgia Quality Improvement Program (GQIP) central site for the year 2022 based on data downloaded on Aug 16, 2023. The Designated Trauma Centers (DTC) in Georgia participate in the National Trauma Data Bank (NTDB). In 2022, Georgia had 33 DTC; 6 facilities were designated at Level I, 10 were Level II, 8 were Level III, and 9 were designated at Level IV. Included in facility totals are one Level I pediatric facility and two Level II pediatric facilities. 2022 data records were chosen if the field of 'Stateinclusion' is 'True'; A total of 39,060 trauma cases were reported in 2022 from 32 DTC in Georgia (One Level III Trauma Center did not upload 2022 data).

Facility information such as trauma levels is provided to allow readers to have an overall picture of the Georgia Designated Trauma Centers (Appendix 1). Trauma registry criteria are provided in the Appendix 2. This report provides analysis of time to definitive care, patient's demographic information, injury characteristics, payment sources, intents, mortality, and outcomes.

The mission of the Georgia trauma system is to save lives and provide the best possible outcomes through improved trauma care and injury prevention. The Georgia Trauma Registry is dedicated to collect trauma data and provide useful information to benefit the public health of Georgia's citizens.

The purpose of this report is to inform the medical community, the public, and the decision makers about issues that characterize the most recent state of care for trauma patients. Implications of this report are wide in areas including epidemiology, injury prevention, research, education, acute care, resource allocation, and policy decision.

The Georgia Department of Public Health, Office of EMS and Trauma would like to thank all the trauma centers that contributed data. We appreciate GQIP providing us the data source. Many thanks go to the Georgia trauma coordinators, trauma registrars and staff for their great efforts in collecting data and improving data quality.

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VISION, MISSION, CORE VALUES

VISION

A Healthy and Safe Georgia – exceptional patient outcomes through comprehensive, statewide, integrated, data–driven, equitable, and people–centered Emergency Medical Services and time–sensitive systems of care.

MISSION

The mission of the Georgia Office of EMS and Trauma is to reduce death and disability by providing regulation, guidance, and leadership to enable the assessment, planning, development, and promotion of statewide Emergency Medical Services and time–sensitive systems of care.

CORE VALUES

DPH's workforce is guided by the following core values in carrying out our public health work:

- **People** – We value our employees as professional colleagues. We treat our customers, clients, partners, and those we serve with respect by listening, understanding, and responding to needs.
- **Excellence** - Commitment, accountability, and transparency for optimal efficient, effective, and responsive performance.
- **Partnership** – Internal and external teamwork to solve problems, make decisions, and achieve common goals.
- **Innovation** – New approaches and progressive solutions to problems. Embracing change and accepting reasonable risk.
- **Science** – The application of the best available research, data and analysis leading to improved outcomes.

SUMMARY

HOSPITALS

31 designated trauma hospitals submitted data in 2022.

- 5 Level I adult centers
  - 1 Level I pediatric center.
- 8 Level II adult centers
  - 2 Level II pediatric centers.
- 8 Level III adult centers.
- 9 Level IV adult centers.

Note:
Augusta University Hospital is a level I adult center with an additional level II pediatric center designation. The facility submitted data as one trauma hospital, and the frequency is counted as from level I.

One Level III Trauma Center did not submit data in 2022.

AGE

- The frequency of injuries initially peak in ages 21 to 32, primarily from MVT-related incidents, and peak again between the ages of 61 and 85, when falls begin to increase.
- Fall-related injuries spike in children aged 0-8 and adults over the age of 66.
- Males account for 68.1% of all incidents up to age 66; after age 66, most patients are female.

MECHANISM OF INJURY

The mechanism of injury is based on NTDB published reference 'External Cause of Injury Matrix and Trauma Type Map (https://www.facs.org/quality-programs/trauma/tqp/center-programs/ntdb).

- Falls account for 47.4% of cases in the registry data. The frequency of Fall related injuries increases in children under age 8 and adults over the age of 66.
- Motor vehicle traffic related (MVT) injuries account for 27.5% of cases in the registry data. The frequency of MVT injuries peak between age 17 to 32.
- Firearm injuries account for 8.0% of cases in the registry data and peak between age 16 to 23.
- Suffocation and firearm injuries have the highest case fatality rates, with suffocation at 37.5% and firearm at 15.9%.

INJURY SEVERITY SCORE

The Injury Severity Score (ISS) is a system for numerically stratifying injury severity. The ISS system has a range of 1-75, and injury severity increases with a higher score. This report groups ISS 1-8 as minor; 9-15 as moderate; 16-24 as severe; and greater than 24 as very severe.

- Almost half (42.4%) of the trauma registry patients suffered minor injuries and about one-third (39.3%) have moderate injuries.
- Case fatality rates increase with injury severity, with the most severe group experiencing a case fatality rate of almost 29.4%.
- Median Length of Stay (LOS) increases for each consecutive severity grouping.
- Median Ventilator Days increase for each consecutive severity grouping when ISS was not more than 24; severe group and very severe group were on the ventilator for the same number of median days.
- Median Intensive Care Unit (ICU) Days increase for each consecutive severity grouping when ISS was more than 8; minor group and moderate group were in the ICU for the same number of median days.

MORTALITY

- The overall mortality rate is 4.3%.
- Case fatality rates are highest in the patient age group 20-24.
- The male case fatality rate (5.4%) is much higher than female case fatality rate (2.8%).
- The largest number of deaths is caused by motor vehicle traffic injuries, followed by fall injuries and firearm injuries.
- Firearm and suffocation have the highest case fatality rates.
- Firearm injuries have the highest case fatality rate at 15.9% among the selected mechanisms (top six) shown in the report.

PAYMENT

- Medicare is the largest payment source at 31.6%.
- Private/Commercial insurance is the second largest category at 17.8%.
- Self-Pay is the third largest category at 16.1%.
- Medicaid is the fourth largest category at 14.7%.

FACILITY INFORMATION

All facilities seeking designation status are expected to meet specific criteria as set forth by the Department of Public Health, Office of EMS and Trauma (OEMST). The department utilizes the document, "Resources for Optimal Care of the Injured Patient", published by the American College of Surgeons. All designated hospitals must submit trauma registry data to the OEMST and maintain a performance improvement process with thorough documentation.

LEVEL I TRAUMA FACILITY

The highest level of trauma center designation offers the greatest level of comprehensive trauma care, from prevention through rehabilitation. Level I facilities have the major responsibility for leading in trauma education, research, and planning. Facilities that meet Level I criteria will be academic facilities.

LEVEL II TRAUMA FACILITY

The second level of trauma center designation offers the same level of clinical care as a Level I, but usually does not have the focus on research, education, and systems planning. Some patients with very complex injuries, such as replantation, may require transfer to a Level I center.

LEVEL III TRAUMA FACILITY

The third level of trauma center designation provides trauma assessment, resuscitation, emergency surgery, stabilization, and if needed, transfer of patients requiring more definitive care to Level I or II centers. Well trained emergency department physicians and general surgeons are required.

LEVEL IV TRAUMA FACILITY

The fourth level of trauma center designation provides advanced trauma life support and stabilization of patients received in their facility. Well trained mid-level providers may assist to expedite the transfer of patients requiring more definitive care to Level I or II centers. Level IV centers may be a clinic or hospital in a remote or rural area and may or may not have a physician available 24 hours a day.

DATA TABLES AND FIGURES

Table 1: Facilities by Level

More than half of the designated trauma facilities are either a Level III or Level IV trauma center.

Level	Number	Percent
I	6	18.8
II	9	28.1
III	8	25.0
IV	9	28.1
Total	32	100.0

Table 2: Incidents by Facility Level

About 86.6% trauma patients were treated in a Level I or Level II trauma facilities.

Level	Number	Percent
I	19,359	49.6
II	14,456	37.0
III	3,535	9.1
IV	1,710	4.4
Total	39,060	100.0

Figure 1: Facilities by Level

This chart represents the overall counts of facilities by designation level.

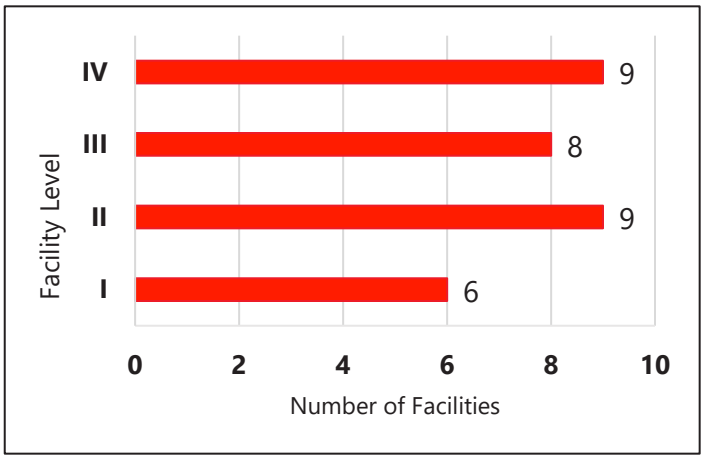


Figure 2A: Incidents by Facility Level

This chart represents the overall counts of facilities by designation level.

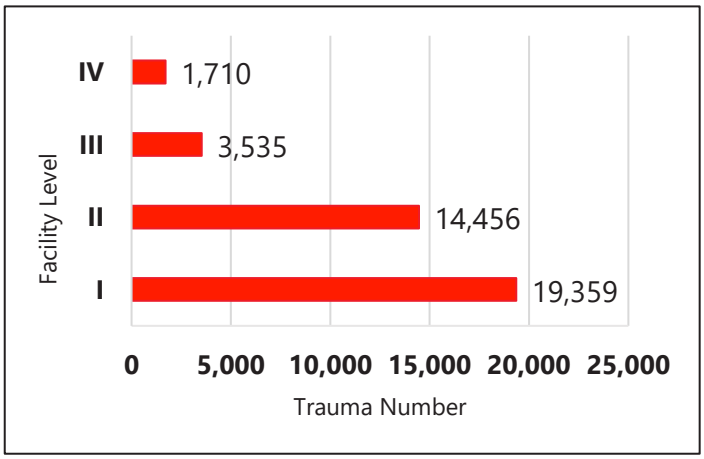
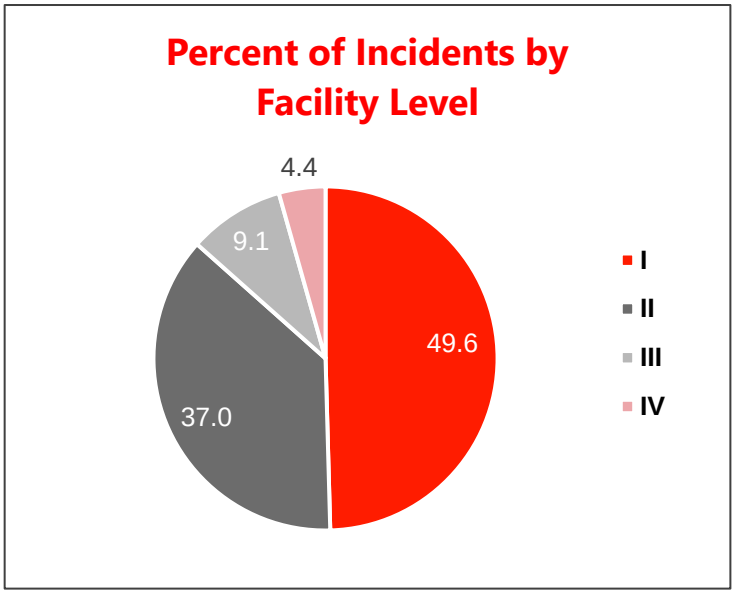


Figure 2B: Percent of Incidents by Facility Level

This graph represents the percentage of incidents by facility designation level.



PREHOSPITAL INFORMATION

The goal of the Emergency Medical Services (EMS) system is to prevent further injury, initiate resuscitation, and provide safe and timely transport of the injured patient. Patients should be transported directly to the center most appropriately equipped and staffed to handle the patient's injuries. The tables and graphs in this section display data indicating where patients came from before arriving at a designated trauma center.

Table 3: Incidents by EMS Region

The frequency of trauma patients in Table 3 represents the number of patients treated in designated trauma centers located in different EMS regions. Facilities in EMS Region 3 treated the most trauma patients (46.5%).

EMS Region	Frequency	Percent
R1	2,870	7.4
R2	2,207	5.7
R3	18,155	46.5
R4	797	2.0
R5	4,056	10.4
R6	2,996	7.7
R7	1,211	3.1
R8	721	1.9
R9	3,937	10.1
R10	2,110	5.4
Total	39,060	100.0

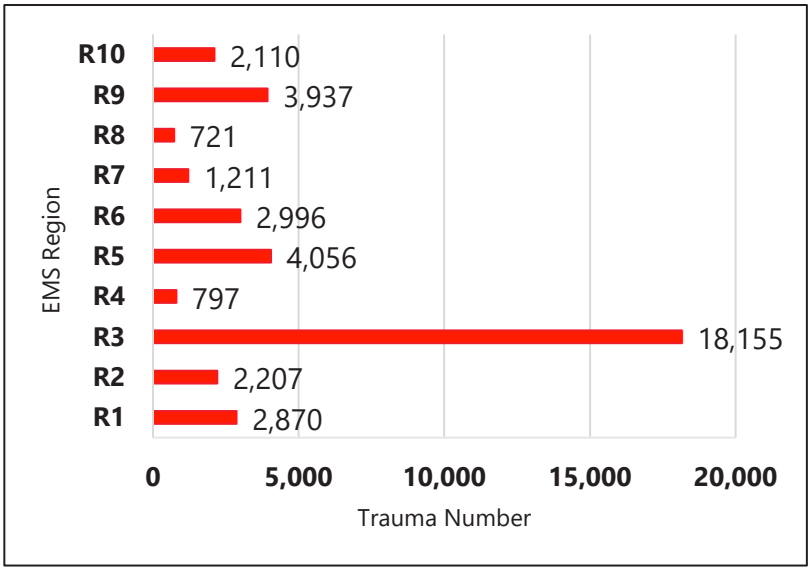
Table 4: Frequency of Patients by the Location the Patient Arrived from and ISS Groups

Among 39,060 records, 26,333 were linked with pre-hospital provider data; Among these 26,333 records, 20,523 were not linked with referral data and grouped as S group (from Scene); 5,810 were linked with referral data and grouped as R group (from referral hospital). The table represents the counts of patients by the groups and Injury Severity Score groups.

Frequency	ISS<=15	ISS>15	Total	Percent
S Group	16,320	4,203	20,523	52.5
R Group	4,493	1,317	5,810	14.9
Not Applicable	11,283	1,444	12,727	32.6
Total	32,096	6,964	39,060	100.0

Figure 3: Incidents by Destination EMS Region

This chart represents the overall counts of incidents by destination EMS region.



TIME TO DEFINITIVE CARE ANALYSIS PART I

The time to definitive care analysis is presented in two parts. The first part represents the cases involving medical transport from the scene of injury to the hospital emergency department where the patient received definitive trauma care. In the trauma registry data, 20,523 cases (52.5%) reported the patient arrived from the 'Scene' of the injury, which are the original data sources for **Scene Group** (S Group).

The second part represents the cases involving the patient being referred to a second hospital for definitive trauma care. Additionally, 5,810 cases (14.9%) reported the patient arrived from a 'Referring Hospital', which are the original data sources for **Referring Group** (R Group).

For Patients from the 'Scene' of the Injury: S Group

There are 39,060 cases reported in year 2022. Among these 39,060 cases, 26,333 cases were linked with Prehospital Provider data. Among these 26,333 cases, 20,523 cases were not linked with referral data and were transported from Scene to Facility. These 20,523 cases are the data sources of the S Group.

Time from EMS Dispatch Time to EMS Scene Arrival Time (Tables 5A1, 5A2, 5A3)

Among these 20,523 cases, 19,132 cases (93.2%) have valid values in the four fields: EMS Dispatch Date, EMS Dispatch Time, EMS Scene Arrival Date, and EMS Scene Arrival Time. Among these 20,523 cases, 6.8% of the cases have missing data in at least one of the four fields. The data in the 19,132 cases is used to calculate the median time from EMS Dispatch to EMS Scene Arrival.

Time from EMS Scene Arrival Time to EMS Scene Departure Time (Tables 5B1, 5B2, 5B3)

Among these 20,523 cases, 19,015 cases (92.7%) have valid values in the four fields: EMS Scene Arrival Date, EMS Scene Arrival Time, EMS Scene Departure Date, and EMS Scene Departure Time. Among these 20,523 cases, **7.3% of the cases have missing data in at least one of the four fields.** The data from these 19,015 cases is used to calculate the median time from EMS Scene Arrival Time to EMS Scene Departure Time.

Time from EMS Scene Departure Time to Hospital Emergency Department (ED) Arrival Time (Tables 5C1, 5C2, 5C3)

Among these 20,523 cases, 19,020 cases (92.7%) have valid values in the four fields: EMS Scene Departure Date, EMS Scene Departure Time, ED Arrival Date, and ED Arrival Time. Among these 20,523 cases, **7.3% of the cases have missing data in at least one of the four fields.** The data from these 19,020 cases is used to calculate the median time from EMS Scene Departure Time to the Hospital ED Arrival Time.

Time from EMS Dispatch Time to Hospital ED Arrival Time (Tables 5D1, 5D2, 5D3)

Among these 20,523 cases, 19,155 cases (93.3%) have valid values in the four fields: EMS Dispatch Date, EMS Dispatch Time, ED Arrival Date, and ED Arrival Time. Among these 20,523 cases, **6.7% of the cases have missing data in at least one of the four fields.** The data from these 19,155 cases is used to calculate the median time from EMS Dispatch Time to Hospital ED Arrival Time.

Table 5A1: S Group, All ISS, Median Time from EMS Dispatch Time to EMS Scene Arrival Time

This chart represents the median overall time (HH:MM:SS) from EMS dispatch to EMS scene arrival for all Injury Severity Scores. The median total time from EMS dispatch time to EMS scene arrival time is 10 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	8,576	0:11:00
II	7,615	0:09:00
III	2,050	0:09:00
IV	891	0:10:00
Total	19,132	0:10:00

Table 5A2: S Group, ISS <=15, Median Time from EMS Dispatch Time to EMS Scene Arrival Time

This chart represents the median time for Injury Severity Scores less than or equal to 15 from EMS dispatch to EMS scene arrival time (HH:MM:SS) by hospital designation level.

Hospital Designation Level	Frequency	Median Total Time
I	6,389	0:11:00
II	6,172	0:09:00
III	1,908	0:09:00
IV	839	0:10:00
Total	15,308	0:10:00

Table 5A3: S Group, ISS >15, Median Time from EMS Dispatch Time to EMS Scene Arrival Time

This chart represents the median time for Injury Severity Scores greater than 15 from EMS dispatch to EMS scene arrival time (HH:MM:SS) by hospital designation level.

Hospital Designation Level	Frequency	Median Total Time
I	2,187	0:10:00
II	1,443	0:08:00
III	142	0:09:00
IV	52	0:07:30
Total	3,824	0:09:00

Table 5B1: S Group, All ISS, Median Time from EMS Scene Arrival Time to EMS Scene Departure Time

This chart represents the median overall time (HH:MM:SS) from EMS scene arrival to EMS scene departure for all Injury Severity Scores. The median total time from EMS scene arrival to EMS scene departure time is 18 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	8,489	0:19:00
II	7,587	0:17:00
III	2,048	0:19:00
IV	891	0:20:00
Total	19,015	0:18:00

Table 5B2: S Group, ISS<=15, Median Time from EMS Scene Arrival Time to EMS Scene Departure Time

This chart represents the median time for Injury Severity Scores less than or equal to 15 from EMS scene arrival time to EMS scene departure time (HH:MM:SS) by hospital designation level.

Hospital Designation Level	Frequency	Median Total Time
I	6,329	0:20:00
II	6,146	0:17:00
III	1,906	0:19:00
IV	839	0:20:00
Total	15,220	0:19:00

Table 5C1: S Group, All ISS, Median Time from EMS Scene Departure Time to Hospital ED Arrival Time

This chart represents the median overall time (HH:MM:SS) from EMS scene departure to Hospital ED arrival time for all Injury Severity Scores. The median total time from EMS scene departure to Hospital ED arrival time is 25 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	8,492	0:25:00
II	7,589	0:26:00
III	2,048	0:23:00
IV	891	0:22:00
Total	19,020	0:25:00

Table 5B3: S Group, ISS>15, Median Time from EMS Scene Arrival Time to EMS Scene Departure Time

This chart represents the median time for Injury Severity Scores greater than 15 from EMS scene arrival time to EMS scene departure time (HH:MM:SS) by hospital designation level.

Hospital Designation Level	Frequency	Median Total Time
I	2,160	0:17:00
II	1,441	0:15:00
III	142	0:19:00
IV	52	0:18:00
Total	3,795	0:16:00

Table 5C2: S Group, ISS<=15, Median Time from EMS Scene Departure Time to Hospital ED Arrival Time

This chart represents the median time for Injury Severity Scores less than or equal to 15 from EMS scene departure time to Hospital ED arrival time (HH:MM:SS) by hospital designation level.

Hospital Designation Level	Frequency	Median Total Time
I	6,332	0:26:00
II	6,148	0:27:00
III	1,906	0:23:00
IV	839	0:22:00
Total	15,225	0:26:00

Table 5C3: S Group, ISS>15, Median Time from EMS Scene Departure Time to Hospital ED Arrival Time

This chart represents the median time for Injury Severity Scores greater than 15 from EMS scene departure time to Hospital ED arrival time (HH:MM:SS) by hospital designation level.

Hospital Designation Level	Frequency	Median Total Time
I	2,160	0:23:00
II	1,441	0:22:00
III	142	0:16:30
IV	52	0:13:30
Total	3,795	0:22:00

Table 5D1: S Group, All ISS, Median Time from EMS Dispatch Time to Hospital ED Arrival Time

This chart represents the median overall time (HH:MM:SS) from EMS dispatch time to Hospital ED arrival time for all Injury Severity Scores. The median total time from EMS dispatch time to Hospital ED arrival time is 56 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	8,594	0:59:00
II	7,620	0:54:00
III	2,050	0:55:00
IV	891	0:55:00
Total	19,155	0:56:00

Table 5D2: S Group, ISS<=15, Median Time from EMS Dispatch Time to Hospital ED Arrival Time

This chart represents the median time for Injury Severity Scores less than or equal to 15 from EMS dispatch time to Hospital ED arrival time (HH:MM:SS) by hospital designation level.

Hospital Designation Level	Frequency	Median Total Time
I	6,400	1:01:00
II	6,177	0:55:00
III	1,908	0:55:00
IV	839	0:56:00
Total	15,324	0:58:00

Table 5D3: S Group, ISS>15, Median Time from EMS Dispatch Time to Hospital ED Arrival Time

This chart represents the median time for Injury Severity Scores greater than 15 from EMS dispatch time to Hospital ED arrival time (HH:MM:SS) by hospital designation level.

Hospital Designation Level	Frequency	Median Total Time
I	2,194	0:53:00
II	1,443	0:47:00
III	142	0:48:30
IV	52	0:46:00
Total	3,831	0:51:00

Table 5D4: S Group, ISS All, Median Time from EMS Dispatch Time to Hospital ED Arrival Time

In Destination EMS Region 5, the median total time from EMS Dispatch Time to Hospital ED Arrival Time is longest (59 minutes).

Destination EMS Region	Frequency	Median Total Time
1	1,739	0:55:00
2	1,297	0:55:00
3	9,216	0:57:00
4	527	0:55:00
5	1,937	0:59:00
6	515	0:52:00
7	646	0:48:00
8	149	0:47:00
9	1,712	0:56:00
10	1,417	0:56:00
Total	19,155	0:56:00

Table 5D5: S Group, ISS <=15, Median Time from EMS Dispatch Time to Hospital ED Arrival Time

In Destination EMS Regions 3 and 5, for Patients ISS <=15, the median total time from EMS Dispatch Time to Hospital ED Arrival Time is the longest (59 minutes).

Destination EMS Region	Frequency	Median Total Time
1	1,576	0:56:00
2	1,072	0:56:00
3	6,964	0:59:00
4	507	0:56:00
5	1,559	0:59:00
6	443	0:53:00
7	486	0:46:30
8	130	0:49:30
9	1,375	0:56:00
10	1,212	0:58:00
Total	15,324	0:58:00

Table 5D6: S Group, ISS >15, Median Time from EMS Dispatch Time to Hospital ED Arrival Time

In Destination EMS Regions 5, 9, and 10, for patients ISS >15, median total time from EMS Dispatch Time to Hospital ED Arrival Time is the longest (53 minutes).

Destination EMS Region	Frequency	Median Total Time
1	163	0:51:00
2	225	0:50:00
3	2,252	0:50:00
4	20	0:51:30
5	378	0:53:00
6	72	0:46:30
7	160	0:51:30
8	19	0:34:00
9	337	0:53:00
10	205	0:53:00
Total	3,831	0:51:00

Table 5D7: S Group, Median Time from EMS Dispatch Time to Hospital ED Arrival Time by ISS groups and Quarters

In Q1, the median total time (ISS all) is 1 minute longer than that in Q2, Q3, and Q4.

ISS	Q1 (Jan-Mar)	Q2 (Apr-Jun)	Q3 (Jul-Sep)	Q4 (Oct-Dec)	Total (Jan-Dec)
ISS <= 15	0:58:00	0:58:00	0:57:00	0:57:00	0:58:00
ISS > 15	0:51:00	0:50:00	0:52:00	0:51:00	0:51:00
Median Total Time	0:57:00	0:56:00	0:56:00	0:56:00	0:56:00

Table 5D8: S Group, All ISS, Median Time by EMS Region and Discharge Status

The table lists the counts of patients that were discharged alive or deceased with the corresponding median time to definitive care per EMS region. Trauma patients who survived their injuries in EMS region 5 had the longest median time to definitive care (0:59:00 HH:MM:SS). Trauma patients who died from their injuries in EMS region 6 had the longest median time to definitive care (0:57:00 HH:MM:SS).

Hospital Destination EMS Region	Discharge Status	Frequency	Median Total Time
1	Alive	1,667	0:56:00
1	Dead	72	0:47:00
2	Alive	1,225	0:55:00
2	Dead	72	0:51:30
3	Alive	8,614	0:58:00
3	Dead	602	0:44:00
4	Alive	501	0:56:00
4	Dead	26	0:42:30
5	Alive	1,820	0:59:00
5	Dead	117	0:41:00
6	Alive	492	0:52:00
6	Dead	23	0:57:00
7	Alive	605	0:49:00
7	Dead	41	0:31:00
8	Alive	145	0:49:00
8	Dead	4	0:20:30
9	Alive	1,621	0:57:00
9	Dead	91	0:36:00
10	Alive	1,378	0:57:00
10	Dead	39	0:45:00
Total		19,155	0:56:00

Figure 5D9: S Group, All ISS, Median Time by EMS Region and Discharge Status

The scatter plot graph represents cumulative counts of trauma patients by the discharge status on the EMS Region lines by their median total time to definitive care. All Injury Severity Scores are represented in the graph. Trauma patients who survived their injuries in EMS region 5 had the longest median time to definitive care (0:59:00 HH:MM:SS). Trauma patients who died from their injuries in EMS region 6 had the longest median time to definitive care (0:57:00 HH:MM:SS); the time is much longer than that of other regions and we might need to pay special attention to EMS region 6.

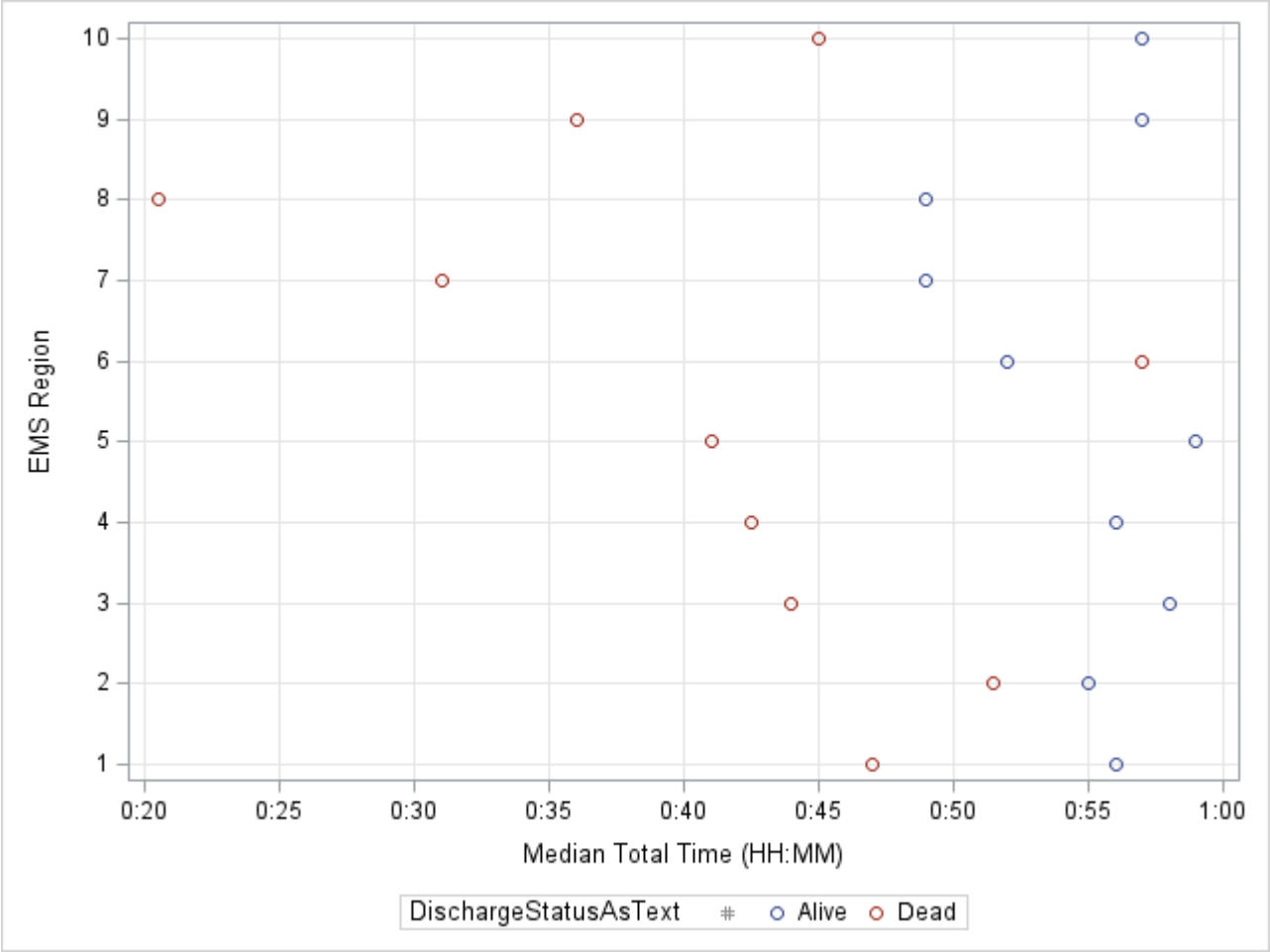


Table 5D10: S Group, ISS <=15, Median Time by EMS Region and Discharge Status

The table lists the counts of patients that were discharged alive or deceased with the corresponding median time to definitive care per EMS region. Trauma patients with an ISS less than or equal to 15 who survived their trauma injuries in EMS region 5 had the longest median time to definitive care (1:00:00 HH:MM:SS). Trauma patients with an ISS less than or equal to 15 who died from their injuries in EMS region 6 had the longest median time to definitive care (0:59:00 HH:MM:SS).

Hospital Destination EMS Region	Discharge Status	Frequency	Median Total Time
1	Alive	1,534	0:56:00
1	Dead	42	0:48:30
2	Alive	1,036	0:56:00
2	Dead	36	0:50:00
3	Alive	6,813	0:59:00
3	Dead	151	0:50:00
4	Alive	488	0:56:00
4	Dead	19	0:42:00
5	Alive	1,522	1:00:00
5	Dead	37	0:43:00
6	Alive	433	0:53:00
6	Dead	10	0:59:00
7	Alive	474	0:48:00
7	Dead	12	0:30:30
8	Alive	129	0:50:00
8	Dead	1	0:17:00
9	Alive	1,336	0:57:00
9	Dead	39	0:30:00
10	Alive	1,188	0:58:00
10	Dead	24	0:48:30
Total		15,324	0:58:00

Figure 5D11: S Group, ISS <=15, Median Time by EMS Region and Discharge Status

The scatter plot graph represents cumulative counts of trauma patients by the discharge status on the EMS Region lines by their median total time to definitive care. Trauma patients with an Injury Severity Score less than or equal to 15 are represented in the graph. Trauma patients who survived their injuries in EMS region 5 had the longest median time to definitive care (1:00:00 HH:MM:SS). Trauma patients who died from their injuries in EMS region 6 had the longest median time to definitive care (0:59:00 HH:MM:SS).

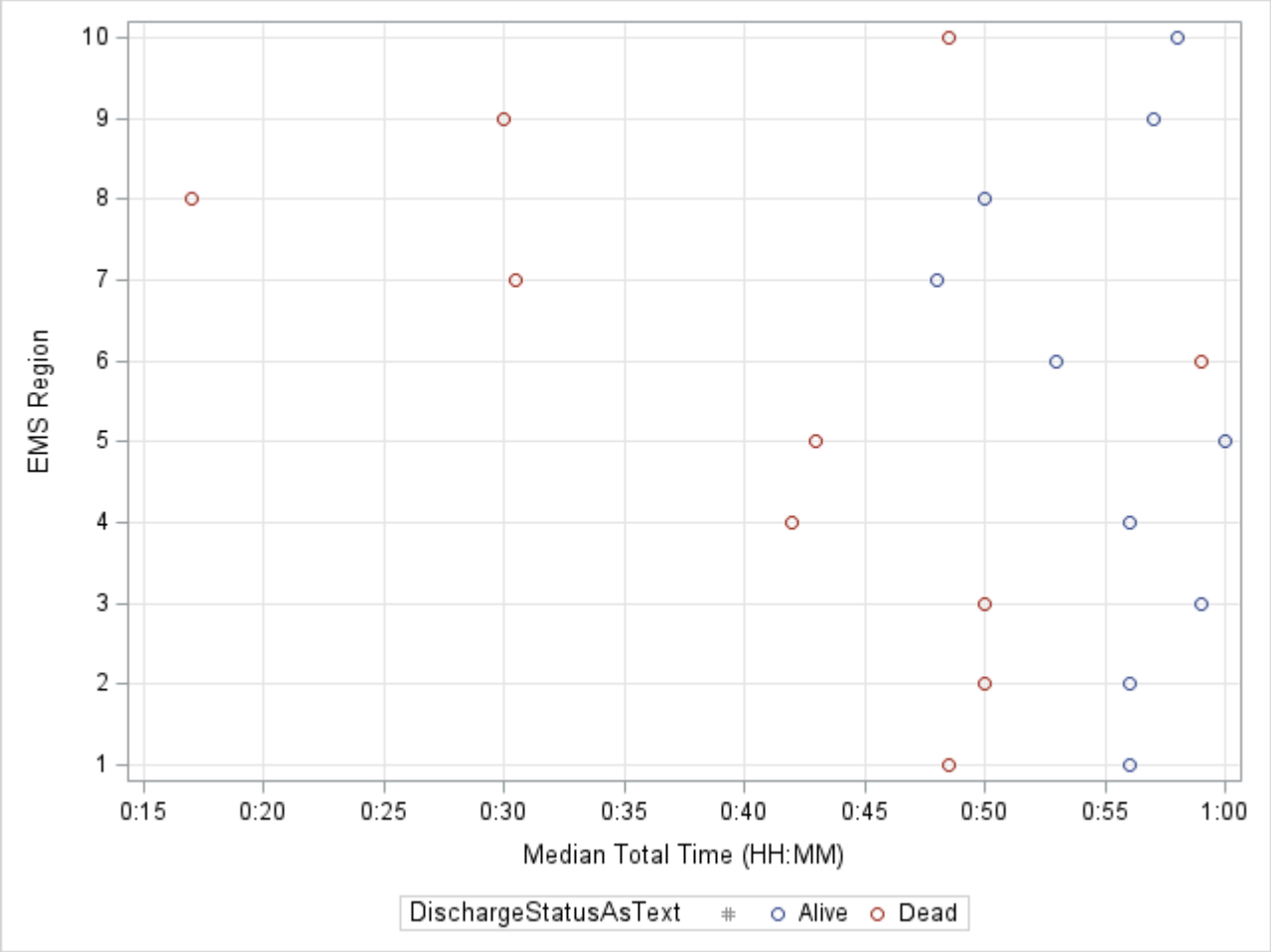


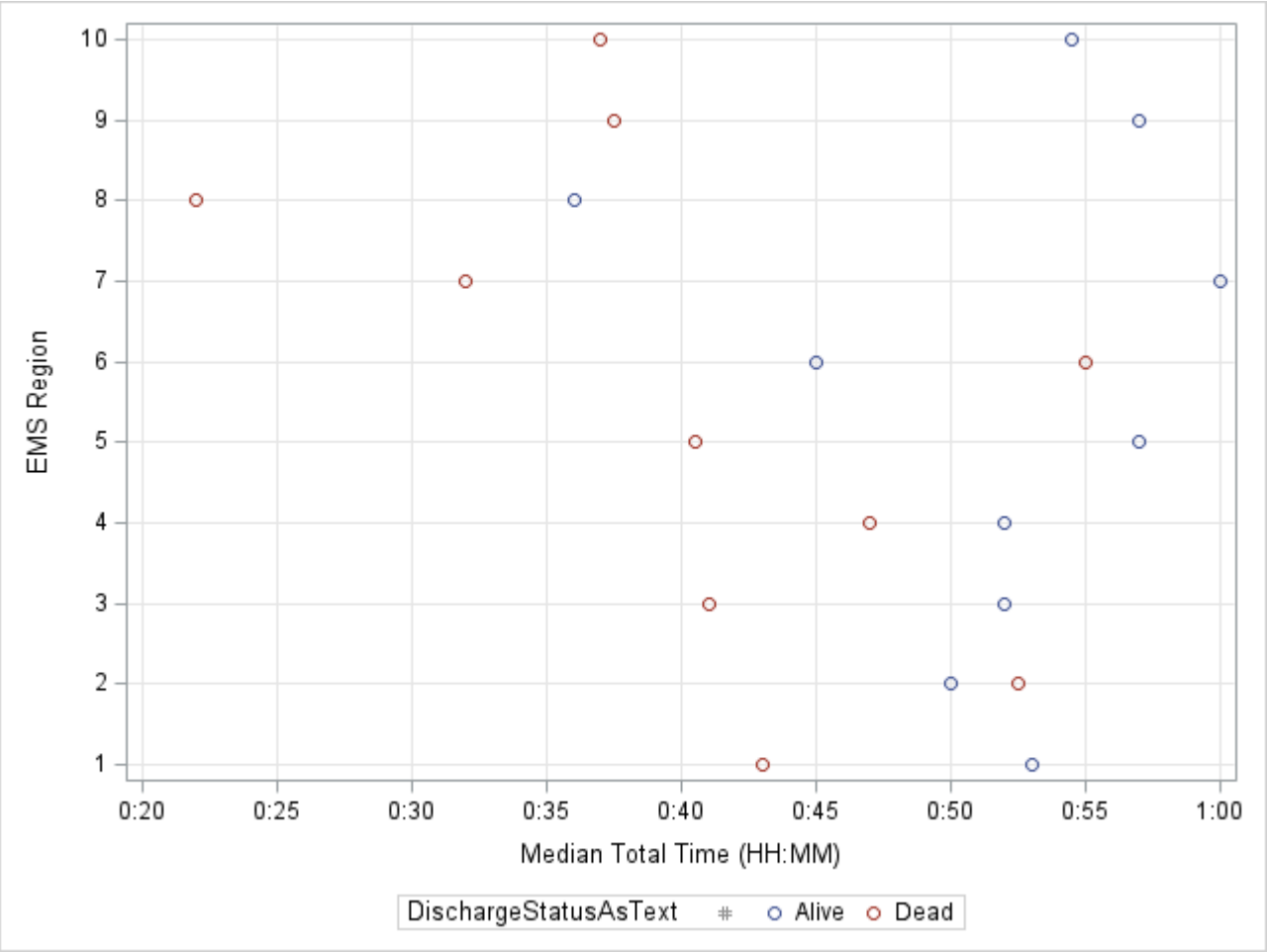
Table 5D12: S Group, ISS >15, Median Time by EMS Region and Discharge Status

The table lists the counts of patients that were discharged alive or deceased with the corresponding median time to definitive care per EMS region. Trauma patients with an ISS greater than 15 who survived their trauma injuries in EMS region 7 had the longest median time to definitive care (1:00:00 HH:MM:SS). Trauma patients with an ISS greater than 15 who died from their injuries in EMS region 6 had the longest median time to definitive care (0:55:00 HH:MM:SS).

Hospital Destination EMS Region	Discharge Status	Frequency	Median Total Time
1	Alive	133	0:53:00
1	Dead	30	0:43:00
2	Alive	189	0:50:00
2	Dead	36	0:52:30
3	Alive	1,801	0:52:00
3	Dead	451	0:41:00
4	Alive	13	0:52:00
4	Dead	7	0:47:00
5	Alive	298	0:57:00
5	Dead	80	0:40:30
6	Alive	59	0:45:00
6	Dead	13	0:55:00
7	Alive	131	1:00:00
7	Dead	29	0:32:00
8	Alive	16	0:36:00
8	Dead	3	0:22:00
9	Alive	285	0:57:00
9	Dead	52	0:37:30
10	Alive	190	0:54:30
10	Dead	15	0:37:00
Total		3,831	0:51:00

Figure 5D13: S Group, ISS >15, Median Time by EMS Region and Discharge Status

The scatter plot graph represents cumulative counts of trauma patients by the discharge status on the EMS Region lines by their median total time to definitive care. Trauma patients with an Injury Severity Score greater than 15 are represented in the graph. Trauma patients who survived their injuries in EMS region 7 had the longest median time to definitive care (1:00:00 HH:MM:SS). Trauma patients who died from their injuries in EMS region 6 had the longest median time to definitive care (0:55:00 HH:MM:SS).



TIME TO DEFINITIVE CARE ANALYSIS PART II

As noted earlier in this report, the second part of the time to definitive care analysis represents the cases involving the patient being referred to a second hospital for definitive trauma care. The analysis provides us with 5,810 cases (14.9%) that report the patient arrived from a 'Referring Hospital', which are the original data sources for **Referring Group** (R Group).

For Patients from a Referral Hospital: R Group

There are 39,060 cases reported in year 2022. Among these 39,060 cases, 26,333 cases were linked with Prehospital Provider data. The referring hospital data was not required in year 2022. Among these 26,333 cases, 5,810 cases were linked with referral data. These 5,810 cases are used for analysis for R Group time analysis.

Time from EMS Dispatch to EMS Scene Arrival Time (Tables 6A1, 6A2, 6A3)

Among these 5,810 cases, 3,006 cases (51.7%) have valid values in the four fields: EMS Dispatch Date, EMS Dispatch Time, EMS Scene Arrival Date, and EMS Scene Arrival Time. Among these 5,810 cases, **48.3% of the cases have missing data in at least one of the four fields.** The data with these 3,006 cases is used to calculate the median time from EMS Dispatch Time to EMS Scene Arrival Time.

Time from EMS Scene Arrival Time to EMS Scene Departure Time (Tables 6B1, 6B2, 6B3)

Among these 5,810 cases, 2,980 cases (51.3%) have valid values in the four fields: EMS Scene Arrival Date, EMS Scene Arrival Time, EMS Scene Departure Date, and EMS Scene Departure Time. Among these 5,810 cases, **48.7% of the cases have missing data in at least one of the four fields.** The data with these 2,980 cases is used to calculate the median time from EMS Scene Arrival Time to EMS Scene Departure Time.

Time from EMS Scene Departure Time to Referral Hospital Arrival Time (Tables 6C1, 6C2, 6C3)

Among these 5,810 cases, 1,109 cases (19.1%) have valid values in the four fields: EMS Scene Departure Date, and EMS Scene Departure Time, Referral Hospital Arrival Date, and Referral Hospital Arrival Time. Among these 5,810 cases, **80.9% of the cases have missing data in at least one of the four fields.** The data from the 1,109 cases is used to calculate the median time from EMS Scene Departure Time to Referral Hospital Arrival Time.

Time from Referral Hospital Arrival Time to the Final Destination Hospital ED Arrival Time (Tables 6D1, 6D2, 6D3)

Among these 5,810 cases, 3,008 cases (51.8%) have valid values in the four fields: Referral Hospital Arrival Date, Referral Hospital Arrival Time, final destination Hospital ED arrival Date, and final destination Hospital ED arrival Time. Among these 5,810 cases, **48.2% of the cases have missing data in at least one of the four fields.** The data from the 3,008 cases is used to calculate the median time from Referral Hospital Arrival Time to the final destination Hospital ED Arrival Time.

Time from EMS Dispatch Time to the Final Destination Hospital ED Arrival Time (Tables 6E1, 6E2, 6E3)

Among these 5,810 cases, 1,122 cases (19.3%) have valid values in the six fields: EMS Dispatch Date, EMS Dispatch Time, Referral Hospital Arrival Date, Referral Hospital Arrival Time, final destination Hospital ED arrival Date, and final destination Hospital ED arrival Time. Among these 5,810 cases, **80.7% of the cases**

have missing data in at least one of the six fields. The data from the 1,122 cases is used to calculate the mean and median time from EMS Dispatch Time to the destination Hospital ED Arrival Time.

Table 6A1: R Group, All ISS, Median Time from EMS Dispatch Time to EMS Scene Arrival Time

This chart represents the median overall time (HH:MM:SS) from EMS dispatch time to EMS scene arrival time for all Injury Severity Scores. The median total time from EMS dispatch time to EMS scene arrival time is 10 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	1,575	0:10:00
II	1,084	0:10:00
III	343	0:08:00
IV	4	0:06:30
Total	3,006	0:10:00

Table 6A2: R Group, ISS <=15, Median Time from EMS Dispatch Time to EMS Scene Arrival Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores less than or equal to 15 from EMS dispatch time to EMS scene arrival time. The median total time from EMS dispatch time to EMS scene arrival time is 10 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	1,197	0:10:00
II	826	0:10:00
III	291	0:08:00
IV	4	0:06:30
Total	2,318	0:10:00

Table 6A3: R Group, ISS >15, Median Time from EMS Dispatch Time to EMS Scene Arrival Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores greater than 15 from EMS dispatch time to EMS scene arrival time. The median total time from EMS dispatch time to EMS scene arrival time is 10 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	378	0:10:00
II	258	0:10:00
III	52	0:08:00
Total	688	0:10:00

Table 6B1: R Group, All ISS, Median Time from EMS Scene Arrival Time to EMS Scene Departure Time

This chart represents the median overall time (HH:MM:SS) from EMS scene arrival time to EMS scene departure time for all Injury Severity Scores. The median total time from EMS scene arrival to EMS scene departure time is 18 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	1,553	0:19:00
II	1,081	0:18:00
III	342	0:19:00
IV	4	0:13:30
Total	2,980	0:18:00

Table 6B2: R Group, ISS <=15, Median Time from EMS Scene Arrival Time to EMS Scene Departure Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores less than or equal to 15 from EMS scene arrival time to EMS scene departure time. The median total time from EMS scene arrival time to EMS scene departure time is 19 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	1,178	0:19:00
II	823	0:18:00
III	290	0:19:00
IV	4	0:13:30
Total	2,295	0:19:00

Table 6C1: R Group, All ISS, Median Time from EMS Scene Departure Time to Referral Hospital Arrival Time

This chart represents the median overall time (HH:MM:SS) from EMS scene departure time to Referral Hospital arrival time for all Injury Severity Scores. The median total time from EMS scene departure time to Referral Hospital arrival time is 18 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	689	0:17:00
II	399	0:21:00
III	18	0:13:00
IV	3	0:11:00
Total	1,109	0:18:00

Table 6B3: R Group, ISS >15, Median Time from EMS Scene Arrival Time to EMS Scene Departure Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores less than 15 from EMS scene arrival time to EMS scene departure time. The median total time from EMS scene arrival time to EMS scene departure time is 18 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	375	0:18:00
II	258	0:17:00
III	52	0:20:30
Total	685	0:18:00

Table 6C2: R Group, ISS <=15, Median Time from EMS Scene Departure Time to Referral Hospital Arrival Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores less than or equal to 15 from EMS scene departure time to Referral Hospital arrival time. The median total time from EMS scene departure time to Referral Hospital arrival time is 19 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	513	0:18:00
II	311	0:22:00
III	14	0:10:00
IV	3	0:11:00
Total	841	0:19:00

Table 6C3: R Group, ISS >15, Median Time from EMS Scene Departure Time to Referral Hospital Arrival Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores greater than 15 from EMS scene departure time to Referral Hospital arrival time. The median total time from EMS scene departure time to Referral Hospital arrival time is 17 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	176	0:15:00
II	88	0:20:00
III	4	0:16:00
Total	268	0:17:00

Table 6D2: R Group, ISS <=15, Median Time from Referral Hospital Arrival Time to Final Destination Hospital ED Arrival Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores less than or equal to 15 from Referral Hospital Arrival Time to Final Destination Hospital ED arrival time. The median total time from Referral Hospital Arrival Time to Final Destination Hospital ED arrival time is 5 hours and 30 minutes.

Table 6D1: R Group, All ISS, Median Time from Referral Hospital Arrival Time to Final Destination Hospital ED Arrival Time

This chart represents the median overall time (HH:MM:SS) from Referral Hospital Arrival Time to Final Destination Hospital ED arrival time for all Injury Severity Scores. The median total time from Referral Hospital Arrival Time to Final Destination Hospital ED arrival time is 5 hours and 17 minutes, which is 5 minutes longer than that in year 2021.

Hospital Designation Level	Frequency	Median Total Time
I	2,264	5:16:00
II	709	5:19:00
III	30	5:29:00
IV	5	6:00:00
Total	3,008	5:17:00

Table 6D3: R Group, ISS >15, Median Time from Referral Hospital Arrival Time to Final Destination Hospital ED Arrival Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores greater than 15 from Referral Hospital Arrival Time to Final Destination Hospital ED arrival time. The median total time from Referral Hospital Arrival Time to Final Destination Hospital ED arrival time is 4 hours and 31 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	1,737	5:29:00
II	569	5:34:00
III	25	5:43:00
IV	5	6:00:00
Total	2,336	5:30:00

Hospital Designation Level	Frequency	Median Total Time
I	527	4:30:00
II	140	4:36:30
III	5	4:21:00
Total	672	4:31:00

Table 6E1: R Group, All ISS, Median Time from EMS Dispatch Time to Final Destination Hospital ED Arrival Time

This chart represents the median overall time (HH:MM:SS) from EMS dispatch time to Final Destination Hospital ED arrival time for all Injury Severity Scores. The median total time from EMS dispatch time to Final Destination Hospital ED arrival time is 6 hours and 4 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	698	6:09:00
II	404	5:59:30
III	19	4:53:00
IV	1	1:16:00
Total	1,122	6:04:00

Table 6E2: R Group, ISS <=15, Median Time from EMS Dispatch Time to Final Destination Hospital ED Arrival Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores less than or equal to 15 from EMS dispatch time to Final Destination Hospital ED arrival time. The median total time from EMS dispatch time to Final Destination Hospital ED arrival time is 6 hours and 19 minutes.

Hospital Designation Level	Frequency	Median Total Time
I	523	6:24:00
II	314	6:18:30
III	15	5:00:00
IV	1	1:16:00
Total	853	6:19:00

Table 6E3: R Group, ISS >15, Median Time from EMS Dispatch Time to Final Destination Hospital ED Arrival Time

This chart represents the median overall time (HH:MM:SS) for Injury Severity Scores greater than 15 from EMS dispatch time to Final Destination Hospital ED arrival time. The median total time from EMS dispatch time to Final Destination Hospital ED arrival time is 5 hours and 21 minutes. For the more severely injured patients (ISS>15), the median total time is about 58 minutes less than that of minor and moderately injured patients. (ISS<=15).

Hospital Designation Level	Frequency	Median Total Time
I	175	5:37:00
II	90	4:59:30
III	4	4:20:30
Total	269	5:21:00

Table 6E4: R Group, Median Time from EMS Dispatch Time to Final Destination Hospital ED Arrival Time

In Q4 2022 (Oct-Dec), the median total time (ISS all) is longer than Q1, Q2, and Q3 of 2022. In year 2021, the Q1, Q2, Q3, Q4, and total median total times (ISS all) were 5:45:00, 5:53:00, 6:25:00, 6:13:00, and 6:04:00. Compared with year 2021, the 2022 Q1 and Q4 median times are longer than the median times in year 2021; the 2022 Q2 and Q3 median times are shorter than the median times in year 2021; and the 2022 total time (ISS all) is the same as that in year 2021.

ISS	Q1 (Jan-Mar)	Q2 (Apr-Jun)	Q3 (Jul-Sep)	Q4 (Oct-Dec)	Total (Jan-Dec)
ISS <= 15	6:05:30	6:05:00	6:16:30	6:57:30	6:19:00
ISS > 15	5:55:00	4:43:00	5:32:00	5:14:30	5:21:00
Median Total Time	6:01:00	5:44:00	5:59:00	6:40:00	6:04:00

Table 6E5: R Group, All ISS, Median Time by EMS Region and Discharge Status

The table includes the counts of patients that were transferred from a referring facility to a final destination facility with the discharge status and corresponding median time to definitive care per EMS region of the final destination hospital. All Injury Severity Scores are represented in the table. Patients discharged alive at a destination hospital in EMS region 3 had the longest median time to definitive care (6:59:00 HH:MM:SS). Trauma patients who died at a destination hospital in EMS region 8 had the longest median time to definitive care (8:44:00 HH:MM:SS), and it was from a single death case. Destination hospitals in EMS Region 1 did not have any reported deaths during the period for the specific analysis. EMS Regions 4 and 7 are not included due to no data reported for the specific analysis.

Hospital Destination EMS Region	Discharge Status	Frequency	Median Total Time
1	Alive	2	5:19:00
2	Alive	143	5:47:00
2	Dead	6	4:07:00
3	Alive	397	6:59:00
3	Dead	19	4:42:00
5	Alive	259	6:27:00
5	Dead	17	6:09:00
6	Alive	24	4:18:00
6	Dead	2	4:31:30
8	Alive	18	4:46:00
8	Dead	1	8:44:00
9	Alive	151	5:44:00
9	Dead	3	3:26:00
10	Alive	74	5:00:00
10	Dead	6	5:50:30
Total		1122	6:04:00

Figure 6E6: R Group, All ISS, Median Time by EMS Region and Discharge Status

The scatter plot graph represents cumulative counts of trauma patients by the discharge status on the EMS Region lines by their median total time to definitive care. All Injury Severity Scores are represented in the graph. Trauma patients who survived their injuries in EMS region 3 had the longest median time to definitive care (6:59:00 HH:MM:SS). Trauma patients who died from their injuries in EMS region 8 had the longest median time to definitive care (8:44:00 HH:MM:SS), and it was from a single death case. Destination hospitals in EMS Region 1 did not have any reported deaths during the period for the specific analysis. EMS Regions 4 and 7 are not included due to no data reported for the specific analysis.

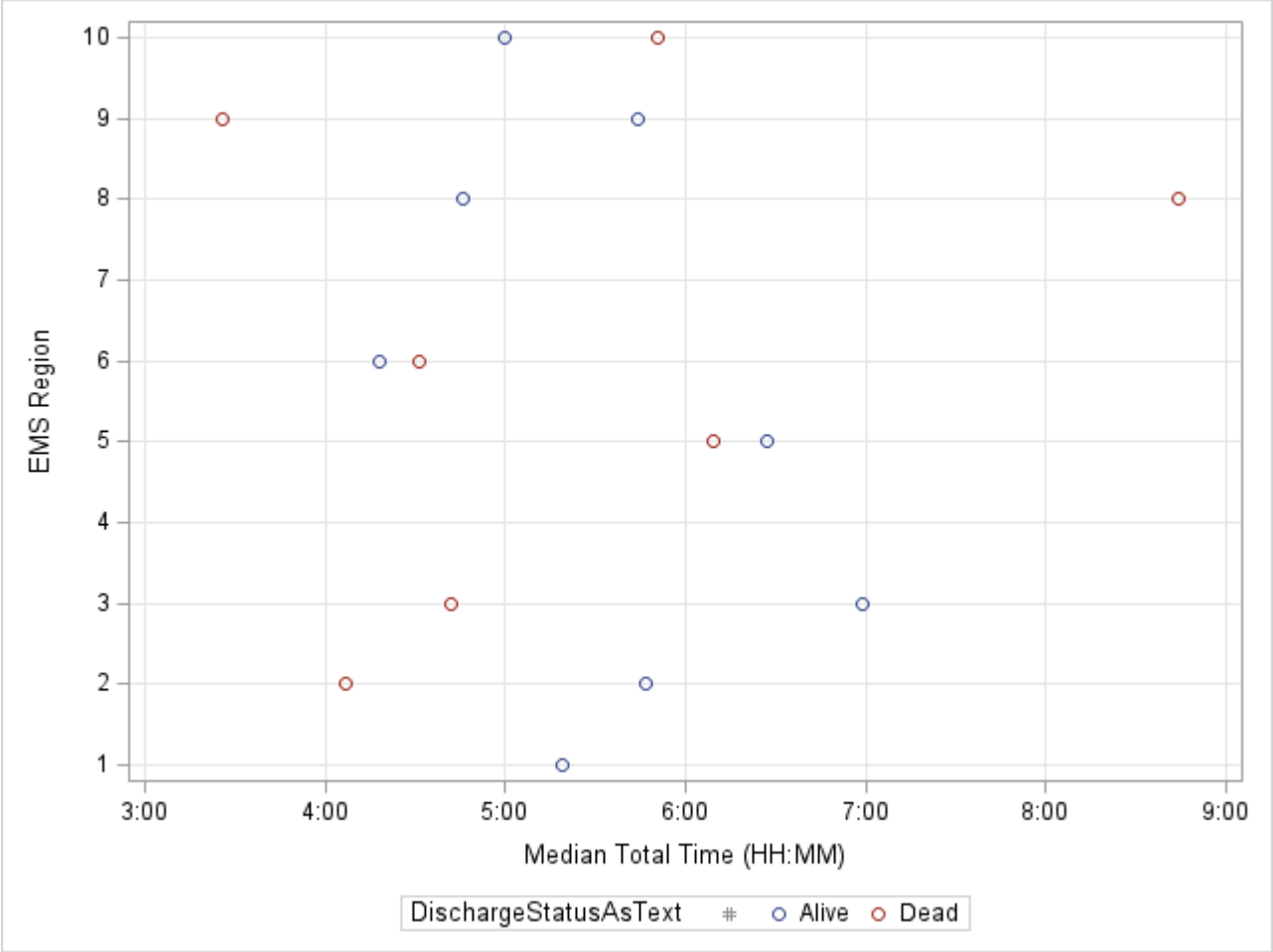


Table 6E7: R Group, ISS <=15, Median Time by EMS Region and Discharge Status

The table lists the counts of patients that were discharged alive or deceased with the corresponding median time to definitive care per EMS region. Trauma patients with an ISS less than or equal to 15 who survived their trauma injuries in EMS region 3 had the longest median time to definitive care (07:12:30 HH:MM:SS). Trauma patients with an ISS less than or equal to 15 who died from their injuries in EMS region 8 had the longest median time to definitive care (08:44:00 HH:MM:SS). Destination hospitals in EMS Region 1 did not have any reported deaths with ISS <= 15 during the period for the specific analysis. EMS Regions 4 and 7 are not included due to no data reported for the specific analysis.

Hospital Destination EMS Region	Discharge Status	Frequency	Median Total Time
1	Alive	2	5:19:00
2	Alive	116	5:56:30
2	Dead	1	4:22:00
3	Alive	314	7:12:00
3	Dead	4	5:09:30
5	Alive	197	6:41:00
5	Dead	4	6:57:00
6	Alive	15	4:33:00
6	Dead	1	4:14:00
8	Alive	14	4:49:30
8	Dead	1	8:44:00
9	Alive	123	5:52:00
9	Dead	2	5:28:00
10	Alive	55	5:19:00
10	Dead	4	5:13:00
Total		853	6:19:00

Figure 6E8: R Group, ISS <=15, Median Time by EMS Region and Discharge Status

The scatter plot graph represents cumulative counts of trauma patients by the discharge status on the EMS Region lines by their median total time to definitive care. Cases with Injury Severity Scores <=15 are represented in the graph. Trauma patients who survived their injuries in EMS region 3 had the longest median time to definitive care (07:12:30 HH:MM:SS). Trauma patients who died from their injuries in EMS region 8 had the longest median time to definitive care (08:44:00 HH:MM:SS). Destination hospitals in EMS Region 1 did not have any reported deaths with ISS <= 15 during the period for the specific analysis. EMS Regions 4 and 7 are not included due to no data reported for the specific analysis.

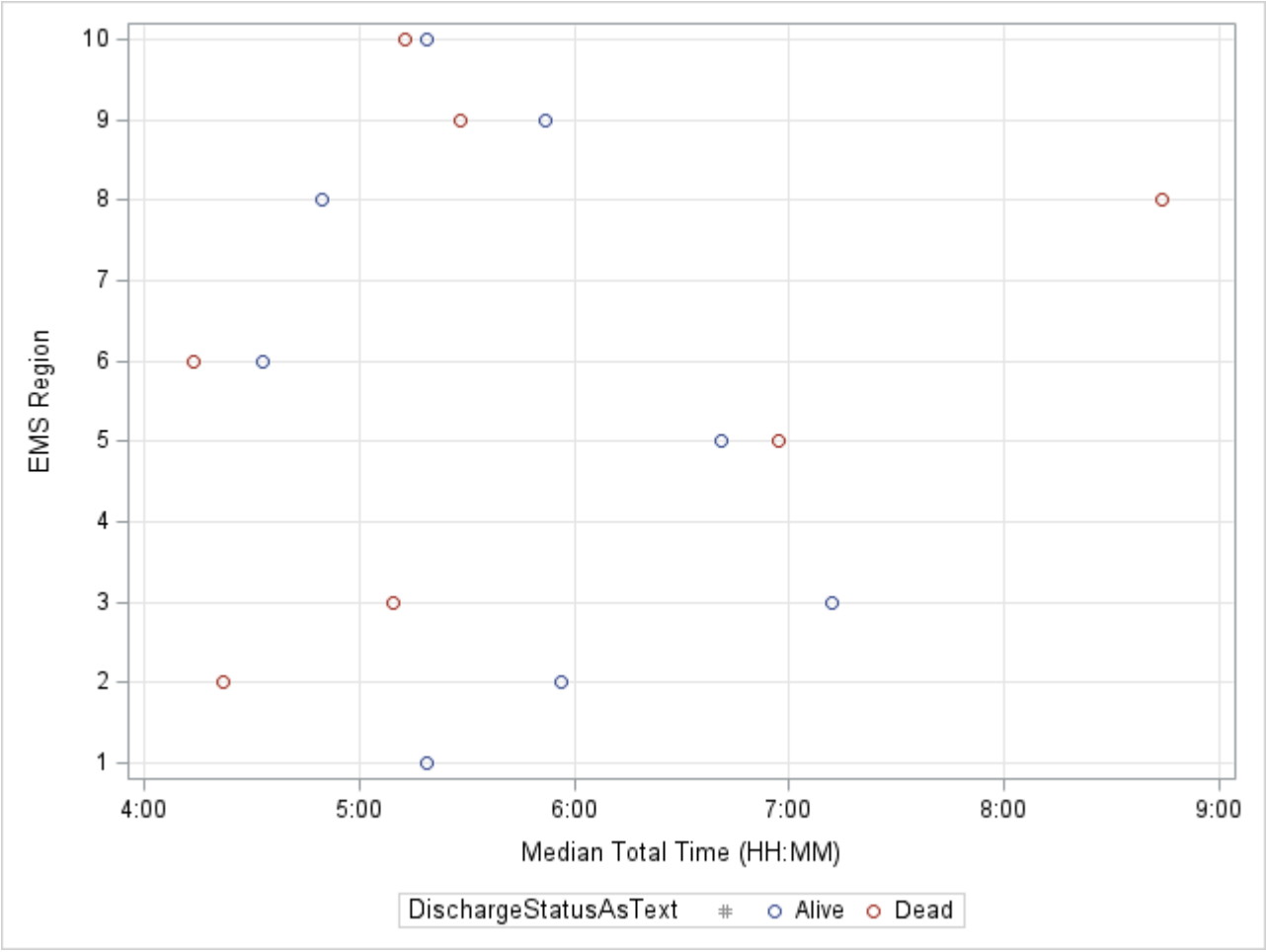


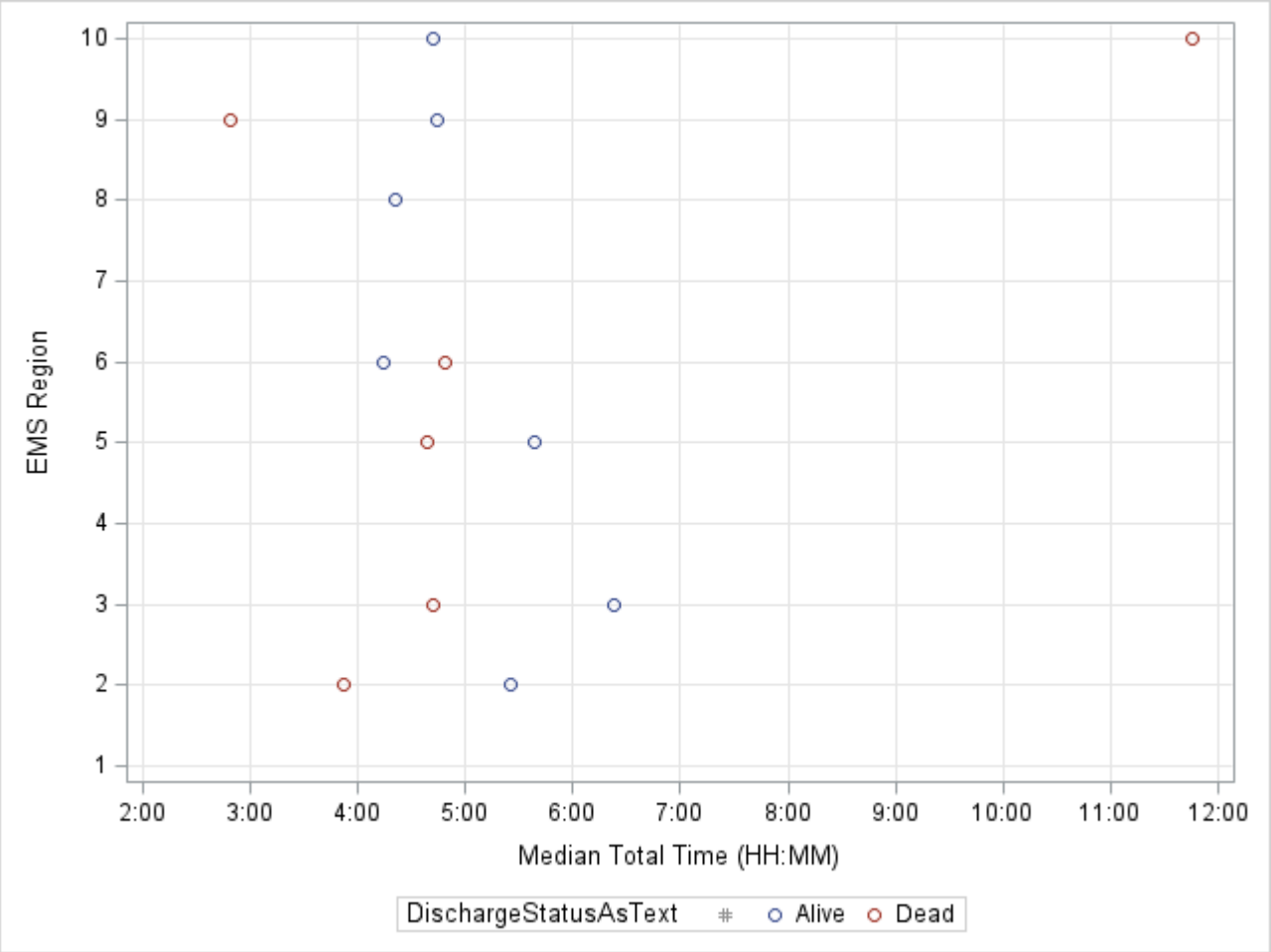
Table 6E9: R Group, ISS >15, Median Time by EMS Region and Discharge Status

The table lists the counts of patients that were discharged alive or deceased with the corresponding median time to definitive care per EMS region. Trauma patients with an ISS greater than 15 who survived their trauma injuries in EMS region 3 had the longest median time to definitive care (06:23:00 HH:MM:SS). Trauma patients with an ISS greater than 15 who died from their injuries in EMS region 10 had the longest median time to definitive care (11:46:00 HH:MM:SS). Destination hospitals in EMS Region 8 did not have any reported deaths with ISS >15 during the period for the specific analysis. EMS Regions 1, 4, and 7 are not included due to no data reported for the specific analysis.

Hospital Destination EMS Region	Discharge Status	Frequency	Median Total Time
2	Alive	27	5:25:00
2	Dead	5	3:52:00
3	Alive	83	6:23:00
3	Dead	15	4:42:00
5	Alive	62	5:39:00
5	Dead	13	4:39:00
6	Alive	9	4:14:00
6	Dead	1	4:49:00
8	Alive	4	4:20:30
9	Alive	28	4:44:00
9	Dead	1	2:49:00
10	Alive	19	4:42:00
10	Dead	2	11:46:00
Total		269	5:21:00

Figure 6E10: R Group, ISS >15, Median Time by EMS Region and Discharge Status

The scatter plot graph represents cumulative counts of trauma patients by the discharge status on the EMS Region lines by their median total time to definitive care. Cases with Injury Severity Scores >15 are represented in the graph. Trauma patients who survived their injuries in EMS region 3 had the longest median time to definitive care (06:23:00 HH:MM:SS). Trauma patients who died from their injuries in EMS region 10 had the longest median time to definitive care (11:46:00 HH:MM:SS). Destination hospitals in EMS Region 8 did not have any reported deaths with ISS >15 during the period for the specific analysis. EMS Regions 1, 4, and 7 are not included due to no data reported for the specific analysis.



DEMOGRAPHIC INFORMATION

Demographics are used to identify age groups and genders that may be at high risk for certain injuries. With this type of information, injury prevention programs can focus on the causes of injuries, a target audience, and specific regions of the state.

Table 7: Incidents by Age

The highest fatality rate was 6.3% and fell within the age group 20-24. It is to be noted that there was 2 death out of 2 not known (NK)/not recorded (NR) that accounted for a 100.0% fatality rate. Not known/Not recorded was recorded because the patient's age was unknown, undetermined, or not documented.

Age Group	Count	Percent	Deaths	Case Fatality Rate
<1	532	1.4	8	1.5
1-4	1,028	2.6	17	1.7
5-9	1,355	3.5	10	0.7
10-14	1,321	3.4	16	1.2
15-19	2,254	5.8	110	4.9
20-24	2,307	5.9	145	6.3
25-34	4,629	11.9	257	5.6
35-44	3,796	9.7	175	4.6
45-54	3,325	8.5	159	4.8
55-64	4,432	11.3	201	4.5
65-74	5,058	12.9	184	3.6
75-84	5,358	13.7	245	4.6
>=85	3,663	9.4	161	4.4
NK/NR	2	0.0	2	100.0
Total	39,060	100.0	1,690	4.3

Figure 7A: Incidents by Age

This graph represents the incident rates by age. Points on the line added together in the age ranges represent the counts seen in Table 7.

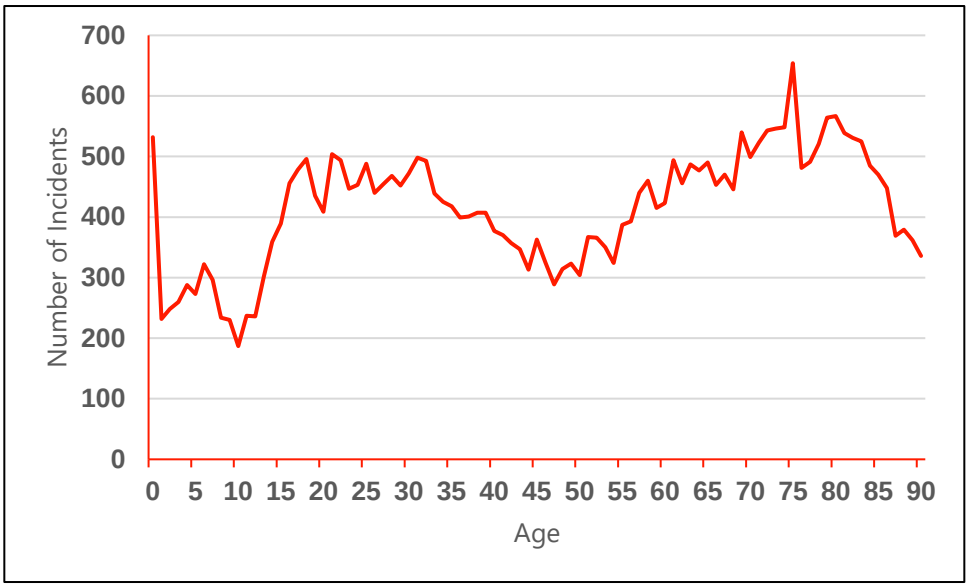


Figure 7B: Case Fatality Rate by Age

The case fatality rate by age. Points on the line added together in the age ranges represent the counts seen in Table 7.

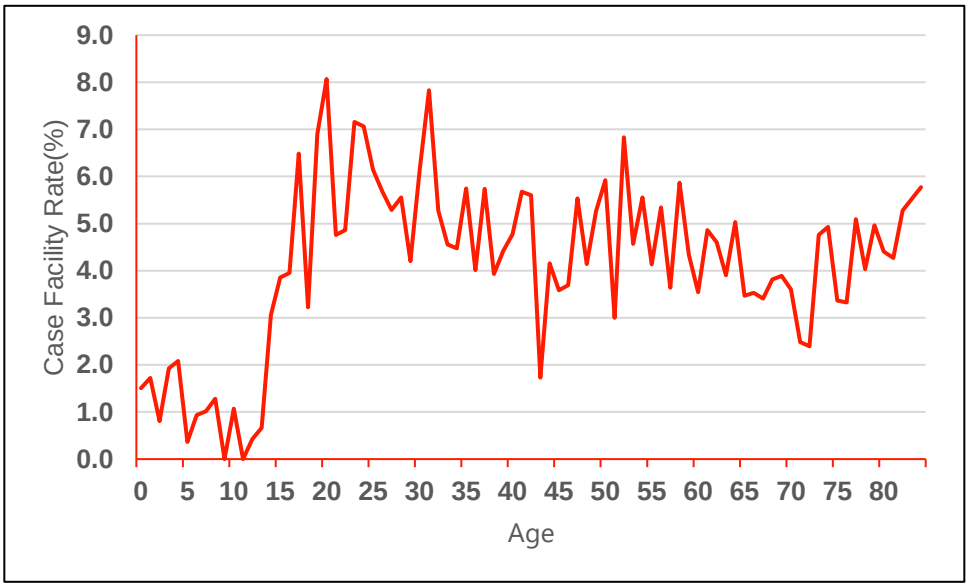


Table 8: Incidents and Case Fatality Rate by Age and Gender

The Incidents number of males (22,805) is much higher than that of female (16,248). Male Case Fatality Rate (5.4%) is higher than female Case Fatality Rate (2.8%). In the female population, the Case Fatality Rate in age group 25-34 is the highest (4.4%). In the male population, the Case Fatality Rate in age group 20-24 is the highest (7.6%). Not known/Not recorded was recorded because the patient's age was unknown, undetermined, or not documented.

Age Group	Number (Female)	Number (Male)	Deaths (Female)	Deaths (Male)	Case Fatality Rate (Female)	Case Fatality Rate (Male)
<1	214	318	0	8	0.0	2.5
1-4	451	577	9	8	2.0	1.4
5-9	542	813	6	4	1.1	0.5
10-14	361	959	1	15	0.3	1.6
15-19	616	1,638	13	97	2.1	5.9
20-24	668	1,638	20	125	3.0	7.6
25-34	1,214	3,415	53	204	4.4	6
35-44	1,025	2,769	28	146	2.7	5.3
45-54	1,038	2,285	38	121	3.7	5.3
55-64	1,714	2,717	48	153	2.8	5.6
65-74	2,620	2,438	60	124	2.3	5.1
75-84	3,235	2,123	99	146	3.1	6.9
>=85	2,550	1,113	81	80	3.2	7.2
NK/NR	0	2	0	2	0.0	100
Total	16,248	22,805	456	1,233	2.8	5.4

Figure 8A: Incidents by Age and Gender

This graph represents incidents by age and gender. Points on the line added together in the age ranges represent the counts seen in Table 8.

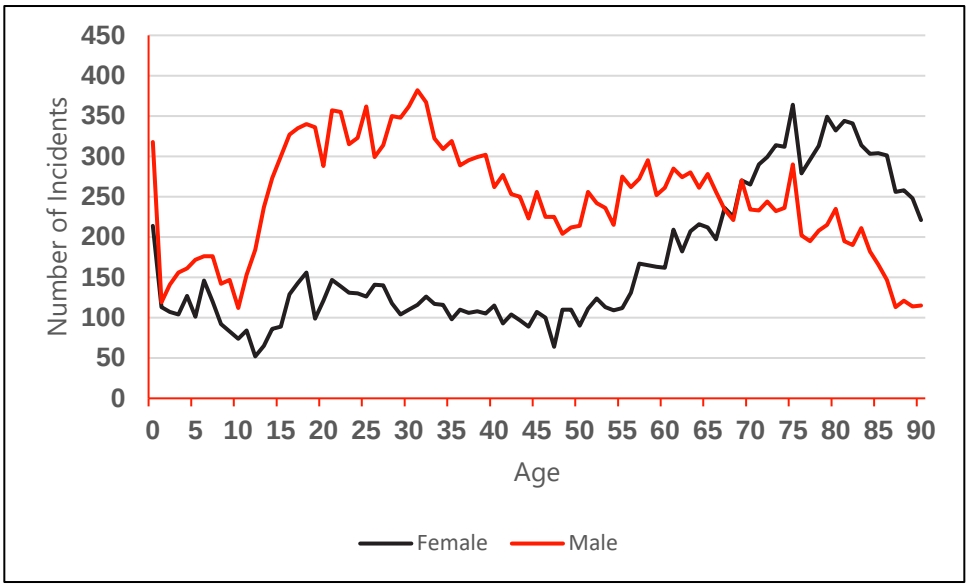


Figure 8B: Case Fatality Rate by Age and Gender

This graph represents the case fatality rate by age and gender. Points on the line added together in the age ranges represent the counts seen in Table 8.

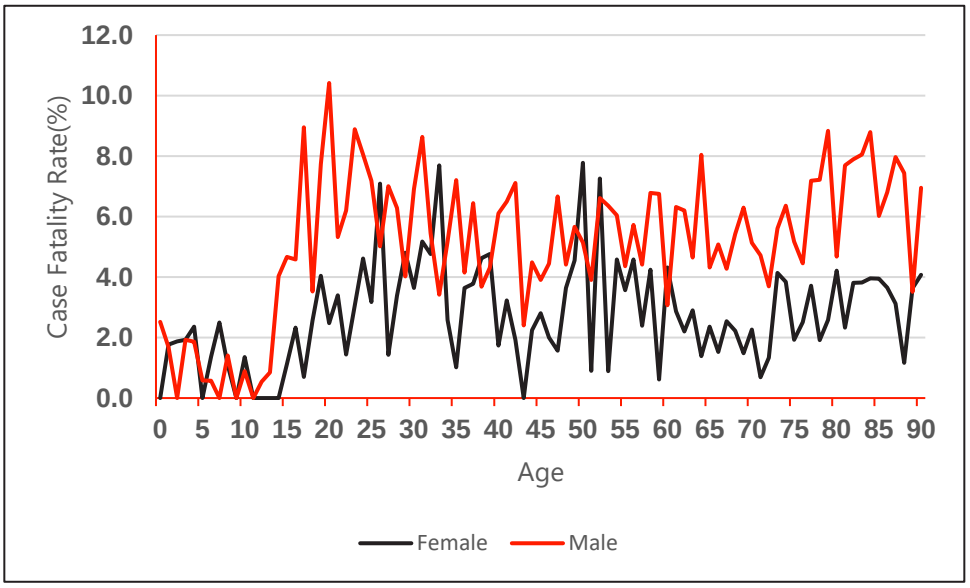


Table 9A: Incidents by Alcohol Use

The incidents count of Alcohol level beyond legal limit (confirmed by test) is 2,089 (5.3%).

Alcohol Use Indicator	Count	Percent
No (Not Tested)	28,837	73.8
No (Confirmed by Test)	7,160	18.3
Yes (Confirmed by Test [Beyond Legal Limit])	2,089	5.3
Yes (Confirmed by Test [Trace Levels])	587	1.5
Not Applicable	378	1.0
Unknown	9	0.0
Total	39,060	100.0

Table 9B: Alcohol Use Indicator (Yes) by Age Group

The incidents count of alcohol use indicator is the highest in age group 25-34 (22.0%).

Age Group	Yes (Confirmed by Test [Beyond Legal Limit])	Yes (Confirmed by Test [Trace Levels])	Total	Percent
1-4	1	0	1	0.0
10-14	0	2	2	0.1
15-19	53	32	85	3.2
20-24	179	50	229	8.6
25-34	475	113	588	22.0
35-44	409	91	500	18.7
45-54	299	83	382	14.3
55-64	389	94	483	18.0
65-74	202	71	273	10.2
75-84	70	40	110	4.1
>=85	12	11	23	0.9
Total	2,089	587	2,676	100.0

Table 10A: Incidents by Drug Use

The incidents count of illegal drug use (confirmed by test) is 2,232 (5.7%).

Drug Code	Count	Percent
No (Not Tested)	31,172	79.8
No (Confirmed by Test)	2,686	6.9
Yes (Confirmed by Test [Illegal Use Drug])	2,232	5.7
Not Applicable	1,919	4.9
Yes (Confirmed by Test [Prescription Drug])	675	1.7
Yes (Confirmed by Test (Unknown if Prescribed or Illegal))	351	0.9
Unknown	25	0.1
Total	39,060	100.0

Table 10B: Drug Use Indicator (Yes) by Age Group

The incidents count of drug use is the highest in age group 25-34 (20.4%).

Age Group	Yes (Confirmed by Test [Illegal Use Drug])	Yes (Confirmed by Test [Prescription Drug])	Yes (Confirmed by Test (Unknown if Prescribed or Illegal))	Total	Percent
<1	3	0	0	3	0.1
1-4	0	3	0	3	0.1
5-9	0	1	0	1	0.0
10-14	16	5	3	24	0.7
15-19	169	33	25	227	7.0
20-24	259	46	39	344	10.6
25-34	513	91	61	665	20.4
35-44	430	66	56	552	16.9
45-54	306	101	48	455	14.0
55-64	334	125	49	508	15.6
65-74	151	109	36	296	9.1
75-84	38	72	20	130	4.0
>=85	13	23	14	50	1.5
Total	2,232	675	351	3,258	100.0

Table 11: Primary Payment Source

The most frequent primary payor is Medicare (31.6%).

Primary Payor	Count	Percent
Medicare	12,357	31.6
Private/Commercial Insurance	6,969	17.8
Self-Pay	6,272	16.1
Medicaid	5,742	14.7
Unknown	3,485	8.9
Blue Cross/Blue Shield	1,487	3.8
No Fault Automobile	1,272	3.3
Other Government	882	2.3
Workers Compensation	472	1.2
Other	122	0.3
Total	39,060	100.0

INJURY CHARACTERISTICS

Mechanism of injury or causes of injury are identified and tracked in the trauma registry. Some age groups may be identified as at risk for certain injuries such as motor vehicle crashes or falls. This information is also used to target injury prevention programs. In some cases, road improvements, pedestrian walkways and driving laws have been improved to reduce injury.

Table 12: Incidents by Mechanism of Injury

The most frequent type of injury is fall injuries, followed by motor vehicle traffic injuries and firearm injuries. Among these top three injuries, firearm injury has the highest case fatality rate (15.9%). There were 244 records missing from the incidents of mechanism of injury due to incomplete information.

Mechanism	Count	Percent	Deaths	Case Fatality Rate
Fall	18,414	47	524	2.8
Motor vehicle traffic	10,660	27	560	5.3
Firearm	3,124	8	498	15.9
Struck by, against	2,100	5	29	1.4
Cut/pierce	1,423	4	17	1.2
Transport, other	957	2	18	1.9
Other specified and classifiable	526	1	8	1.5
Pedal cyclist, other	347	1	2	0.6
Natural/environmental, Bites and stings	334	1	2	0.6
Pedestrian, other	271	1	15	5.5
Machinery	207	1	1	0.5
Natural/environmental, Other	132	0	0	0.0
Overexertion	119	0	1	0.8
Other specified, not elsewhere classifiable	77	0	1	1.3
Unspecified	72	0	2	2.8
Fire/flame	27	0	2	7.4

Hot object/substance	15	0	0	0.0
Suffocation	8	0	3	37.5
Drowning/submersion	2	0	0	0.0
Poisoning	1	0	0	0.0
Total	38,816	100	1,683	4.3

Figure 12: Case Fatality Rate by Selected Mechanism of Injury

This graph represents the case fatality rate by selected mechanisms of injury with firearm injuries accounting for the highest case fatality rate (15.9%).

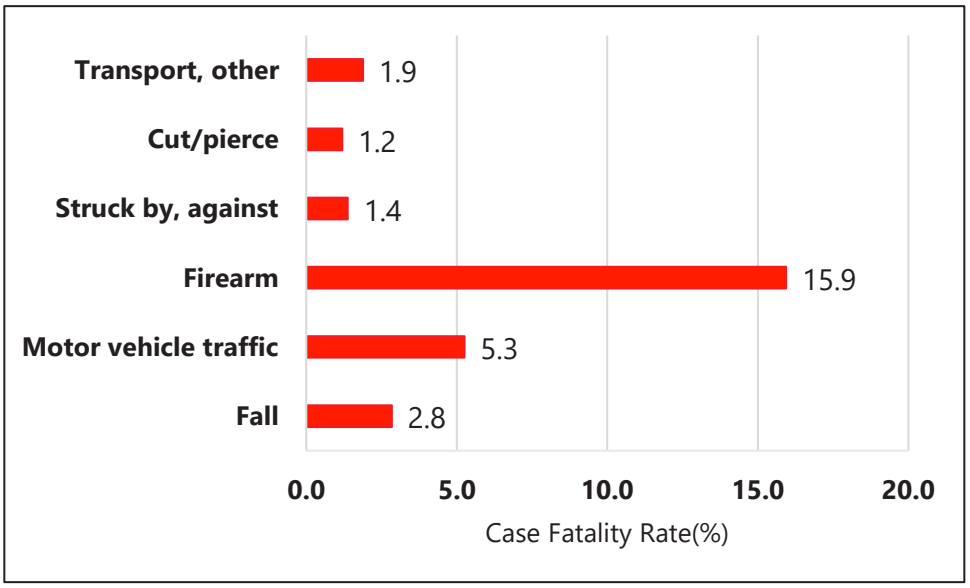


Table 13: Incidents by Selected Mechanism of Injury and Age Group

The table represents the incidents by selected mechanisms of injury and age groups. For people age less than 15 years and older than 54 years, the number of fall injuries is higher than motor vehicle traffic injuries. For people age between 15 to 54 years, the number of motor vehicle traffic injuries is higher than fall injuries.

Age	Fall	Motor Vehicle Crash	Firearm	Struck by against	Cut/Pierce	Transport, other
<1	293	35	5	20	1	1
1-4	523	149	39	79	26	15
5-9	702	225	26	119	25	74
10-14	385	290	107	186	32	160
15-19	238	901	576	202	88	121
20-24	184	1,047	572	123	167	90
25-34	522	2,087	828	353	401	124
35-44	722	1,596	498	312	275	111
45-54	970	1,334	230	247	168	110
55-64	2,175	1,369	150	241	141	87
65-74	3,622	943	63	143	68	37
75-84	4,635	531	25	52	25	20
>=85	3,443	152	4	23	6	7
NK/NR	0	1	1	0	0	0
Total	18,414	10,660	3,124	2,100	1,423	957

Figure 13A: Incidents by Selected Mechanism of Injury and Age Group

The table represents the incidents by selected mechanisms of injury and age groups. Mechanism of injuries represented in this graph include falls, motor vehicle traffic, and firearm. For people age less than 15 years and older than 54 years, the number of fall injuries is higher than motor vehicle. Points on the line added together in the age ranges represent the counts seen in Table 13.

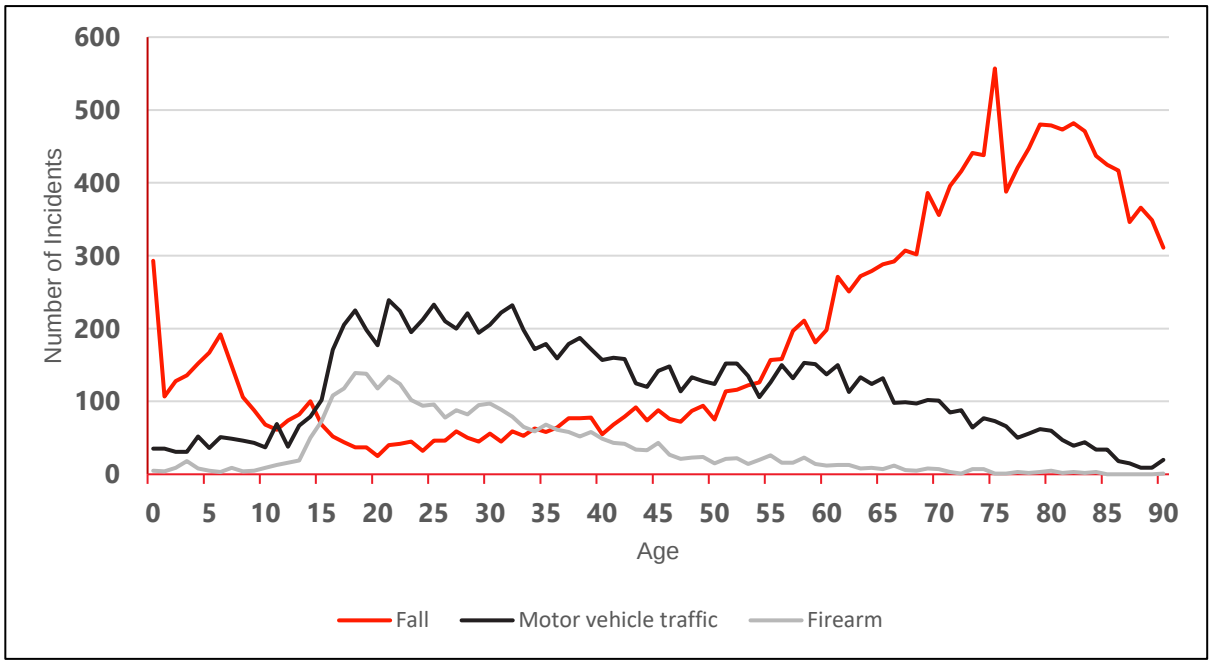


Figure 13B: Incidents by Selected Mechanism of Injury and Age Group

The table represents the incidents by selected mechanisms of injury and age groups. Mechanism of injuries represented in this graph include struck by, against, cut/pierce, and transport, other. For all ages, the number of incidents for each injury accounted for 66 incidents or less. Points on the line added together in the age ranges represent the counts seen in Table 13.

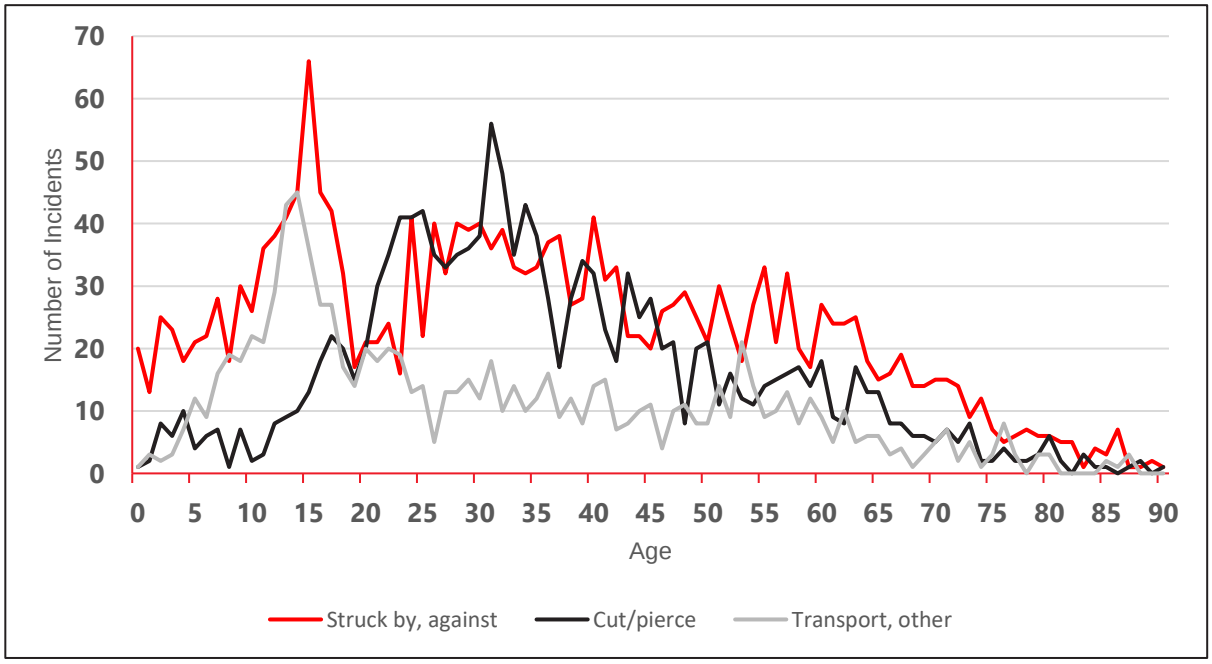


Table 14: Case Fatality Rate by Selected Mechanism of Injury and Age Group

The table represents the case fatality rate by the selected mechanism of injury and age group. The highest mechanism of injury total fatality rate represented in this table is firearm at 15.9%.

Age	Fall	Motor Vehicle Crash	Firearm	Struck by against	Cut/Pierce	Transport, other
<1	0.7	0.0	20.0	0.0	0.0	0.0
1-4	0.0	3.4	20.5	0.0	0.0	6.7
5-9	0.0	2.7	11.5	0.0	0.0	0.0
10-14	0.0	2.4	6.5	0.0	0.0	1.3
15-19	0.0	2.9	13.5	0.5	1.1	3.3
20-24	2.2	4.0	16.3	2.4	0.0	0.0
25-34	2.3	5.0	15.1	1.7	1.5	0.8
35-44	1.8	4.1	17.3	0.6	1.8	0.9
45-54	2.5	5.8	18.3	2.0	1.8	1.8
55-64	2.9	6.6	19.3	2.5	0.7	4.6
65-74	2.7	6.2	27.0	2.1	1.5	2.7
75-84	3.8	10.2	28.0	3.8	0.0	5.0
>=85	3.7	15.1	25.0	4.3	0.0	14.3
NK/NR	0.0	100.0	100.0	0.0	0.0	0.0
Total	2.8	5.3	15.9	1.4	1.2	1.9

Figure 14A: Case Fatality Rate by Selected Mechanism of Injury and Age

The graph represents the case fatality rates by selected mechanisms of injury and age. Mechanism of injuries represented in this graph include fall, motor vehicle traffic, and firearm. Firearms account for the highest fatality rate among these three mechanisms of injury. Points on the line added together in the age ranges represent the counts seen in Table 14.

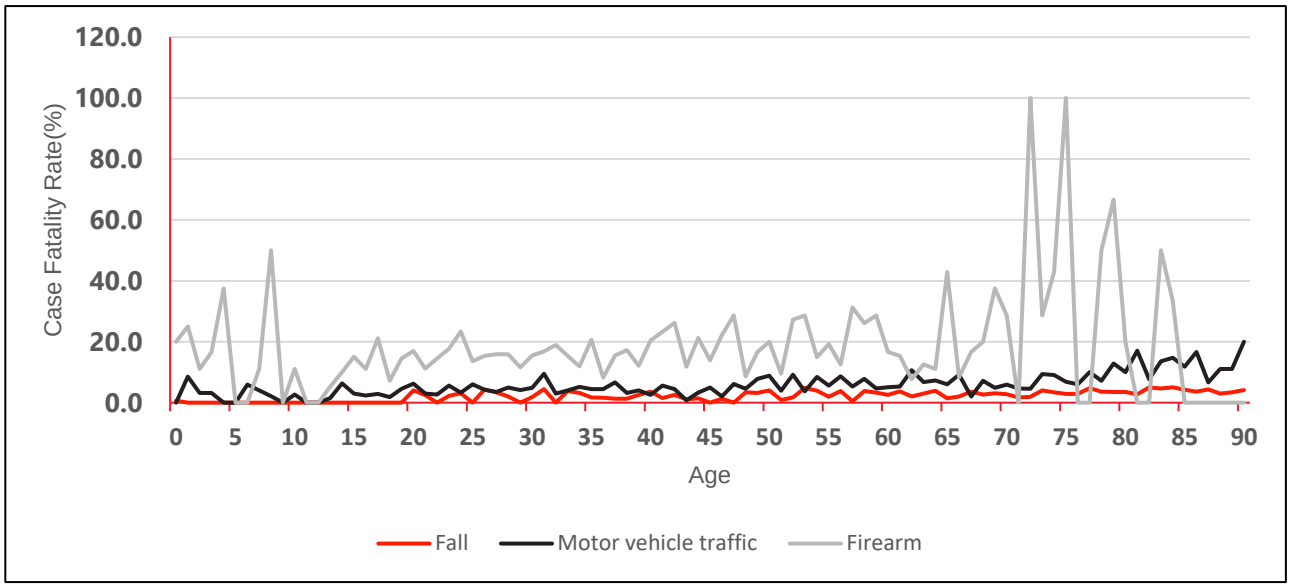


Figure 14B: Case Fatality Rate by Selected Mechanism of Injury and Age

The graph represents the case fatality rates by selected mechanisms of injury and age. Mechanism of injuries represented in this graph include struck by, against, cut/pierce, and transport, other. For all ages, the number of case fatality rates accounted for 50% or less. Points on the line added together in the age ranges represent the counts seen in Table 14.

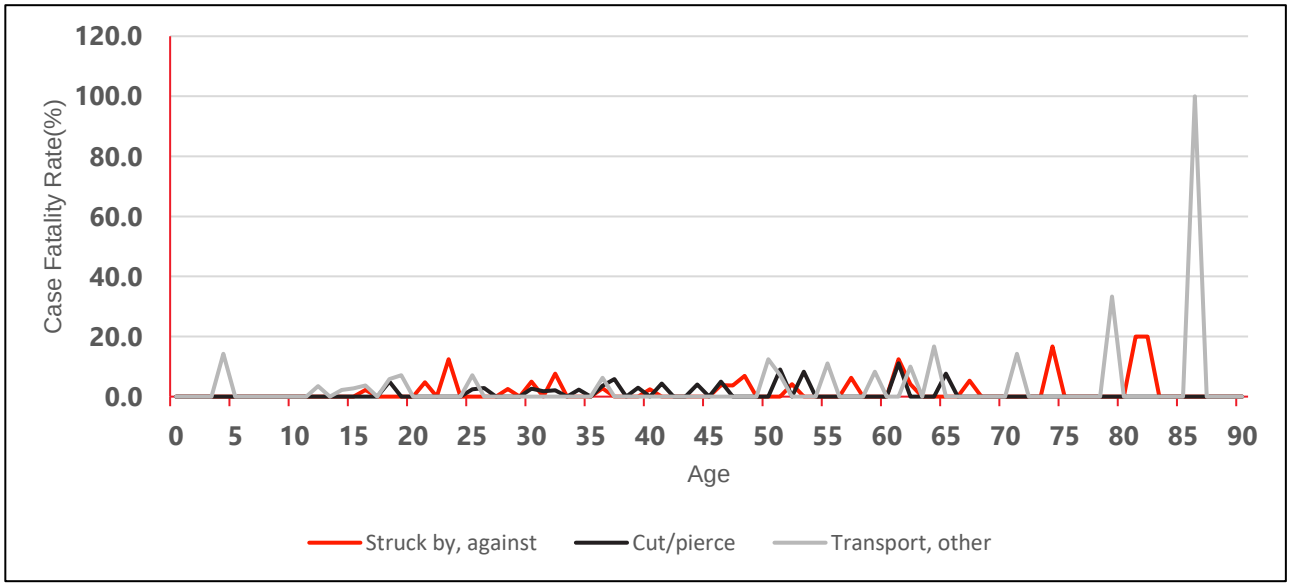


Table 15: Incidents and Case Fatality Rate by Mechanism of Injury and Gender

The table represents the rate of incidents by gender and case fatality rates for mechanisms of injury. The percent of fall injuries in female (62.3%) is much higher than that in male (36.9%). The percent of firearm injuries in male (11.7%) is much higher than that in female (2.9%). The total case fatality rate in male (5.4%) is much higher than that in female (2.8%).

Mechanism	Percent (Female)	Percent (Male)	Case Fatality Rate (Female)	Case Fatality Rate (Male)
Fall	62.3	36.9	2.2	3.7
Motor vehicle traffic	25.0	29.2	3.9	6.0
Firearm	2.9	11.7	12.0	16.7
Struck by, against	2.6	7.4	1.2	1.4
Cut/pierce	1.3	5.4	0.5	1.3
Transport, other	1.9	2.9	0.7	2.5
Other specified and classifiable	0.6	1.9	1.0	1.6
Pedal cyclist, other	0.5	1.2	0.0	0.7
Natural/environmental, Bites and stings	1.0	0.7	0.6	0.6
Pedestrian, other	0.7	0.7	7.3	4.3
Machinery	0.1	0.8	0.0	0.5
Natural/environmental, Other	0.4	0.3	0.0	0.0
Overexertion	0.3	0.3	2.0	0.0
Other specified, not elsewhere classifiable	0.2	0.2	0.0	2.0
Unspecified	0.1	0.3	0.0	3.2
Fire/flame	0.0	0.1	0.0	10.5
Hot object/substance	0.0	0.0	0.0	0.0
Suffocation	0.0	0.0	33.3	40.0
Drowning/submersion	0.0	0.0	0.0	0.0
Poisoning	0.0	0.0	0.0	0.0
Total	100.0	100.0	2.8	5.4

Figure 15A: Percentage of Incidents by Selected Mechanism of Injury and Gender

The graph represents the percentage rate of incidents by select mechanisms of injury and gender.

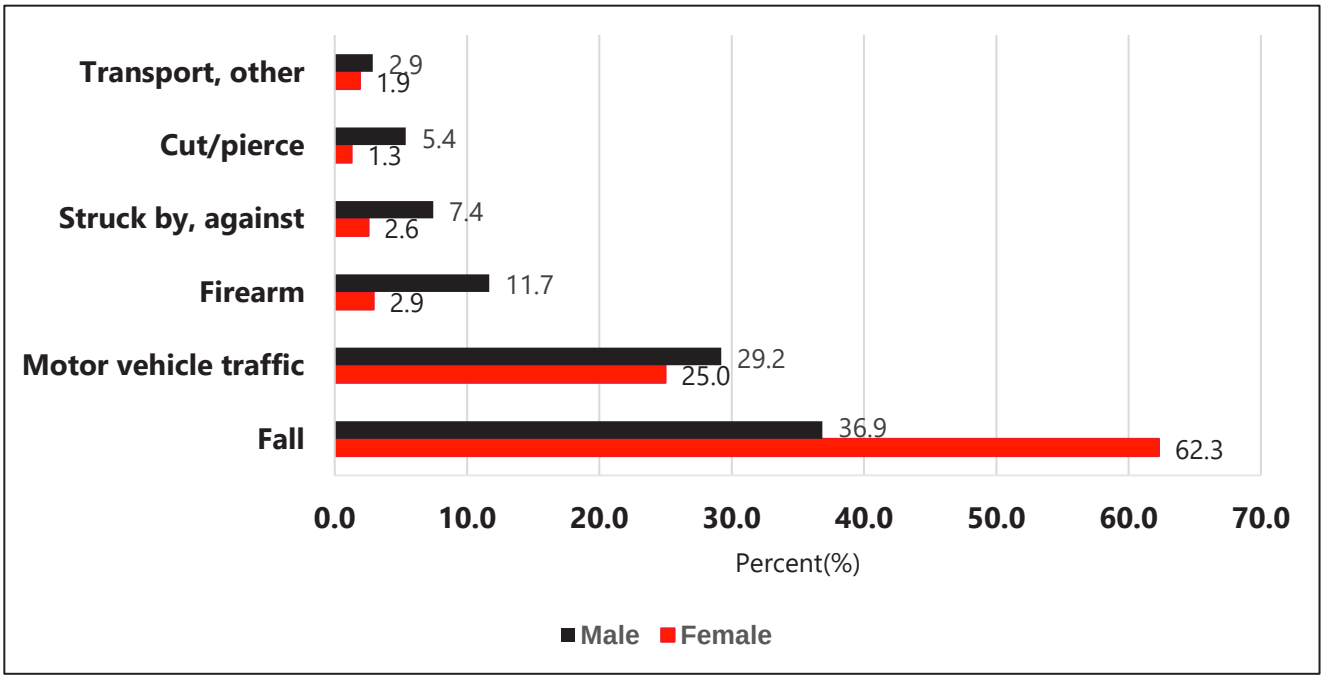


Figure 15B: Case Fatality Rate by Selected Mechanism of Injury and Gender

The graph represents the case fatality rate by selected mechanisms of injury and gender.

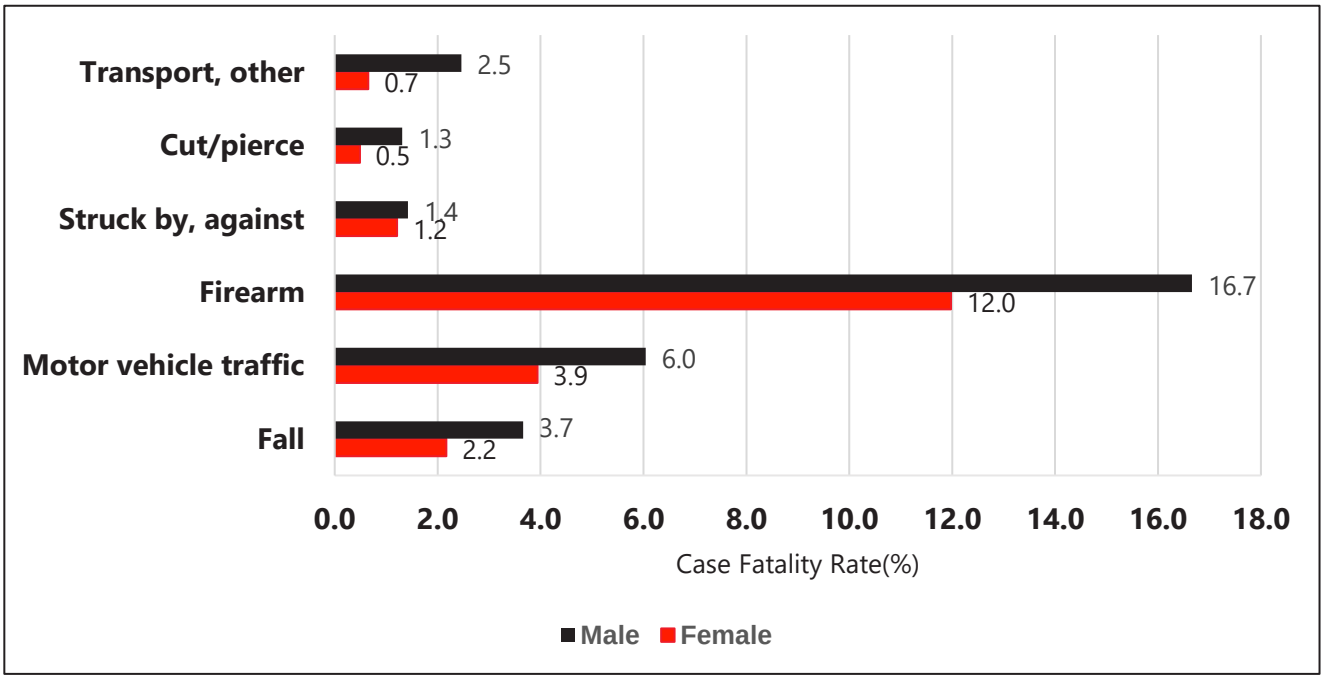


Table 16: Incidents and Case Fatality Rate by Injury Severity Score (ISS)

The table represents the case fatality rate by injury severity score. Minor injuries (42.4%) and moderate injuries (39.3%) account for 81.7 percent of all the injuries. Patients with severe injuries with an ISS greater than 24 have the highest case fatality rate (29.4%).

ISS	Number	Percent	Deaths	Case Fatality Rate (%)
1-8	16,560	42.4	213	1.3
9-15	15,362	39.3	339	2.2
16-24	4,080	10.4	282	6.9
>24	2,884	7.4	848	29.4
NK/NR	174	0.4	8	4.6
Total	39,060	100.0	1,690	4.3

Figure 16: Case Fatality Rate by Injury Severity Score (ISS)

The graph represents the case fatality rate by injury severity score. Patients with severe injuries with an ISS greater than 24 have the highest case fatality rate (29.4%).

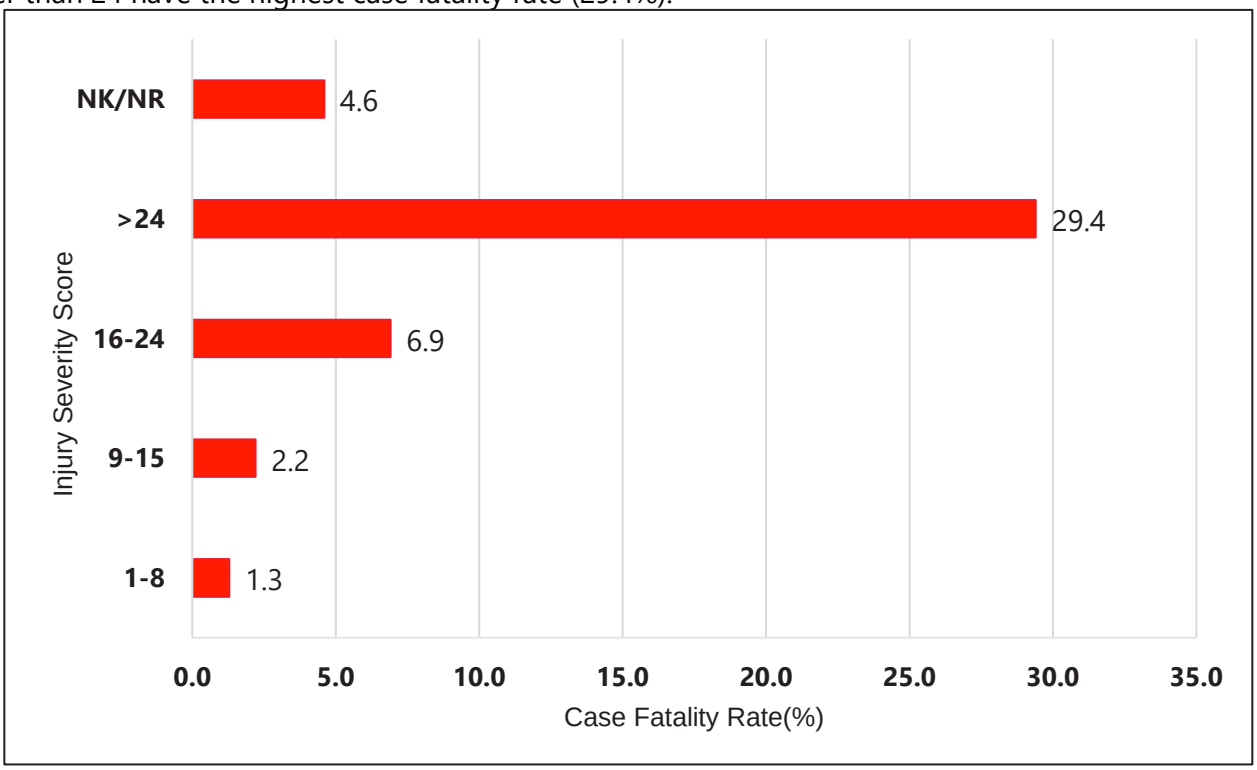


Table 17: Incidents by Injury Severity Score (ISS) and Age

The table represents the incidents by injury severity score and age. The largest number (514) of very severe injuries (ISS >24) is in age group 25-34.

Age	ISS 1-8	ISS 9-15	ISS 16-24	ISS > 24	ISS NK/NR	Total
<1	265	191	41	18	17	532
1-4	669	278	30	34	17	1,028
5-9	1,052	211	56	19	17	1,355
10-14	864	293	83	64	17	1,321
15-19	1,029	708	251	258	8	2,254
20-24	985	728	320	266	8	2,307
25-34	2,009	1,518	571	522	9	4,629
35-44	1,652	1,287	501	347	9	3,796
45-54	1,415	1,201	443	260	6	3,325
55-64	1,749	1,815	505	356	7	4,432
65-74	1,842	2,383	524	290	19	5,058
75-84	1,835	2,728	468	305	22	5,358
>=85	1,194	2,021	287	143	18	3,663
NK/NR	0	0	0	2	0	2
Total	16,560	15,362	4,080	2,884	174	39,060

Figure 17: Incidents by Injury Severity Score (ISS) and Age

The graph represents the incidents by injury severity score and age. Points on the line added together in the age ranges represent the counts seen in Table 17.

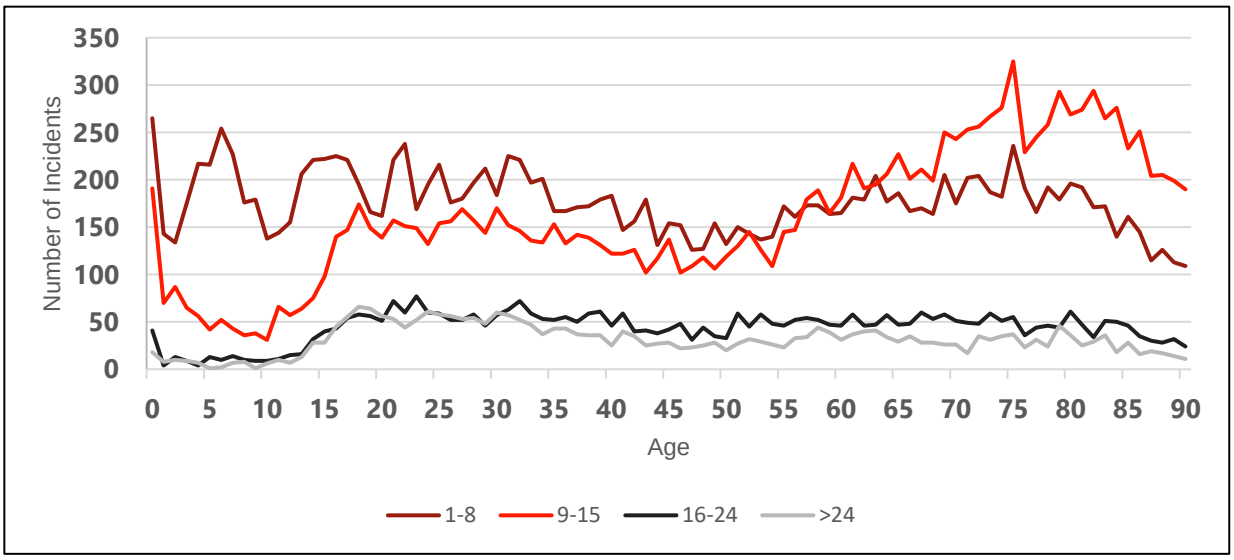


Table 18: Case Fatality Rate by Injury Severity Score (ISS) and Age

The table represents the incidents by injury severity score and age. The highest total fatality rate (6.3%) is in age group 20-24.

Age	ISS 1-8	ISS 9-15	ISS 16-24	ISS > 24	ISS NK/NR	Total
<1	0.0	0.5	7.3	16.7	5.9	1.5
1-4	0.1	0.7	10.0	32.4	0.0	1.7
5-9	0.1	0.0	7.1	26.3	0.0	0.7
10-14	0.1	0.7	0.0	20.3	0.0	1.2
15-19	1.6	1.4	4.8	27.9	0.0	4.9
20-24	1.7	2.1	6.9	33.5	25.0	6.3
25-34	1.3	2.2	6.1	30.7	22.2	5.6
35-44	1.1	1.7	7.6	28.0	0.0	4.6
45-54	1.7	2.7	5.4	30.4	0.0	4.8
55-64	1.1	2.1	7.1	30.1	14.3	4.5
65-74	1.2	1.7	6.3	29.7	5.3	3.6
75-84	2.3	2.6	9.0	28.9	4.5	4.6
>=85	2.0	3.5	10.5	25.2	0.0	4.4
NK/NR	0.0	0.0	0.0	100.0	0.0	100.0
Total	1.3	2.2	6.9	29.4	4.6	4.3

Figure 18: Case Fatality Rate by Injury Severity Score (ISS) and Age

The graph represents the case fatality rate by injury severity score and age. Points on the line added together in the age ranges represent the counts seen in Table 18.

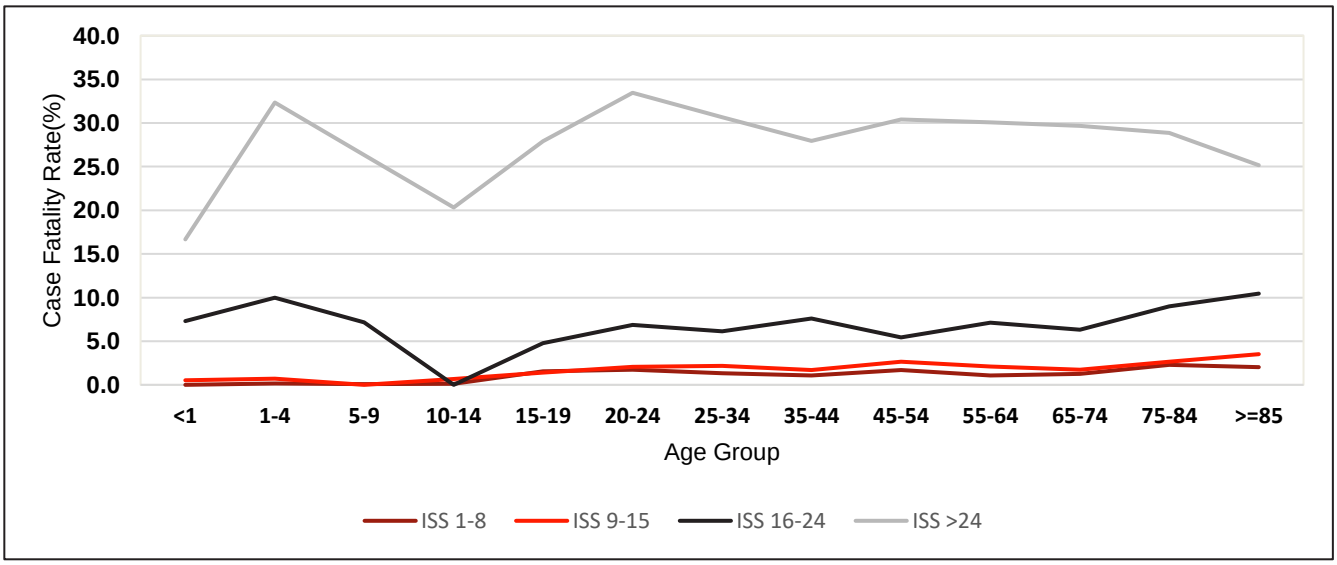


Table 19: Incidents and Case Fatality Rate by Work-Related Injury

The table represents work-related injuries by frequency and fatality rate. In 2022, there were 1,233 confirmed work-related injuries, which account for 3.2% of all trauma injuries. The case fatality rate for the confirmed work-related injuries is 2.2%.

Work-Related Injury	Number	Percent	Deaths	Case Fatality Rate
FALSE	37,780	96.7	1,662	4.4
TRUE	1,233	3.2	27	2.2
UNKNOWN	47	0.1	1	2.1
Total	39,060	100.0	1,690	4.3

Figure 19: Case Fatality Rate by Work-Related Injury

The graph represents the case fatality rate of work-related injuries. The case fatality rate of the confirmed work-related injuries is 2.2% and is lower than the total case fatality rate 4.3%.

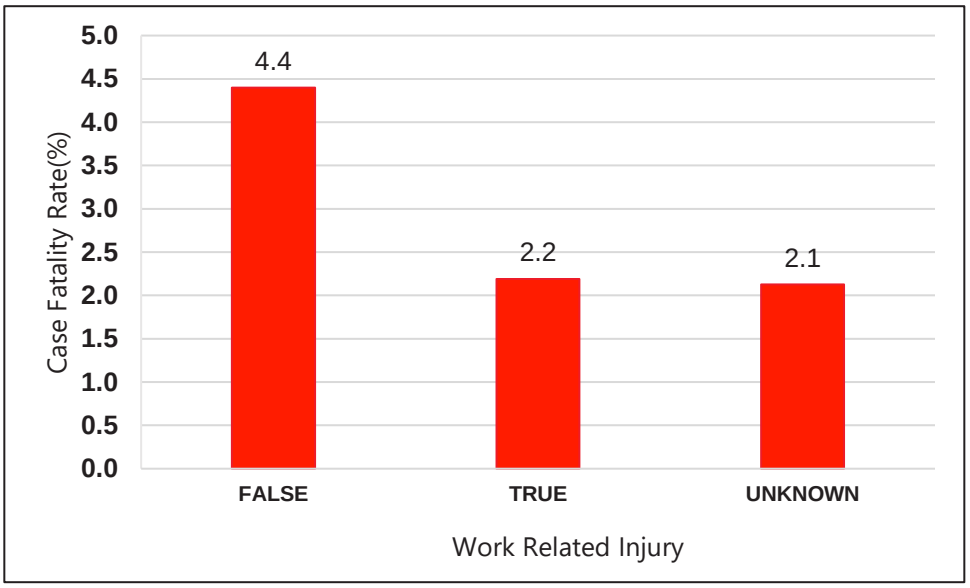


Table 20: Incidents and Case Fatality Rate by Intent

The table represents the frequency and case fatality rate of injuries by the intent of the injury. Most of the injuries are unintentional injuries (87.3%). Assault injuries account for 10.3% of all the injuries. The case fatality rate of self-inflicted is the highest (23.6%). The number of records missing data is 29. These records are not counted in the total.

Intent	Number	Percent	Deaths	Case Fatality Rate
Unintentional	34,079	87.3	1,166	3.4
Assault	4,036	10.3	346	8.6
Self-inflicted	462	1.2	109	23.6
Undetermined	394	1.0	56	14.2
Other	60	0.2	12	20.0
Total	39,031	100.0	1,689	4.3

Figure 20: Case Fatality Rate by Intent

The graph represents the case fatality rate of injuries by the intent. The case fatality rate of self-inflicted is the highest (23.6%).

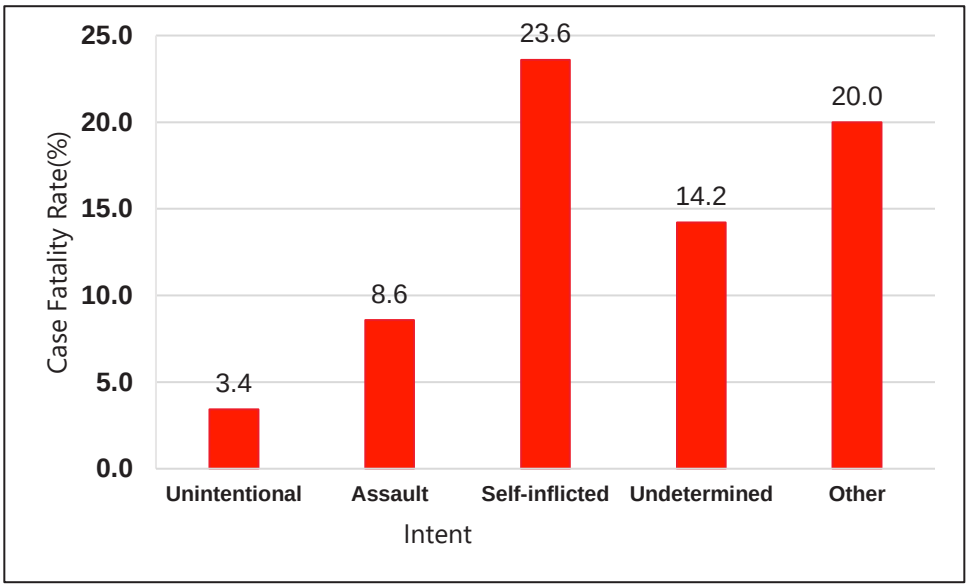


Table 21: Incidents and Case Fatality Rate by the Top 40 Places of Injury

The table represents the frequency and case fatality rate of injuries by the location of the injury. The documented location with the highest frequency is unspecified. The highest number of deaths (284) resulted from injuries that occurred on a local resident or business street. The unspecified place is used by registrars when inadequate documentation is available.

ICD10 Injury Place	Number	Percent	Deaths	Case Fatality Rate
Unspecified place or not applicable	5,338	13.7	117	2.2
Local residential or business street	4,601	11.8	284	6.2
Unspecified street and highway	3,388	8.7	150	4.4
Unspecified place in single-family (private) house	3,199	8.2	139	4.3
Other place in single-family (private) house	1,719	4.4	70	4.1
State road	1,567	4.0	102	6.5
Unspecified place in unspecified non-institutional (private) residence	1,546	4.0	69	4.5
Garden or yard in single-family (private) house	1,117	2.9	60	5.4
Bedroom of single-family (private) house	1,042	2.7	50	4.8
Interstate highway	1,003	2.6	65	6.5
Bathroom of single-family (private) house	834	2.1	50	6.0
Unspecified place in nursing home	692	1.8	21	3.0
Other place in unspecified non-institutional (private) residence	630	1.6	26	4.1

Kitchen of single-family (private) house	584	1.5	25	4.3
Parking lot	530	1.4	47	8.9
Private driveway to single-family (private) house	497	1.3	23	4.6
Garden or yard of unspecified non-institutional (private) residence	495	1.3	12	2.4
Unspecified place in prison	493	1.3	5	1.0
Bedroom in nursing home	460	1.2	14	3.0
Unspecified place in apartment	447	1.1	36	8.1
Other paved roadways	409	1.0	22	5.4
Sidewalk	353	0.9	8	2.3
Bedroom of unspecified non-institutional (private) residence	343	0.9	10	2.9
Other specified places	337	0.9	13	3.9
Other trade areas	327	0.8	20	6.1
Bathroom of unspec private residence single-family or house	322	0.8	4	1.2
Parkway	284	0.7	13	4.6
Other recreation area	246	0.6	2	0.8
Private garage of single-family (private) house	238	0.6	8	3.4
Other specified industrial and construction area	232	0.6	7	3.0

Supermarket, store or market	232	0.6	12	5.2
Gas station	229	0.6	34	14.8
Other place in apartment	228	0.6	21	9.2
Restaurant or cafe	225	0.6	11	4.9
Kitchen of unspecified non-institutional (private) residence	203	0.5	8	3.9
Public park	189	0.5	3	1.6
Other specified sports and athletic area	186	0.5	2	1.1
Exit ramp or entrance ramp of street or highway	185	0.5	15	8.1
Bathroom in nursing home	181	0.5	2	1.1
Unspecified place in other specified residential institution	174	0.4	8	4.6

Table 22: Incidents by AIS Severity and Case Fatality Rate

The table represents the frequency of injury severity by fatality rate. Patients with the maximum AIS severity have the highest case fatality rate (80.0%). There were 174 records missing AIS severity.

AIS Severity	Number	Percent	Deaths	Case Fatality Rate %
Maximum	90	0.2	72	80.0
Critical	1,810	4.7	634	35.0
Severe	2,764	7.1	301	10.9
Serious	15,859	40.8	441	2.8
Moderate	14,156	36.4	129	0.9
Minor	4,207	10.8	105	2.5
Total	38,886	100.0	1,682	4.3

Figure 22A: Incidents by AIS Severity

The graph represents the frequency of injuries by severity levels. Most injuries were considered serious.

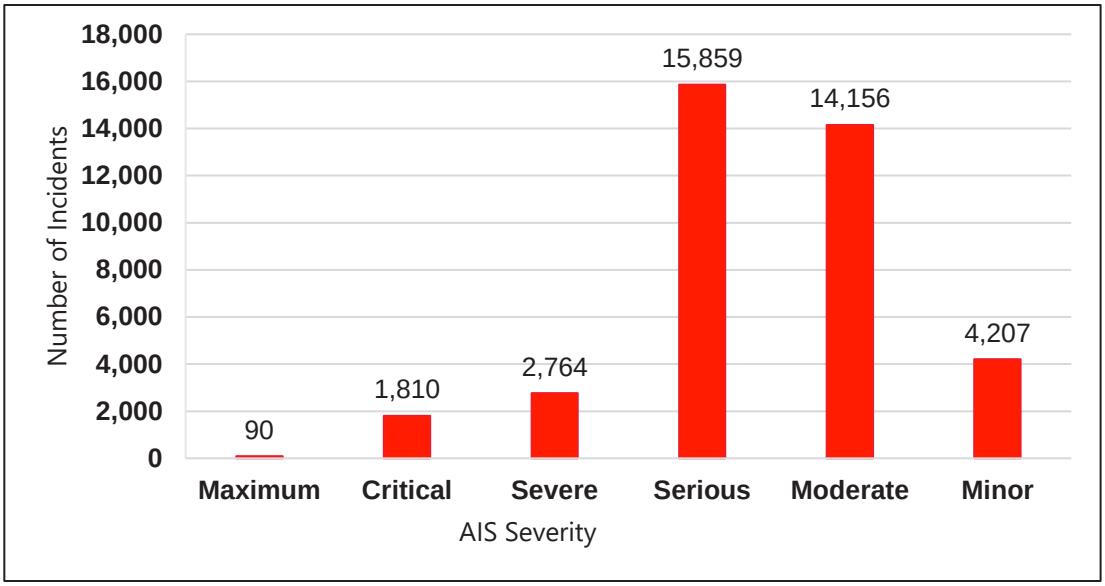


Figure 22B: Case Fatality Rate (%) by AIS Severity

The graph represents the frequency of death from trauma injuries. Patients with the maximum AIS severity have the highest case fatality rate (80.0%).

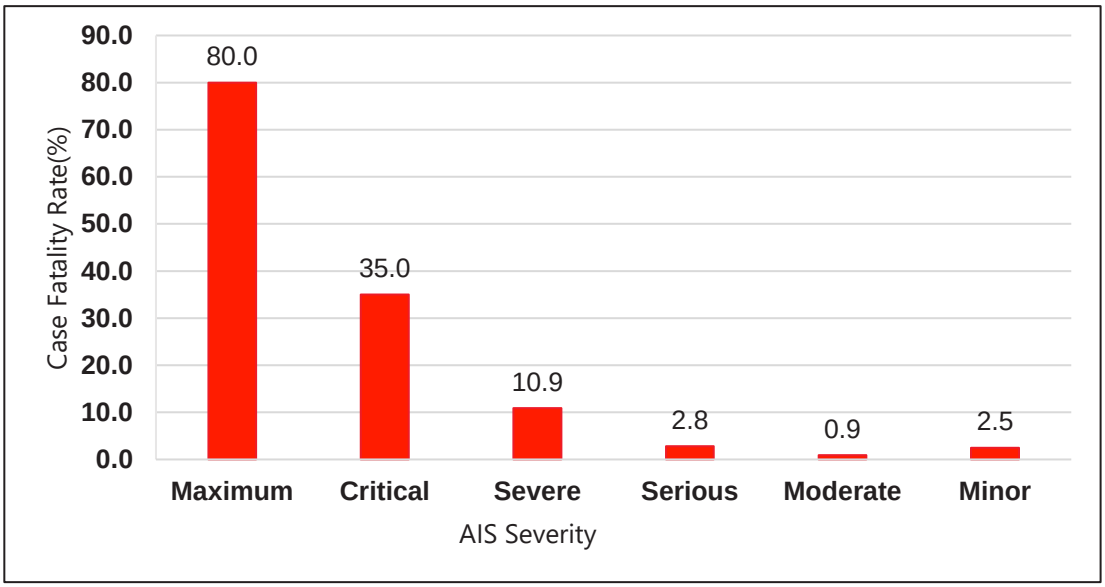


Table 23: Incidents by ISS Body Region and Discharge Status

The table represents the frequency of injuries by the ISS body regions with the case fatality rate for each body region. If a patient has multiple injured body regions, only one region with the highest AIS severity is counted. Patients with the highest AIS severity in the head or neck region have the highest case fatality rate (8.9%).

ISS Body Region	Number	Percent	Deaths	Case Fatality Rate %
Extremities or Pelvic Girdle	16,324	42.0	251	1.5
Head or Neck	8,719	22.4	772	8.9
Chest	6,079	15.6	368	6.1
External	3,372	8.7	143	4.2
Abdominal or Pelvic Contents	2,852	7.3	136	4.8
Face	1,539	4.0	12	0.8
Total	38,885	100.0	1,682	4.3

Figure 23A: Incidents by ISS Body Region

The graph represents the frequency of injuries by ISS body region. Most injuries occur in the extremities or pelvic girdle ISS body region, which correlates to the most frequent mechanism of injury, falls and MVC.

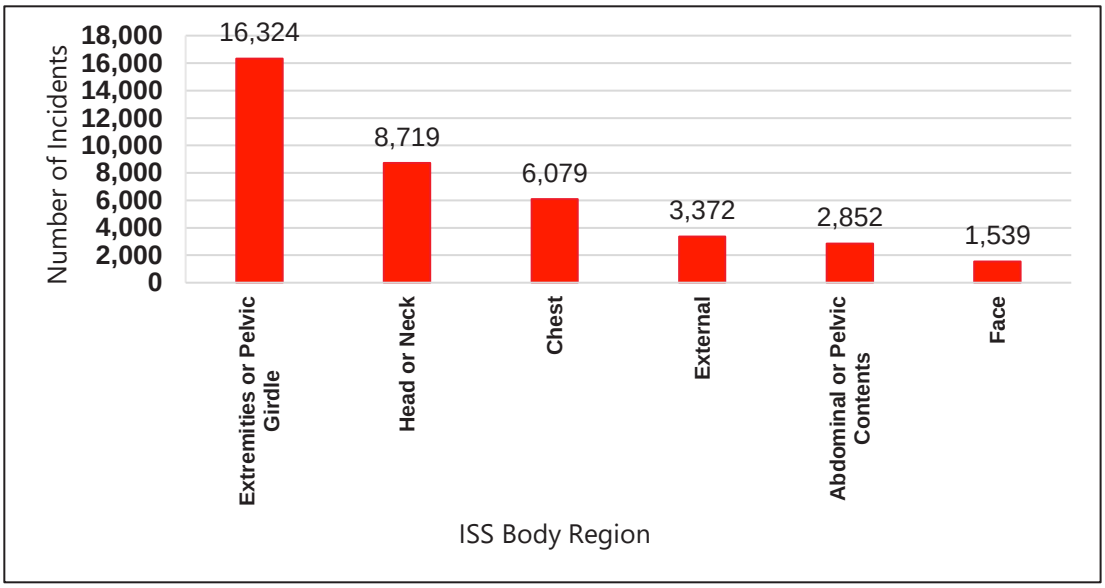


Figure 23B: Incidents by Case Fatality Rate and ISS Body Region

The graph represents the case fatality rate by ISS body region. Most fatalities involve an injury to the head or neck region which could be caused by a firearm, MVC, or fall. See Figure 15B for fatal MOI (Mechanism of Injury) detail.

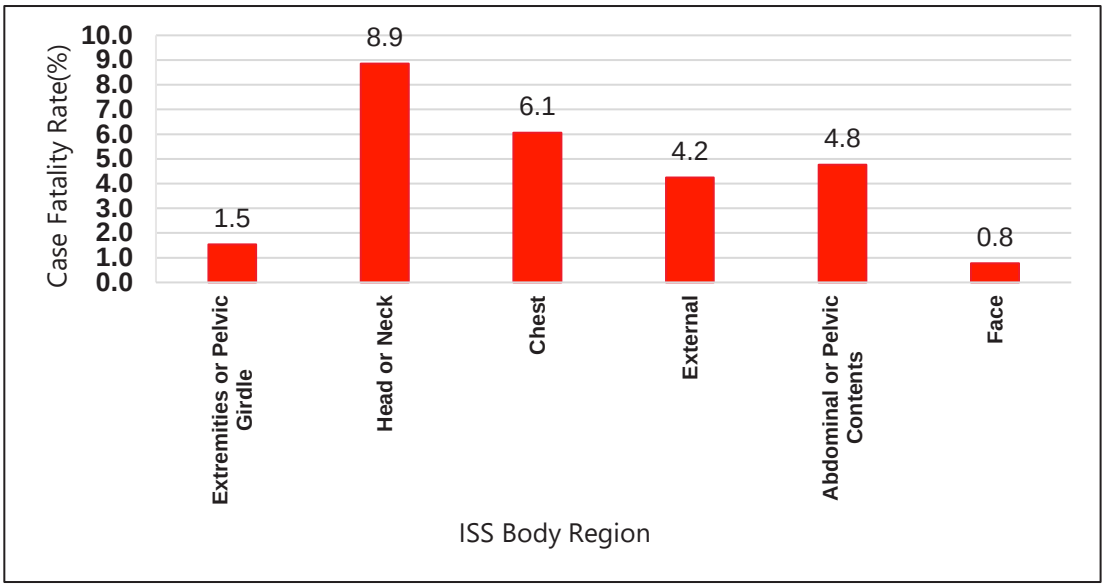


Table 24: Incidents by Protective Devices

The table displays the frequency of protective device use by injured patients. Helmets are reported as used in only 4.2% of the injured patients.

Protective Device	Frequency	Percent
None	32,111	82.2
Not Applicable	4,998	12.8
Helmet	1,621	4.2
Unknown	265	0.7
Protective Clothing	24	0.1
Other	16	0.0
Protective Non-Clothing Gear (e.g. Shin Guard, Padding)	11	0.0
Eye Protection	6	0.0
Hard Hat	5	0.0
Personal Floatation Device	3	0.0
Total	39,060	100.0

OUTCOMES INFORMATION

Outcome measurements describe the results of intervention and management of injuries. Positive patient outcomes result from an effective and efficient system of care.

Table 25: Median Length of Stay (LOS) in Days by Mechanism of Injury (MOI)

The table represents the frequency of the mechanisms of injury for patients and the median length of stay in days for each mechanism. Patients with a Suffocation MOI have the highest median LOS of 5 days. The table displays the MOI that have frequency more than one.

Mechanism of Injury	Frequency	Median Days
Fall	17,099	4
Motor vehicle traffic	9,907	4
Firearm	2,603	3
Struck by, against	1,787	2
Cut/pierce	1,229	2
Transport, other	871	2
Other specified and classifiable	470	2
Pedal cyclist, other	306	2
Natural/environmental, Bites and stings	292	1
Pedestrian, other	253	3
Machinery	191	1
Natural/environmental, Other	115	2
Overexertion	110	2
Other specified, not elsewhere classifiable	71	2
Unspecified	68	3
Fire/flame	20	2
Hot object/substance	10	1
Suffocation	8	5
Drowning/submersion	2	4

Figure 25: Median Length of Stay (LOS) in Days by Selected Mechanisms of Injury

The graph displays the top eight frequent mechanisms of injury (MOI) with the median length of stay. Note that table 25 contains other mechanisms of injury with the same LOS in days as the graph displays. Not seen in the graph due to the low frequency are patients with Drowning/submersion MOI.

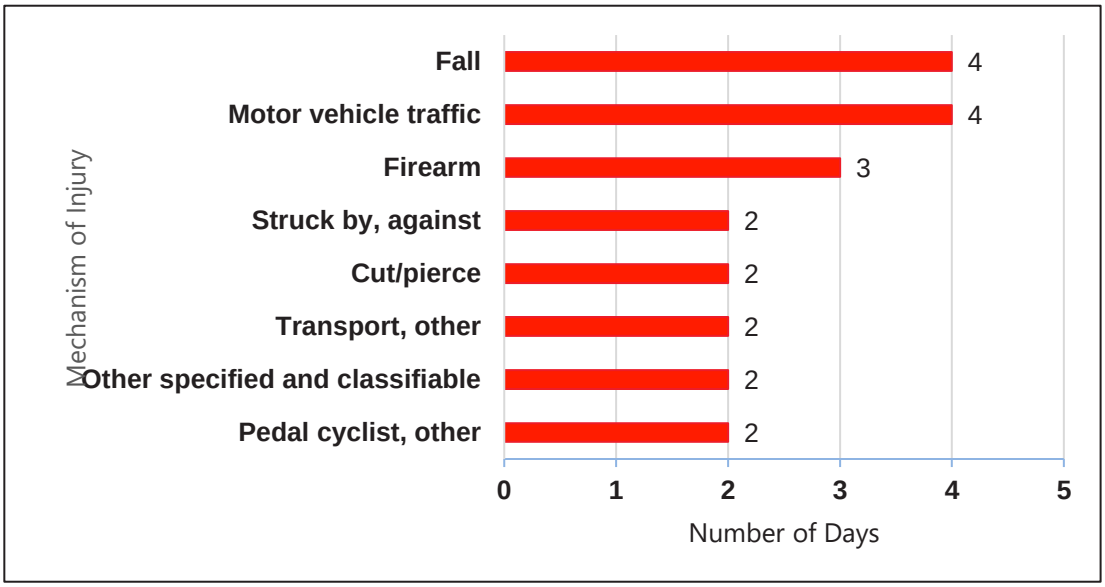


Table 26: Median Length of Stay (LOS) in Days by Injury Severity Score

The median length of stay increases as the injury severity score increases. Records with a blank ISS entry are omitted.

Injury Severity Score	Frequency	Median Days
1-8	14,359	2
9-15	14,662	4
16-24	3,888	7
>24	2,616	9
NK/NR	118	1

Figure 26: Median Length of Stay (LOS) in Days by Injury Severity Score

The graph displays the median length of stay in days by injury severity score groups.

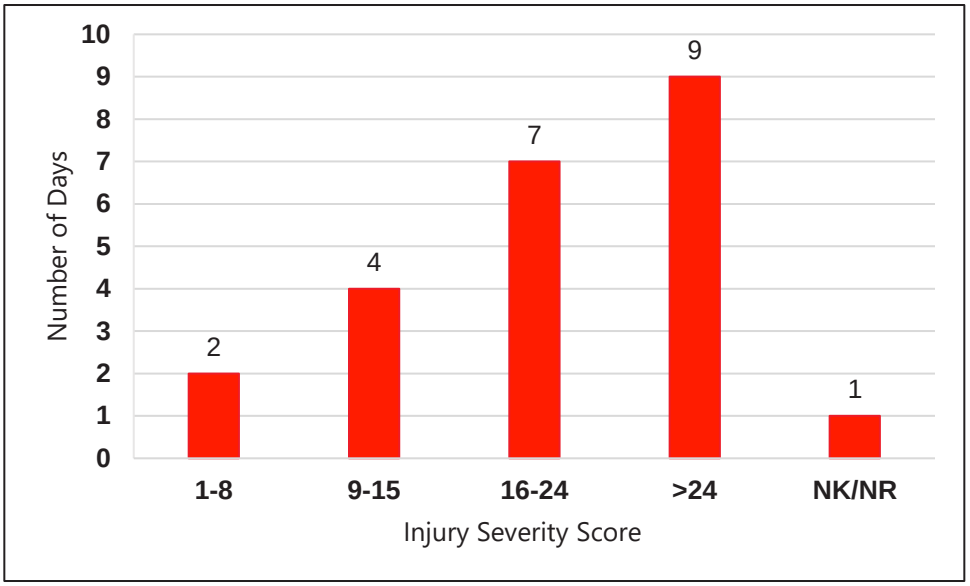


Table 27: Median Ventilator Days by Mechanism of Injury (MOI)

The table represents the admitted trauma patients with ventilator days greater than zero. Patients with Pedal cyclist and Pedestrian injuries have the highest median ventilator days. The table displays the MOI that have frequency more than one.

Mechanism of Injury	Frequency	Median Ventilator Days
Motor vehicle traffic	1,368	4
Fall	925	3
Firearm	604	3
Struck by, against	101	3
Cut/pierce	73	2
Transport, other	63	3
Pedestrian, other	39	6
Other specified and classifiable	18	3
Other specified, not elsewhere classifiable	15	2
Unspecified	13	4
Pedal cyclist, other	10	9
Fire/flame	9	1
Suffocation	5	4

Natural/environmental, Other	4	3
Machinery	2	2
Natural/environmental, Bites and stings	2	5

Figure 27: Median Ventilator Days by Selected Mechanism of Injury

The graph displays the median ventilator days by the top eight mechanism of injury.

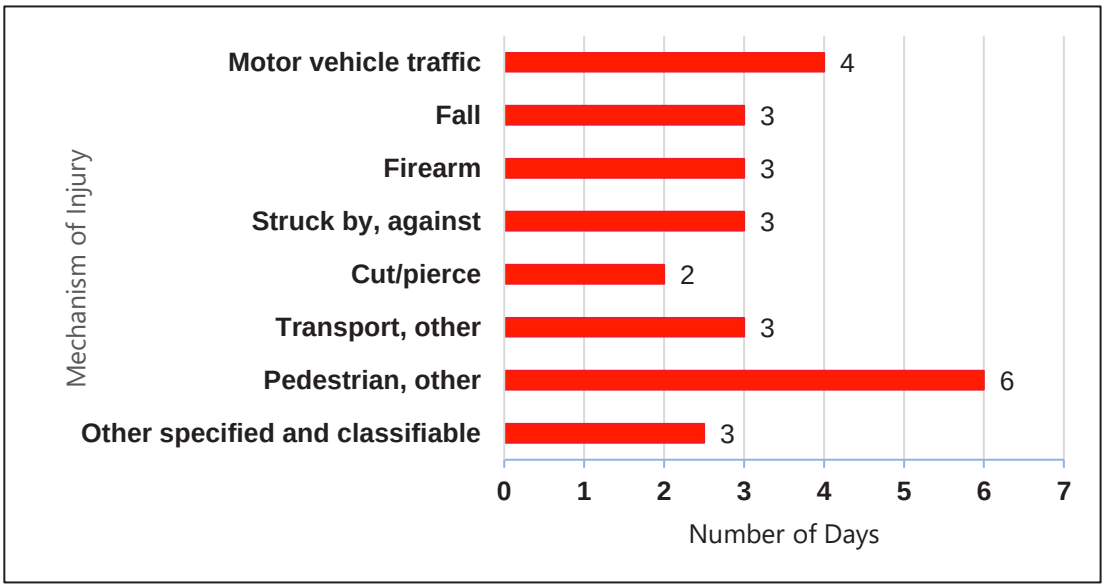


Table 28: Median Ventilator Days by Injury Severity Score (ISS)

The table represents the frequency of patients within the same ISS group and the median ventilator days. Patients with an ISS greater than 16 were on the ventilator for the same number of median days.

Injury Severity Score	Frequency	Median Ventilator Days
1-8	354	2.0
9-15	678	3.0
16-24	757	4.0
>24	1,484	4.0
NK/NR	4	3.5

Figure 28: Median Ventilator Days by Injury Severity Score (ISS)

The graph displays the median ventilator days by injury severity score. The higher the ISS the longer patients required the ventilator.

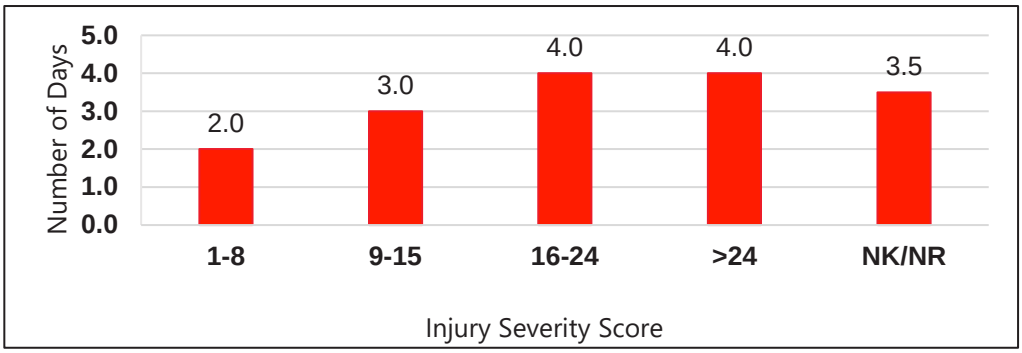


Table 29: Median ICU Days by Mechanism of Injury

The table represents inpatients with Intensive Care Unit (ICU) days >0. Patients with Overexertion injuries have the highest median ICU days of 5 days. The table displays the MOI that have frequency more than one.

Mechanism of Injury	Frequency	Median ICU Days
Fall	3,659	3
Motor vehicle traffic	3,183	4
Firearm	909	4
Struck by, against	343	3
Cut/pierce	201	3
Transport, other	196	3
Pedestrian, other	72	4
Other specified and classifiable	63	3
Pedal cyclist, other	50	3
Machinery	26	3
Unspecified	26	4
Other specified, not elsewhere classifiable	21	4
Natural/environmental, Other	20	3
Natural/environmental, Bites and stings	18	3
Fire/flame	9	3
Suffocation	7	4
Drowning/submersion	2	4
Overexertion	2	5

Figure 29: Median ICU Days by Selected Mechanism of Injury

The graph displays the top eight most frequent mechanisms of injury with their respective median number of ICU days.

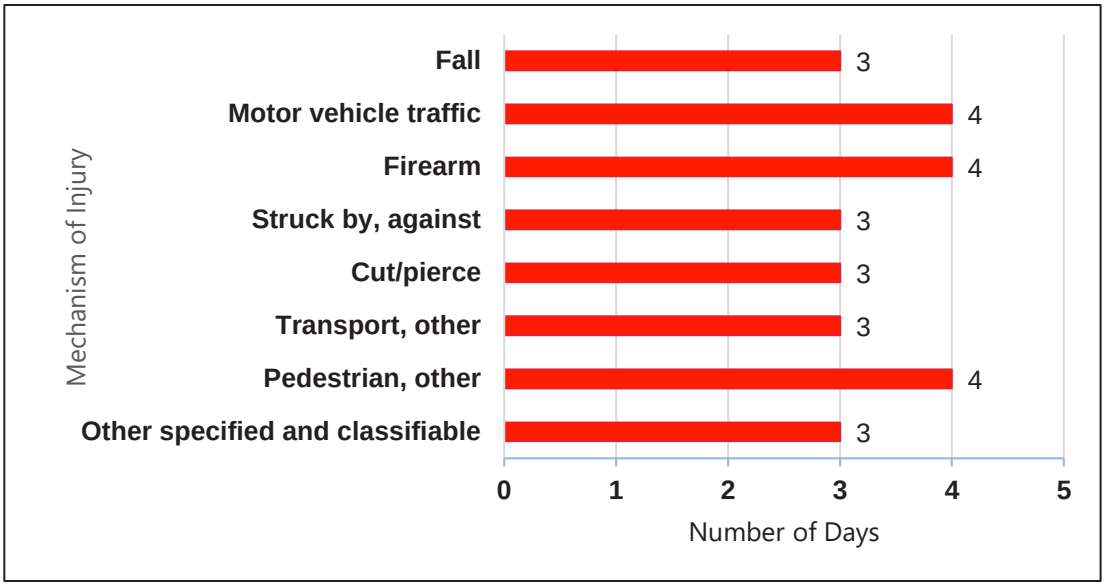


Table 30: Median ICU Days by Injury Severity Score (ISS)

The table represents the median ICU days by injury severity group. The median ICU days increase with injury severity scores.

Injury Severity Score	Frequency	Median ICU Days
1-8	1,378	3
9-15	2,967	3
16-24	2,316	4
>24	2,191	5
NK/NR	6	3

Figure 30: Median ICU days by Injury Severity Score

The graph displays the median ICU days for all trauma registry patients. As expected, patients with higher ISS experienced more ICU days.

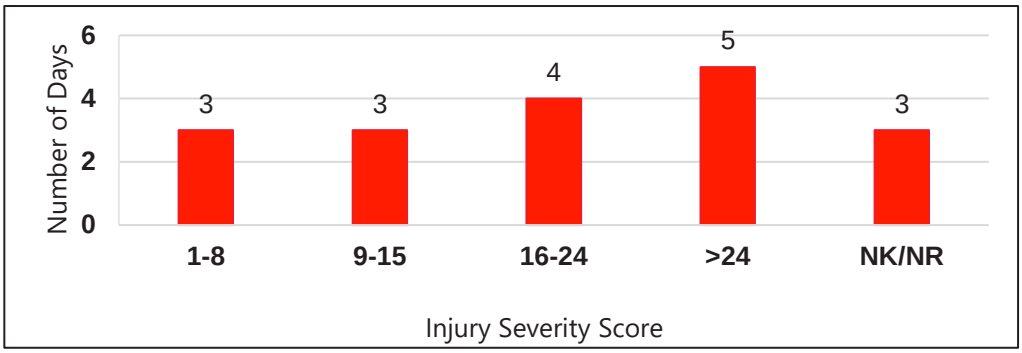


Table 31: Incidents by ED Discharge Disposition

The table represents the frequency of ED Dispositions. Less than half of the ED Dispositions were to a Floor Bed (43.8%). Of the 39,060 trauma registry cases, the Emergency Department (ED) disposition mortality rate was 1.7%, representing 665 lives lost.

ED Disposition	Frequency	Percent
Floor Bed (General Admission, Non-Specialty Unit Bed)	17,119	43.8
Intensive Care Unit (ICU)	6,465	16.6
Operating Room	5,999	15.4
Home without Services	2,540	6.5
Transferred to Another Hospital	2,417	6.2
Observation Unit (Unit that Provides LT 24 Hour Stays)	1,660	4.2
Telemetry/Step-Down Unit (Less Acuity than ICU)	1,641	4.2
Died/Expired	665	1.7
Not Applicable	377	1.0
Left Against Medical Advice	87	0.2
Other (Jail, Institutional Care, Mental Health, etc.)	59	0.2
Home with Services	18	0.0
Burn Center	11	0.0
Discharged/Transferred to Hospice Care	2	0.0
Total	39,060	100.0

Table 32: Incidents by Signs of Life

The table represents the frequency of patients arriving to the trauma center with and without signs of life. Most patients (70.3%) arrived with signs of life.

Signs of Life	Frequency	Percent
Arrived with Signs of Life	27,471	70.3
Not Applicable	11,195	28.7
Arrived with No Signs of Life	391	1.0
Unknown	3	0.0
Total	39,060	100.0

Table 33: Frequency of Hospital Discharge Disposition

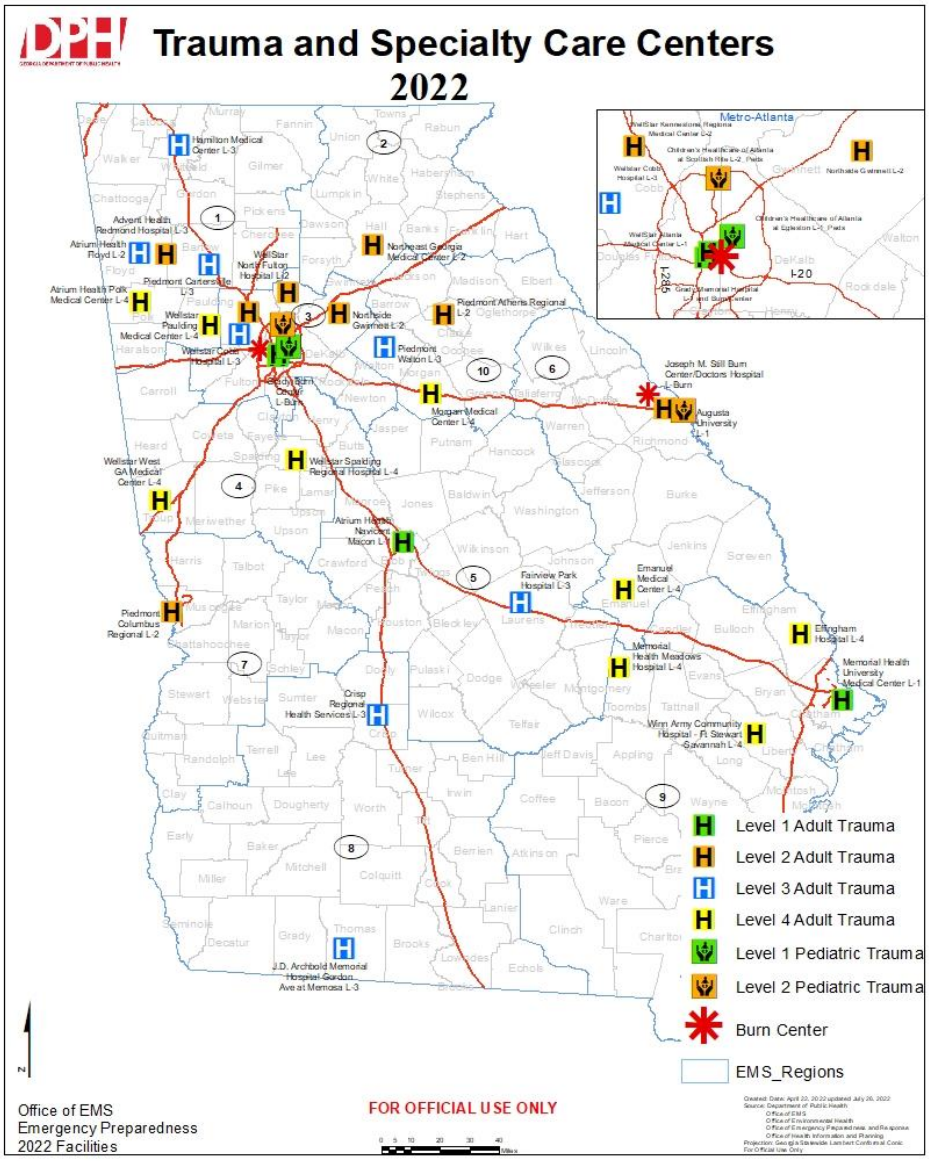
The table represents the hospital discharge disposition of 39,060 trauma registry cases. The hospital mortality rate was 3.3%, representing 1,276 lives lost.

Hospital Discharge Disposition	Frequency	Percent
Discharged Home with No Home Services	21,706	55.6
Discharged/Transferred to Inpatient Rehab or Designated Unit	3,522	9.0
Discharged/Transferred to Skilled Nursing Facility (SNF)	3,364	8.6
Discharge/Transferred to Home Under Care of Organized Home Health Service	3,098	7.9
Not Applicable	2,788	7.1
Discharged/Transferred to a Short-Term General Hospital for Inpatient Care	1,349	3.5
Expired	1,276	3.3
Discharged/Transferred to Hospice Care	592	1.5
Left Against Medical Advice or Discontinued Care	472	1.2
Discharged/Transferred to Court/Law Enforcement	294	0.8
Discharged/Transferred to Long Term Care Hospital (LTCH)	160	0.4
Discharged/Transferred to a Psychiatric Hospital or Distinct Part Unit of a Hosp	155	0.4
Discharged/Transferred to Another Type of Institution not Defined Elsewhere	144	0.4
Discharged/Transferred to an Intermediate Care Facility (ICF)	116	0.3

Burn Center	14	0.0
RETIRED 2014 - Discharged/Transferred to Another Type of Rehab or LTCF	7	0.0
SCI Rehabilitation	3	0.0
Total	39,060	100.0

APPENDIX 1

2022 TRAUMA CENTERS AND SPECIALTY CARE CENTERS IN GEORGIA WITHIN EMS REGIONS



APPENDIX 2

2022 ANNUAL TRAUMA REGISTRY INCLUSION CRITERIA

Georgia Trauma Registry Inclusion Criteria

Any patient presenting with a traumatic injury occurring within 14 days of initial hospital visit and with an ICD-10_CM diagnosis code below:

o S00-S99 w/ 7th character modifiers of A, B, or C. (see exclusions)
o T07 (unspecified multiple injuries)
o T14 (injury of unspecified body region)
o T20-T28 with 7th character A only or T30-T32 (patient must also have a non-burn trauma diagnosis)*
o T79.A1 – T79.A9 w/ 7th character modifier A (Traumatic Compartment Syndrome – initial diagnosis)

EXCLUDING patients with isolated injuries:

o Diagnosis codes of ICD-10-CM superficial injuries: S00, S10, S20, S30, S40, S50, S60, S70, S80, S90
o Late effect codes w/ the 7th character modifier of D through S
o Patients w/ isolated burn injuries T20-T28 w/7th modifier A or T30-T32*
o Patients w/ injuries older than 14 days from first ED arrival date

AND must include one of the following in addition to a valid trauma diagnosis code from the listed above

o Admitted to the hospital after discharge from the ED, regardless of length of stay
o Transferred to or from another acute care facility
o Died, regardless of length of stay
o DOA: defined as a patient that died from a traumatic injury before hospital arrival

Additional criteria/notes:

o UUID field entry should be Not Known/Not Recorded until the NEMSIS 3.5 OS is implemented nationwide.
o The Georgia data collection standard for blood utilization includes data for any blood products administered within the first 4 hours from the patient arrival time.
o Unplanned readmissions must be associated with the initial trauma injury, have a trauma diagnosis, ISS total, and be readmitted within 72 hours of discharge from the first visit.
o * Indicates a difference between the Georgia Criteria and the NTDS Criteria

Per the Centers for Medicare and Medicaid Services, Acute Care Hospital is defined as a hospital capable of providing inpatient medical care with services for surgery, acute medical conditions, or injuries. "CMS Data Navigator Glossary of Terms" https://www.cms.gov/Research-Statistics-Data-and systems/Research/ResearchGenInfo/Downloads/DataNav_Glossary_Alpha.pdf (accessed January 15, 2019).

Revised: 08/20/2021, 7/22/2020, 11/15/2019 eff.01/01/2020, Blood collection revised 07/10/2019, 12/18/2017 eff. 01/01/2018, 03/01/2016, 05/20/2015, 04/23/2014, 02/14/2013, 12/31/2012 eff. 01/01/2013; Created: 06/26/2002.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GEORGIA DEPARTMENT OF PUBLIC HEALTH