



TEXAS
Health and Human
Services

**Texas Department of State
Health Services**

2020-2022 Injury Data by Regional Advisory Council (RAC)

March 8th, 2024

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Texas EMS and Trauma Registries


- The Emergency Medical Services and Trauma Registries (EMSTR) collects data from EMS providers, hospitals, justices of the peace, medical examiners, and rehabilitation facilities.
- EMS providers and trauma facilities must report all EMS runs and trauma activations to EMSTR under Texas Administrative Code, Title 25, Chapter 103.
- An EMS run is a resulting action from a call for assistance where an EMS provider is dispatched to, responds to, provides care to, or transports a person.

Methodology Notes

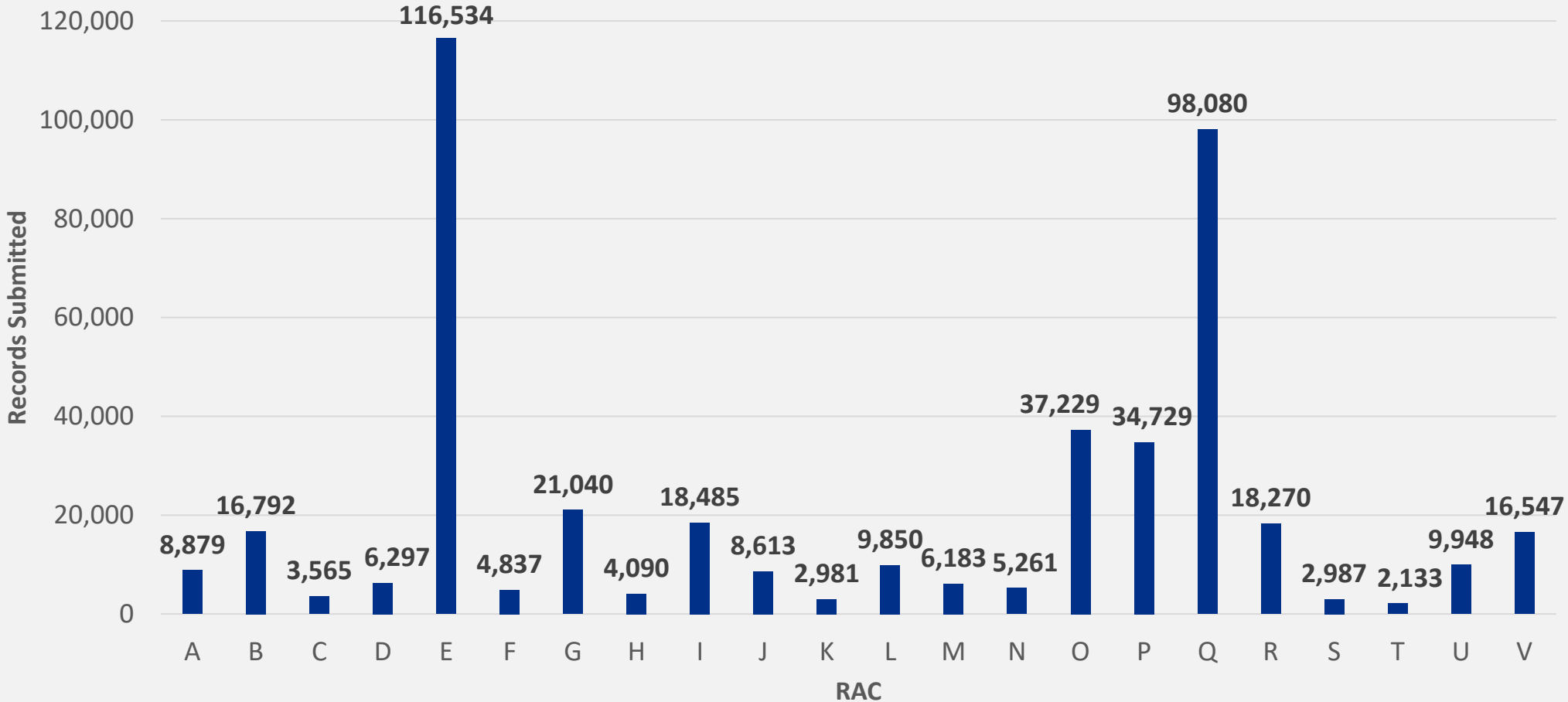
- EMSTR is a passive surveillance system and each hospital is required to independently submit a patient's record. Patients transferred between hospitals will result in more than one record.
- Per epidemiology best practice, EMSTR suppressed data when there were less than five (5) records to protect identifiable data, noted with an asterisk (*).
- This presentation includes data from 2018-2022.
- Age groups – when age is broken down into pediatric, adult, and geriatric, the age breakdowns are:
 - Pediatric – Children 15 and younger;
 - Adult – Ages 16-64; and
 - Geriatric – Ages 65+.

Data Definitions

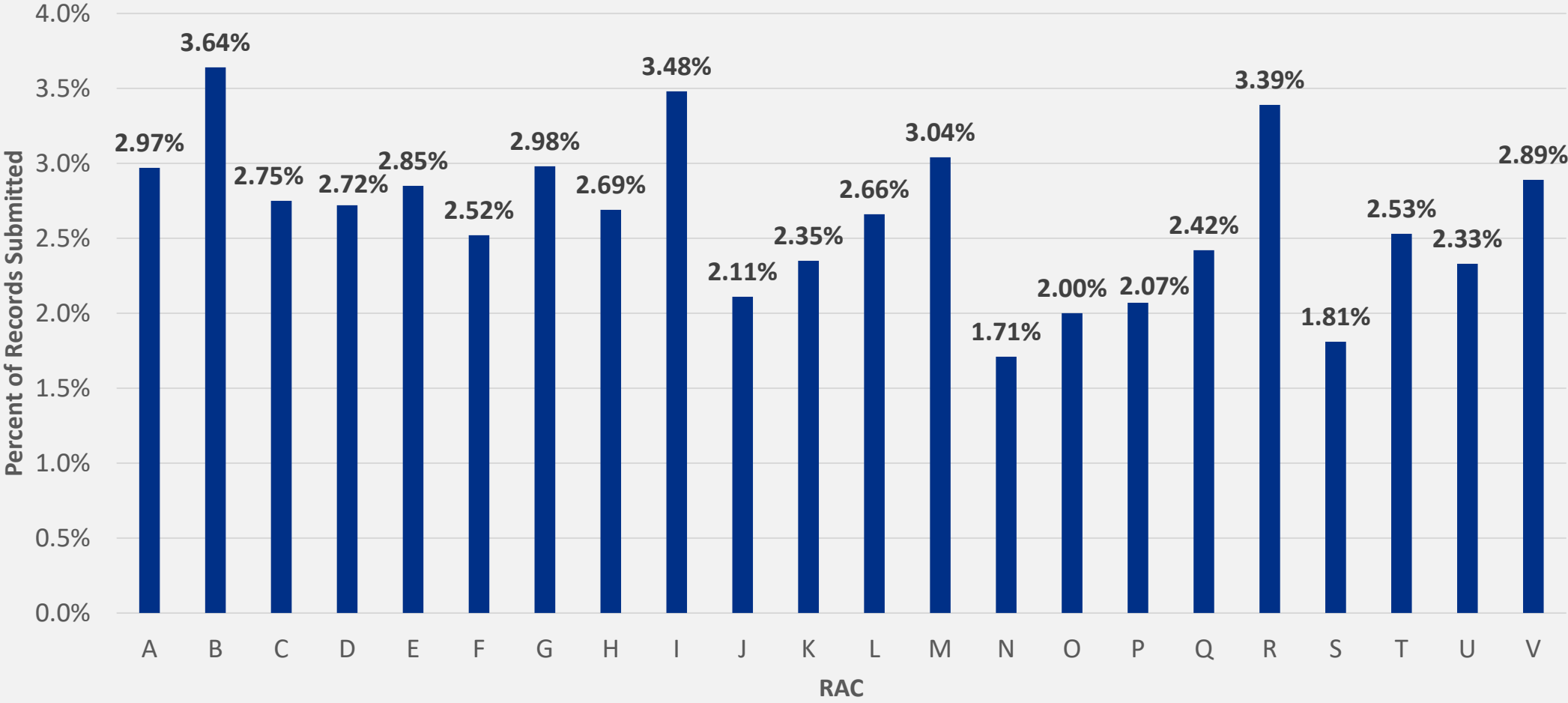


- Shock – Defined as a blood pressure less than 90 for patients 64 and younger or less than 110 for patients 65 and older.
 - Traumatic Brain Injury (TBI) – we used Abbreviated Injury Scale (AIS) scoring to define a TBI.
 - Missing – Providers did not fill in the section.
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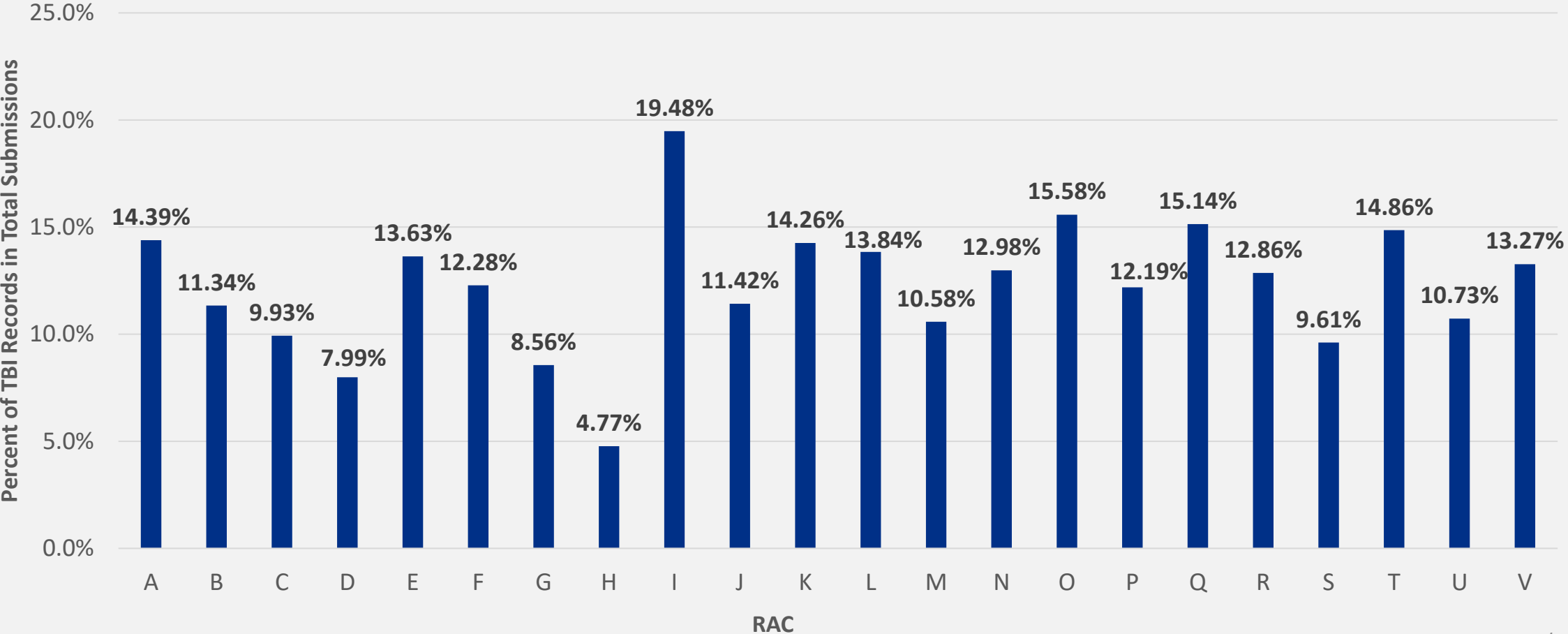
Total Records Submitted by RAC



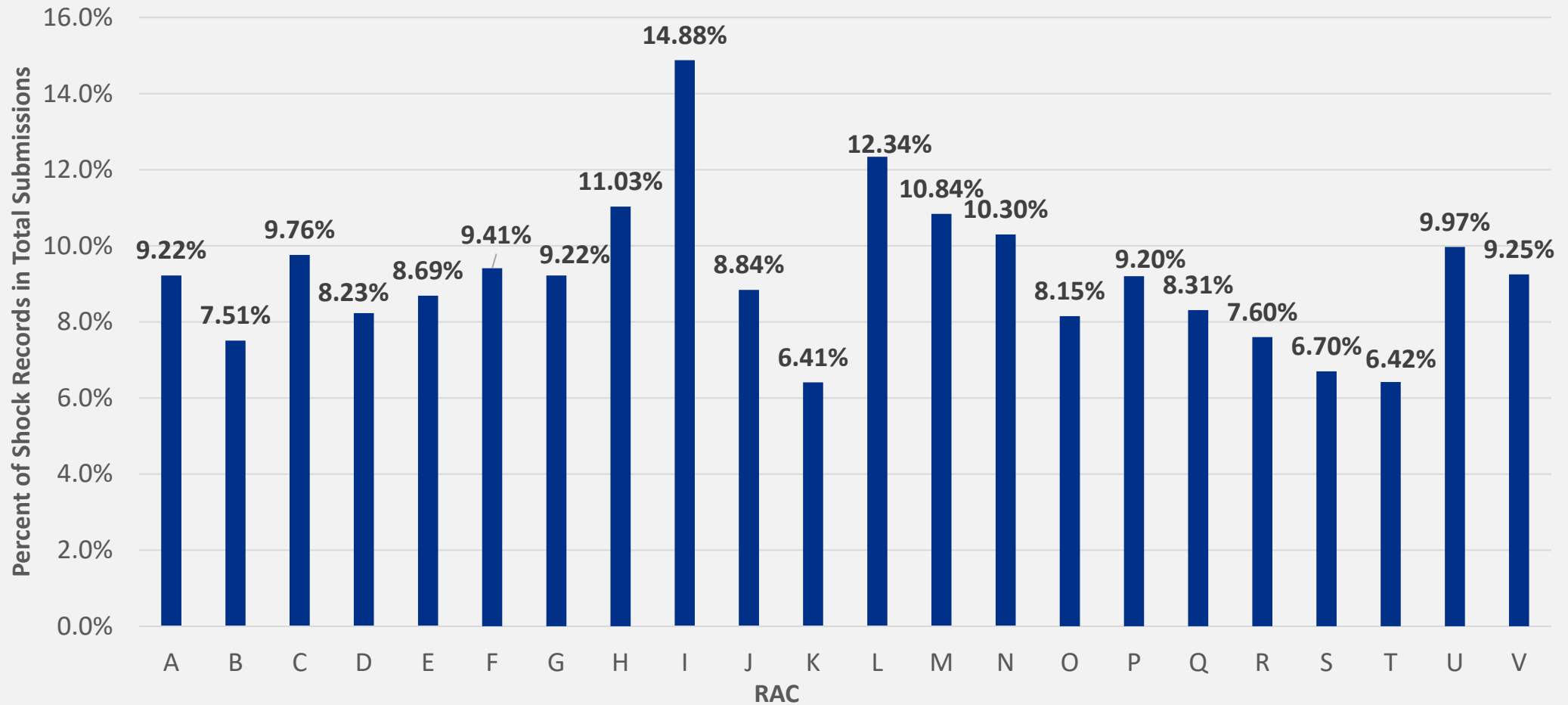
Fatal Records as a Percentage of all Records by RAC



TBIs as a Percentage of Total Records by RAC



Shock as a Percentage of Total Records by RAC



RAC A



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RAC A Top Five Non-Fatal Mechanism – All Ages

Mechanism of Injury	Number	Percent
Fall	5,015	58.21%
Motor Vehicle Traffic (MVT) Occupant	1,134	13.16%
Struck By / Against	422	4.90%
Firearm	284	3.30%
Motor Vehicle (MV) Non-Traffic	237	2.75%

RAC A Top Five Non-Fatal Mechanism – Pediatrics

Mechanism of Injury	Number	Percent
Fall	259	43.60%
Struck By / Against	61	10.27%
MVT Occupant	56	9.43%
MV Non-Traffic	34	5.72%
Hot Object / Substance	29	4.88%

RAC A Top 5 Non-Fatal Mechanism – Adults

Mechanism of Injury	Number	Percent
Fall	1,137	29.22%
MVT Occupant	871	22.38%
Struck By / Against	305	7.84%
Firearm	254	6.53%
Cut/Pierce	187	4.81%

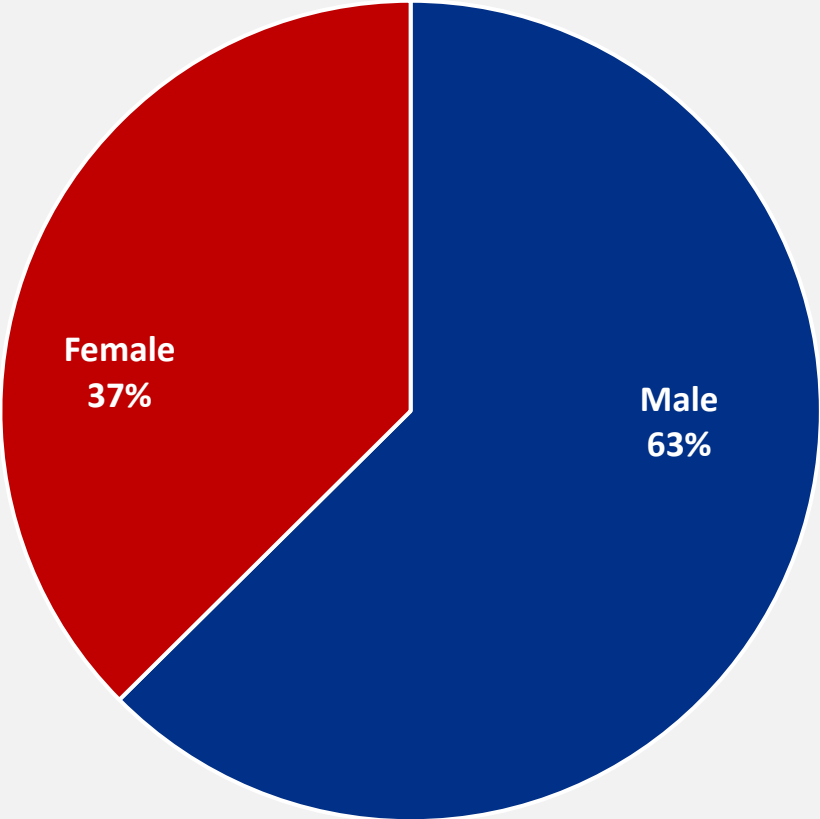
RAC A Top 5 Non-Fatal Mechanism – Geriatric

Mechanism of Injury	Number	Percent
Fall	3,618	87.62%
MVT Occupant	207	5.01%
Struck By / Against	56	1.44%
Not Applicable	33	0.80%
Overexertion	27	0.65%

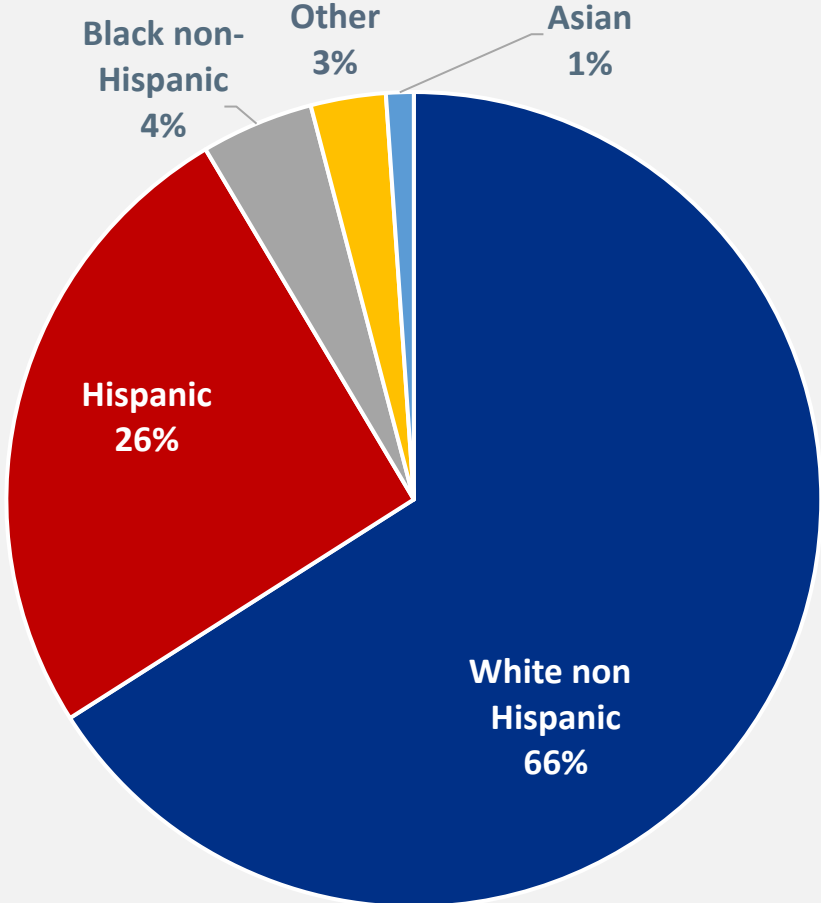
RAC A Top 5 Fatal Mechanism – All Ages

Mechanism of Injury	Number	Percent
Fall	127	48.11%
MVT Occupant	52	19.70%
Firearm	42	15.91%
MVT Motorcyclist	8	3.03%
Struck By / Against	8	3.03%

RAC A - TBI



By Sex



By Race

RAC A – TBI Mechanism

Mechanism of Injury	Number	Percent
Fall	636	49.77%
MVT Occupant	240	18.78%
Struck By / Against	103	8.06%
MV Motorcyclist	65	5.09%
Firearm	46	3.60%
MV Non-Traffic	44	3.44%
Other Land Transport	37	2.90%
MVT Pedestrian	31	2.43%

Note – this only shows the top eight (8) mechanisms of injury.

RAC A – TBI Transport Mode

Transport Mode	Number	Percent
Ground Ambulance	810	63.38%
Private / Public Vehicle / Walk-in	304	23.79%
Helicopter Ambulance	145	11.35%
Fixed-Wing Ambulance	11	0.86%
Not Known / Not Recorded	5	0.39%
Police	*	*
Other	*	*

RAC A – TBI Emergency Department (ED) Disposition

ED Disposition	Number	Percent
Intensive Care Unit	454	35.52%
Floor Bed	259	20.27%
Transferred to Another Hospital	217	16.98%
Home without Services	185	14.48%
Operating Room	93	7.28%
Deceased / Expired	28	1.88%

Note – this only shows the top six (6) ED Dispositions.

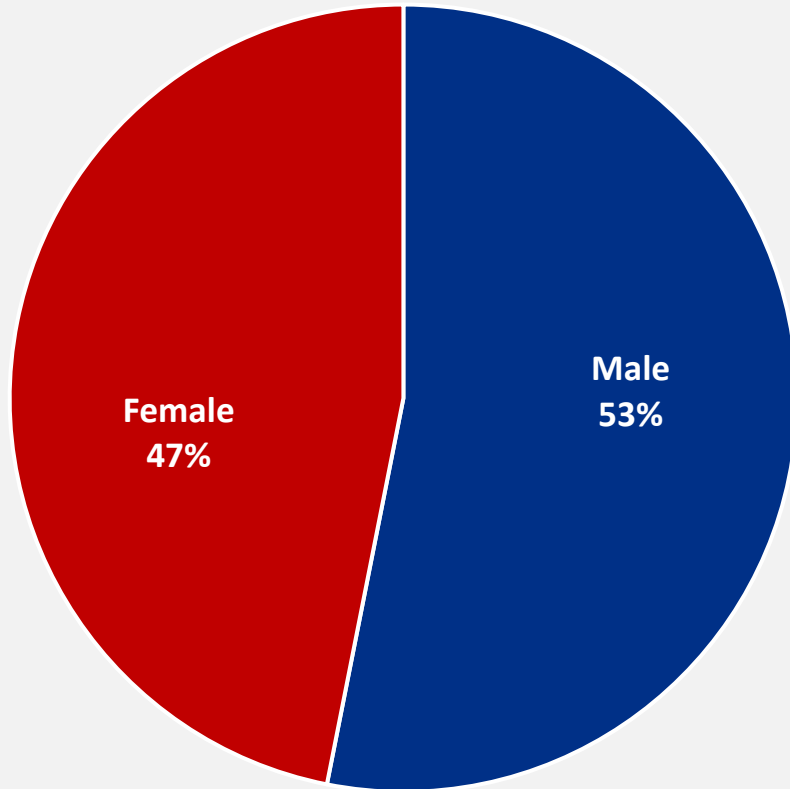
RAC A – TBI Hospital Disposition

Hospital Disposition	Number	Percent
Discharged to Home or Self-care	470	36.78%
Not Applicable*	427	33.41%
Discharged / Transferred to Skilled Nursing Facility	107	8.37%
Deceased / Expired	84	6.57%
Discharged / Transferred to Inpatient Rehab or Designated Unit	78	6.10%

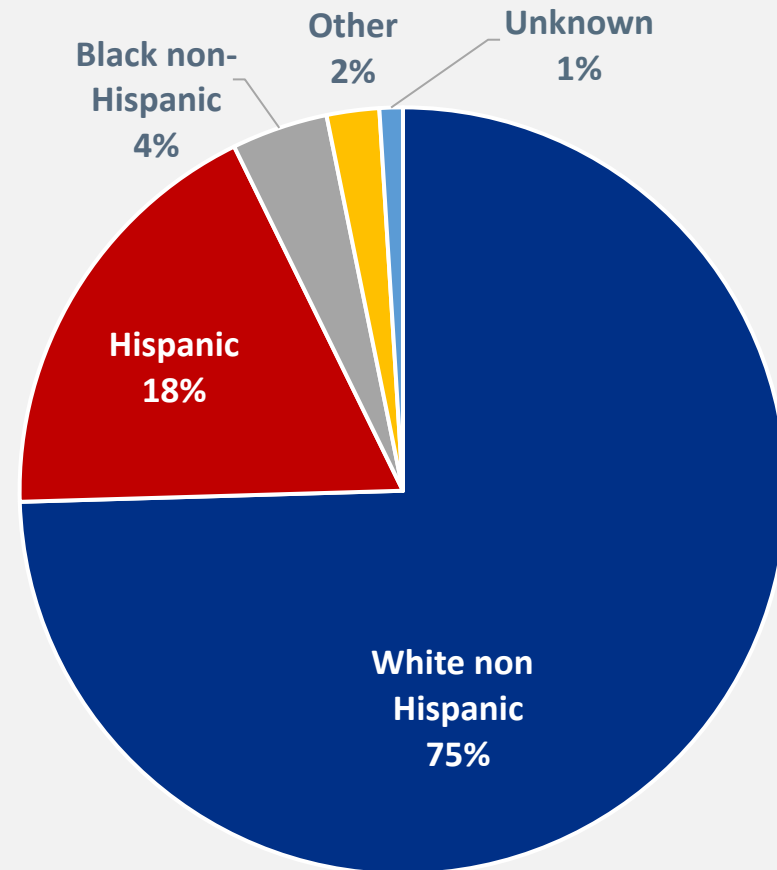
Note – this only shows the top 5 ED Dispositions.

*Not Applicable is reported if ED disposition is left against medical advice, deceased, discharged home or self-care, hospice, court/ law enforcement, or inpatient rehab.

RAC A – Shock Patients



By Sex



By Race

RAC A – Shock Patients by Mechanism

Mechanism of Injury	Number	Percent
Fall	520	63.49%
MVT Occupant	91	11.11%
Firearm	49	5.98%
Struck By / Against	24	2.93%
Cut / Pierce	21	2.56%
MV Motorcyclist	16	1.95%

Note – this only shows the top six (6) mechanisms of injury.

RAC A – Shock Patients – Transport Mode

Transport Mode	Number	Percent
Ground Ambulance	543	66.30%
Private / Public Vehicle / Walk-in	200	24.42%
Helicopter Ambulance	55	6.72%
Not Known / Not Recorded	11	1.34%
Missing	8	0.98%
Fixed-Wing Ambulance	*	*

RAC A – Shock Patients – ED Disposition

ED Disposition	Number	Percent
Floor Bed	304	37.12%
Transferred to Another Hospital	170	20.76%
Intensive Care Unit (ICU)	123	15.02%
Operating Room	92	11.23%
Deceased / Expired	55	6.72%
Home without Services	29	3.54%

Note – this only shows the top six (6) ED Dispositions.

RAC A – Shock Patients – Hospital Disposition

Hospital Disposition	Number	Percent
Not Applicable*	256	31.26%
Discharged to Home or Self-care	180	21.98%
Discharged / Transferred to Skilled Nursing Facility	170	20.76%
Discharged / Transferred to Inpatient Rehab or Designated Unit	60	7.33%
Deceased / Expired	59	7.20%

Note – this only shows the top five (5) Hospital Dispositions.

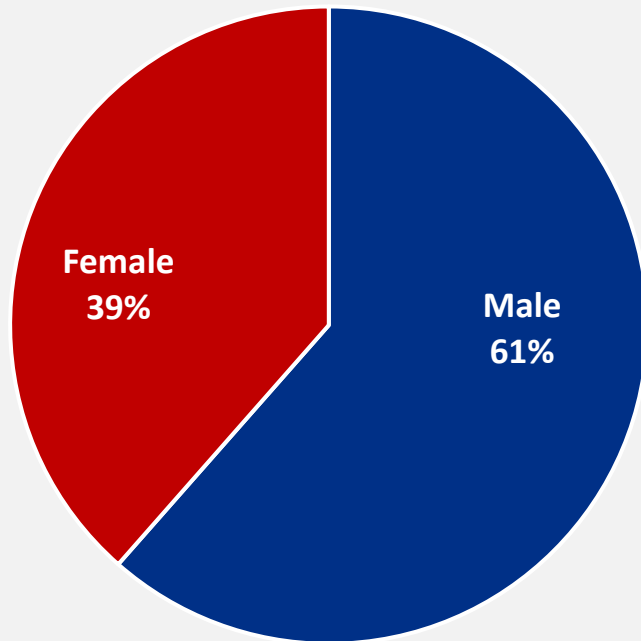
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RAC E

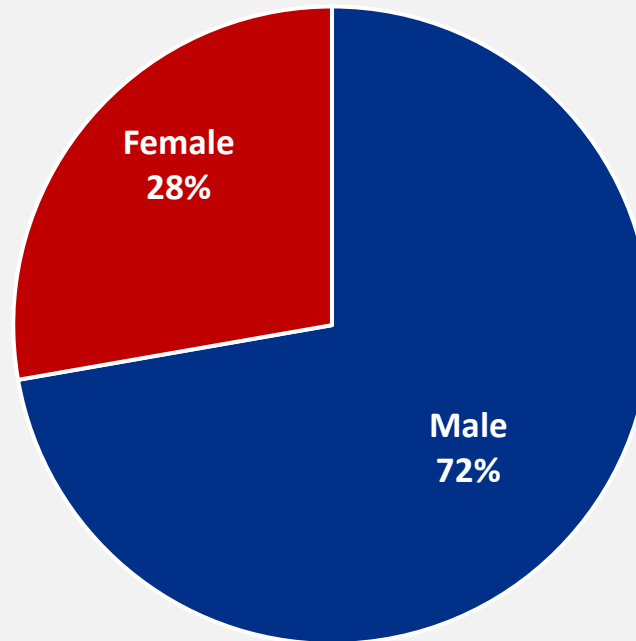


RAC E – TBI Patients by Age and Sex

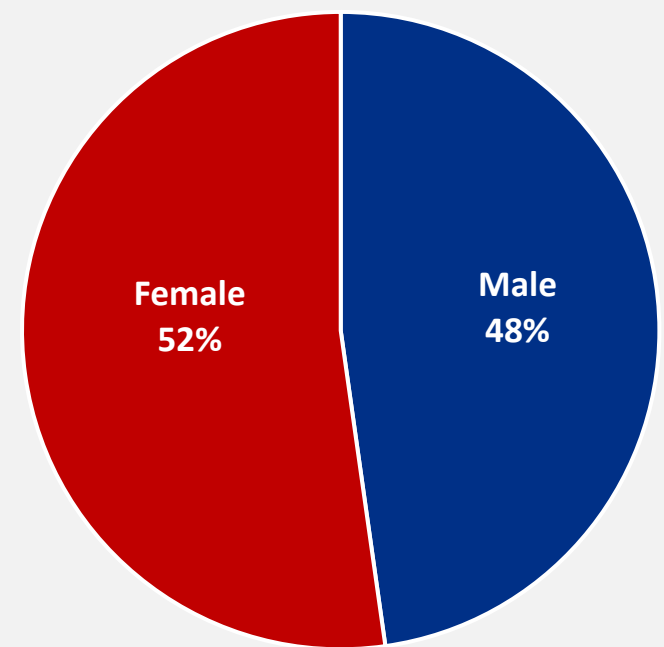
Pediatric



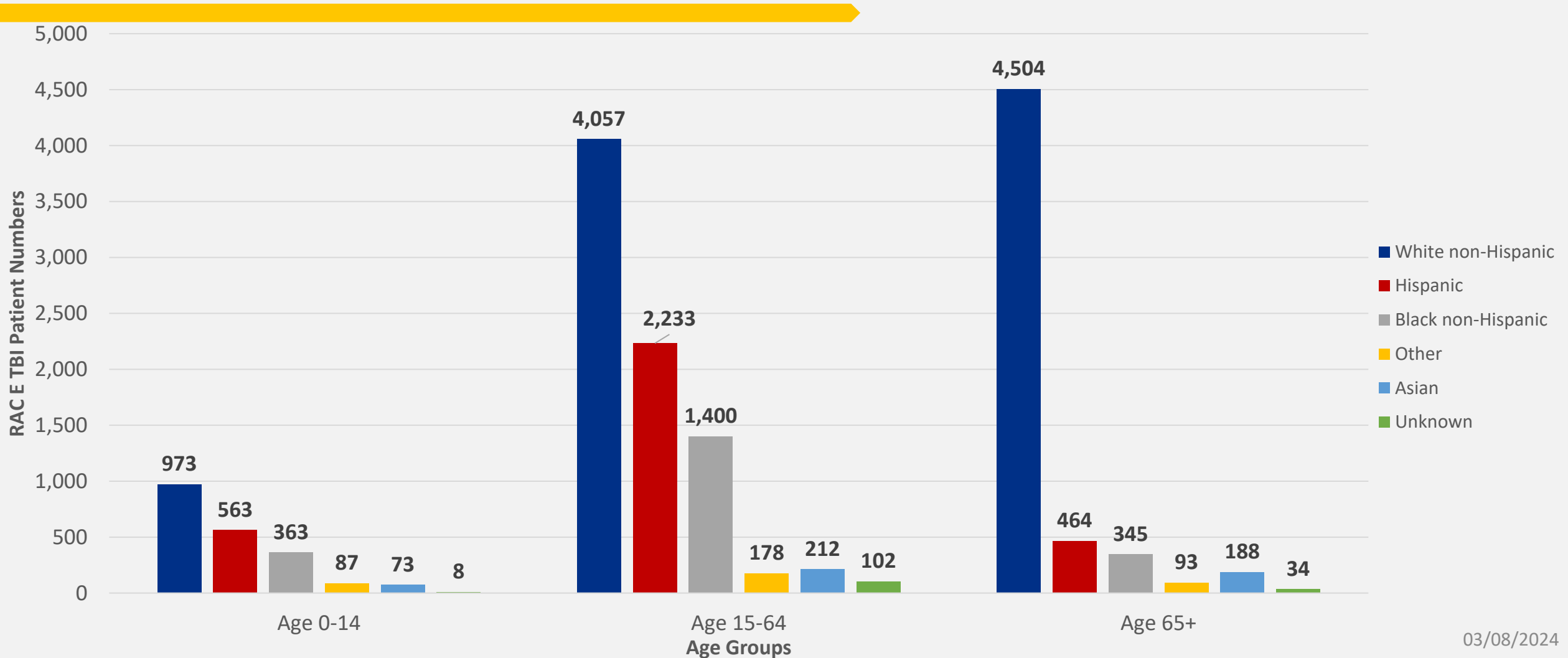
Adult



Geriatric



RAC E – TBI Patients by Age and Race



RAC E – TBI Patients by Age and Mechanism

Mechanism of Injury	All Ages	Pediatric	Adult	Geriatric
Fall	51.80%	46.64%	30.00%	85.41%
MVT Occupant	17.53%	15.77%	26.13%	5.70%
Struck By / Against	6.74%	8.27%	9.67%	1.94%
MVT – Motorcyclist	4.29%	0.44%	7.61%	0.87%
Firearm	4.21%	1.40%	7.21%	0.84%
MVT – Pedestrian	3.61%	2.37%	5.39%	1.42%
MV – Non Traffic	3.26%	6.05%	4.34%	0.68%
Pedal Cyclist	1.38%	2.81%	1.43%	0.80%

Note – this only shows the top eight (8) mechanisms of injury.

RAC E – TBI Patients by Age and Transport Mode

Transport Mode	Pediatric	Adult	Geriatric
Ground Ambulance	52.10%	75.52%	77.68%
Private / Public Vehicle / Walk-in	35.17%	13.04%	15.39%
Helicopter Ambulance	12.14%	11.09%	6.73%
Fixed-Wing Ambulance	0.58%	0.11%	*

Note – this does not include police, other, or not known / not recorded due to small counts.

RAC E – TBI ED Disposition All Ages

ED Disposition	Number	Percent
Intensive Care Unit	6,178	38.89%
Floor Bed	3,553	22.37%
Transferred to Another Hospital	2,223	13.99%
Telemetry/ step down unit	1,367	8.61%
Home without services	913	5.75%
Operating room	795	5.00%
Deceased/ Expired	516	3.25%

Note – this only shows the top seven (7) ED Dispositions.

RAC E – TBI Patients by Age and ED Disposition

ED Disposition	Pediatric	Adult	Geriatric
Floor Bed	35.80%	19.36%	21.84%
Transferred to Another Hospital	22.79%	10.76%	15.48%
ICU	17.17%	42.92%	41.03%
Home without Services	15.92%	4.75%	3.46%
Operating Room	3.63%	7.37%	2.06%
Observation Unit	1.69%	0.73%	1.00%
Deceased / Expired	1.35%	4.90%	1.47%
Telemetry / Step Down Unit	*	8.15%	12.40%

Note – this only shows the top eight (8) ED Dispositions.

RAC E – TBI Hospital Disposition All Ages

Hospital Disposition	Number	Percent
Discharged to Home or Self-care	6,843	43.08%
Not Applicable*	3,730	23.48%
Discharged / Transferred to Inpatient Rehab or Designated Unit	1,296	8.16%
Deceased / Expired	1,108	6.98%
Discharged / Transferred to Skilled Nursing Facility	1,054	6.64%

Note – this only shows the top five (5) Hospital Dispositions.

*Not Applicable is reported if ED disposition is left against medical advice, deceased, discharged home or self-care, hospice, court/ law enforcement, or inpatient rehab.

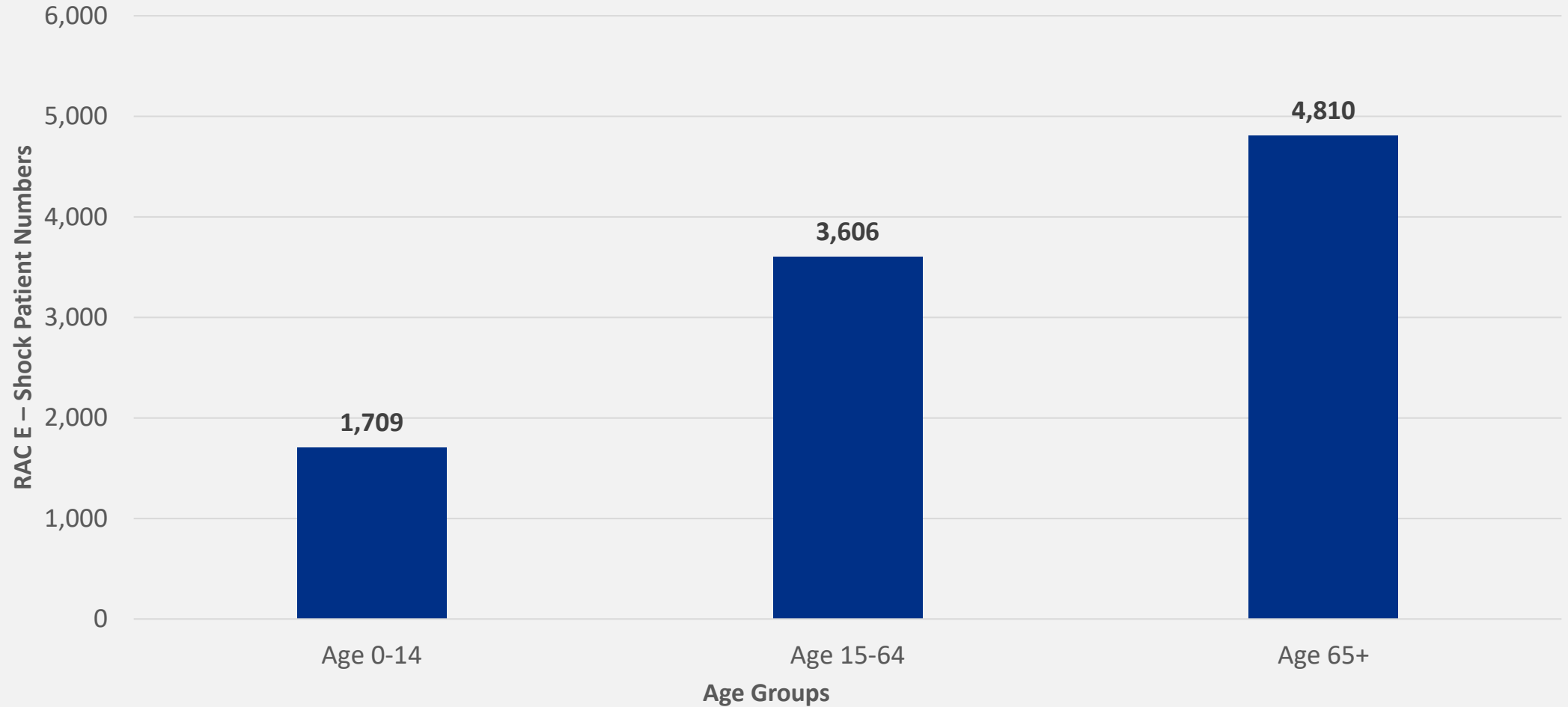
RAC E – TBI Patients by Age and Hospital Disposition

Hospital Disposition	Pediatric	Adult	Geriatric
Discharged to Home or Self-care	52.10%	52.11%	26.67%
Not Applicable*	40.83%	20.85%	20.88%
Deceased/ Expired	2.61%	8.48%	6.36%
Discharged/ Transferred to Inpatient Rehab	2.47%	8.02%	10.47%
Discharged/ Transferred to Home under Care of Organized Home Health	0.73%	1.93%	6.73%

Note – this only shows the top five (5) Hospital Dispositions.

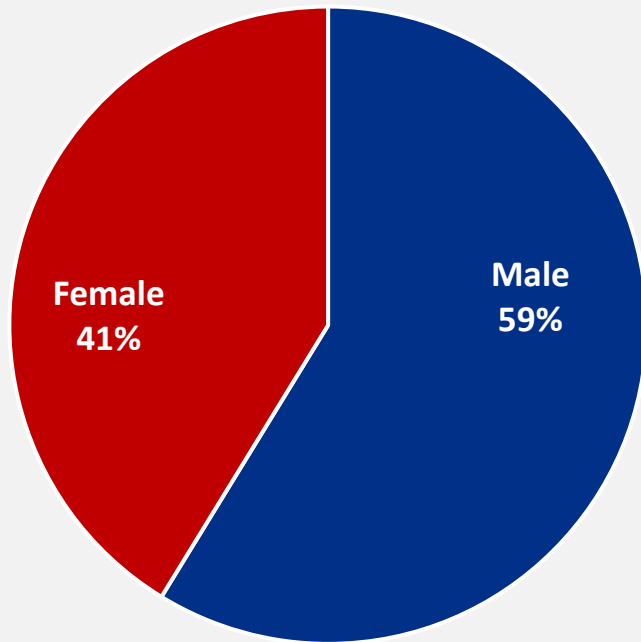
*Not Applicable is reported if ED disposition is left against medical advice, deceased, discharged home or self-care, hospice, court/ law enforcement, or inpatient rehab.

RAC E – Shock Patients by Age

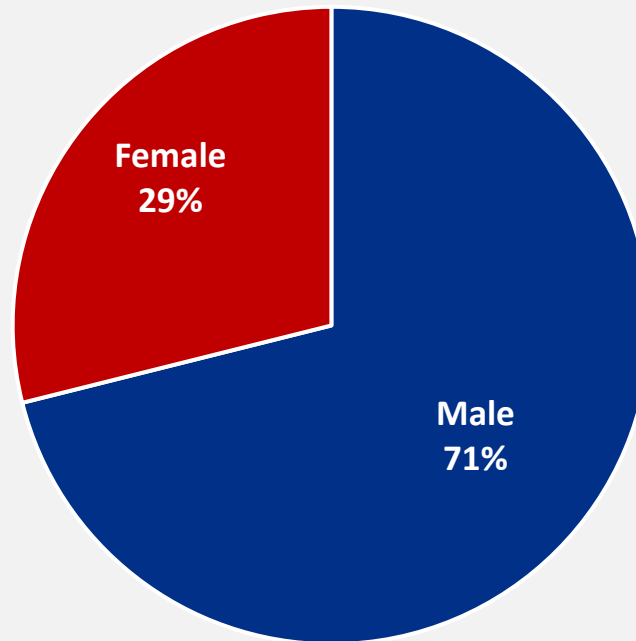


RAC E – Shock Patients by Age and Sex

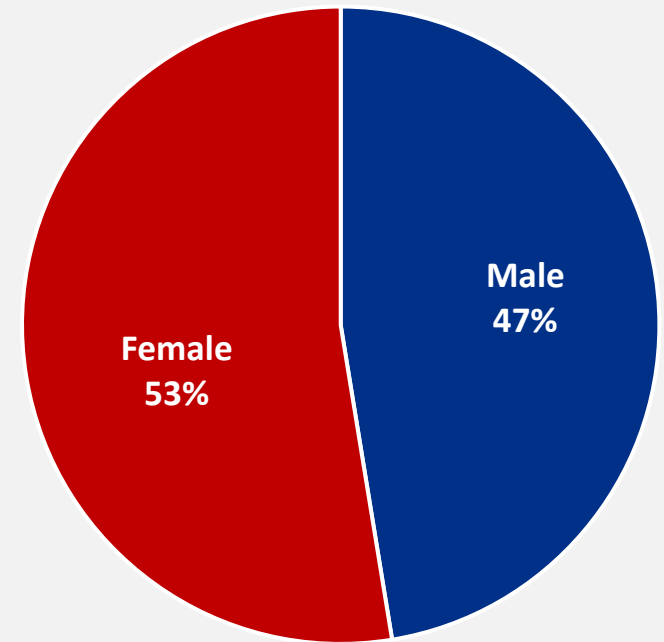
Pediatric



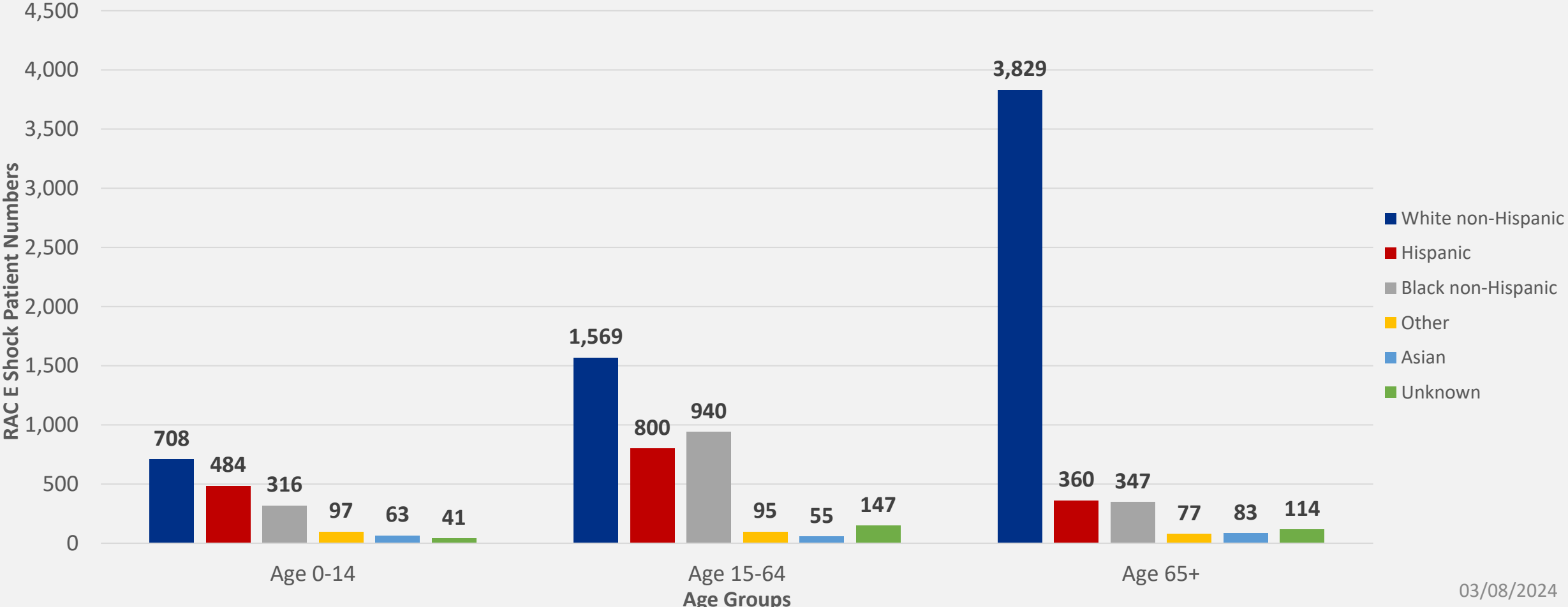
Adult



Geriatric



RAC E – Shock Patients by Age and Race



RAC E – Shock Patients by Age and Mechanism

Mechanism of Injury	All Ages	Pediatric	Adult	Geriatric
Fall	52.05%	49.03%	19.02%	77.88%
MVT Occupant	10.59%	5.27%	18.61%	6.47%
Firearm	9.75%	1.58%	24.99%	1.23%
Not Applicable	6.41%	6.03%	7.38%	5.82%
Struck By / Against	2.95%	5.79%	3.58%	1.48%
Cut / Pierce	2.77%	2.75%	5.41%	0.79%
MVT - Motorcyclist	2.66%	*	6.27%	0.83%
MVT - Pedestrian	2.56%	0.82%	5.21%	1.19%

Note – this only shows the top eight (8) mechanisms of injury.

Resources

- NEMESIS Technical Resources and Data Dictionaries - nemesis.org/technical-resources/version-3/version-3-data-dictionaries/.
- National Trauma Data Bank (NTDB) data dictionary - facs.org/quality-programs/trauma/tqp/center-programs/ntdb/ntds.
- NSW Institute of Trauma and Injury Management - aci.health.nsw.gov.au/get-involved/institute-of-trauma-and-injury-management.
- Coding is based on the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM).

Thank you!

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Regional Advisory Council (RACs)

March 8th, 2024

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