



**TEXAS**  
Health and Human  
Services

**Texas Department of State  
Health Services**

# 2019-2021 Texas Pediatric Injuries

Prepared by the Injury Prevention Unit  
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# Texas EMS and Trauma Registries

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- The data used are hospital-reported traumatic injuries. Hospitals must report spinal cord injuries, traumatic brain injuries, and other traumatic injuries specified in Texas Administrative Code, Title 25, Chapter 103.
- This data report includes only records submitted into the Emergency Medical Services and Trauma Registries (EMSTR) through a passive surveillance system.
- Patients transferred between hospitals will result in more than one registries record since each hospital must independently submit a patient's record to the registries.

# Methodology Notes

- Per epidemiology best practice, EMSTR suppressed data when there were less than 5 records to protect identifiable data, noted with an asterisk (\*).
- For this analysis, EMSTR used patients under the age of 15.
- This presentation uses 2019-2021 Texas data:
  - In 2019, EMSTR received **144,926** unique patient records of all ages; 16,490 under the age of 15.
  - In 2020, EMSTR received **137,826** unique patient records of all ages; 15,387 under the age of 15.
  - In 2021, EMSTR received **153,135** unique patient records of all ages; 16,757 under the age of 15.

# Pediatric Data Definitions

- Pediatric – Children under the age of 15.
- Fatality – Either arrived at an emergency department (ED) or hospital with no signs of life or the patient's hospital disposition is deceased.
- Missing – Providers did not fill in the section.
- Unintentional – a type of injury that is not deliberate or done with purpose.
- Injury Severity Score - The Injury Severity Score (ISS) is an anatomical scoring system that provides an overall score for patients with multiple injuries. The ISS scoring categories are:
  - ISS Less than 9 = mild
  - ISS 9-15 = moderate
  - ISS 16-24 = severe
  - ISS  $\geq$  25 = profound

# 2019-2021 Pediatric Trauma Injuries



# 2019-2021 Pediatric Data

## Non-Fatal

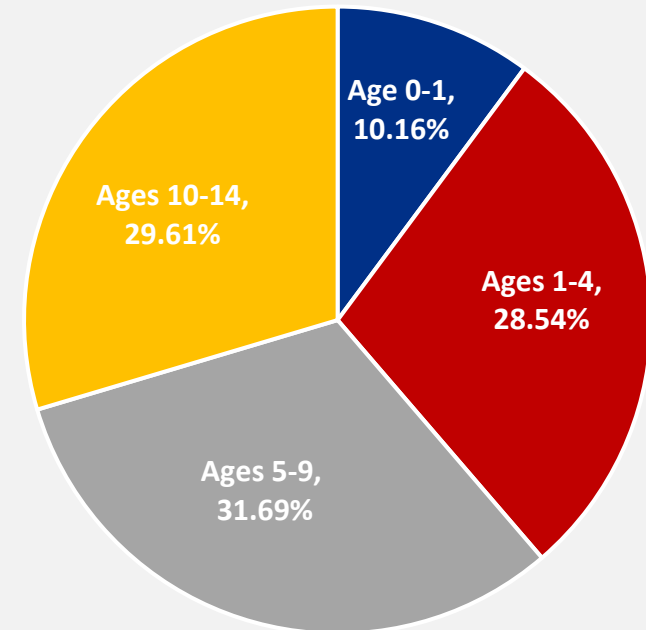
Year	Record Count
2019	16,317
2020	15,228
2021	16,612
Total	48,157

## Fatal

Year	Record Count
2019	173
2020	159
2021	145
Total	477

# 2019-2021 Pediatric Non-Fatal Age Category

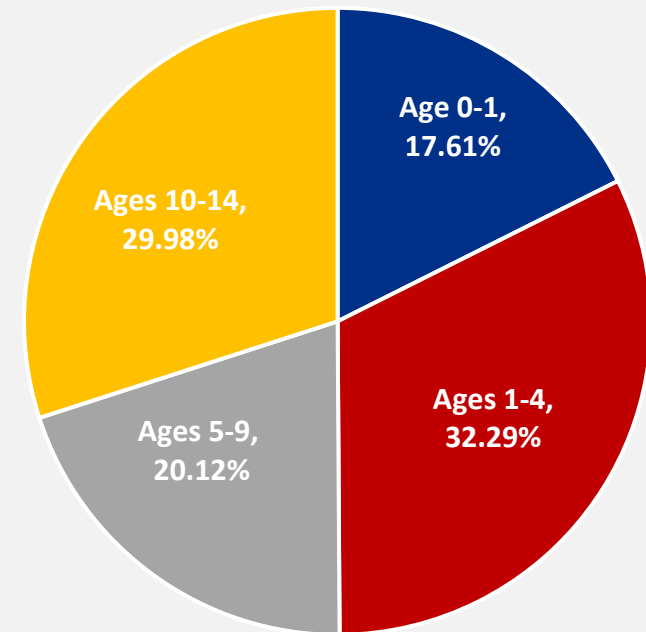
Age Group	Record Count
Ages 0-1	4,893
Ages 1-4	13,742
Ages 5-9	15,262
Ages 10-14	14,260
Total	48,157



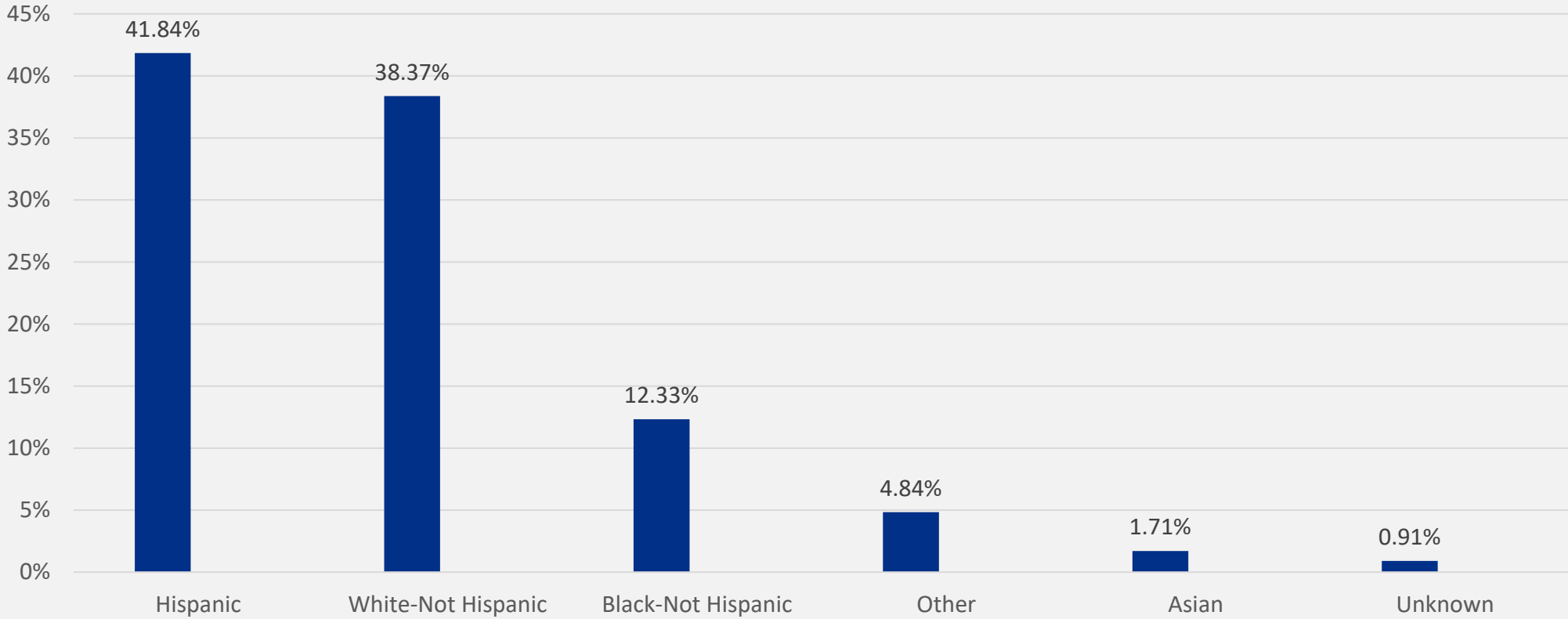


# 2019-2021 Pediatric Fatal Age Category

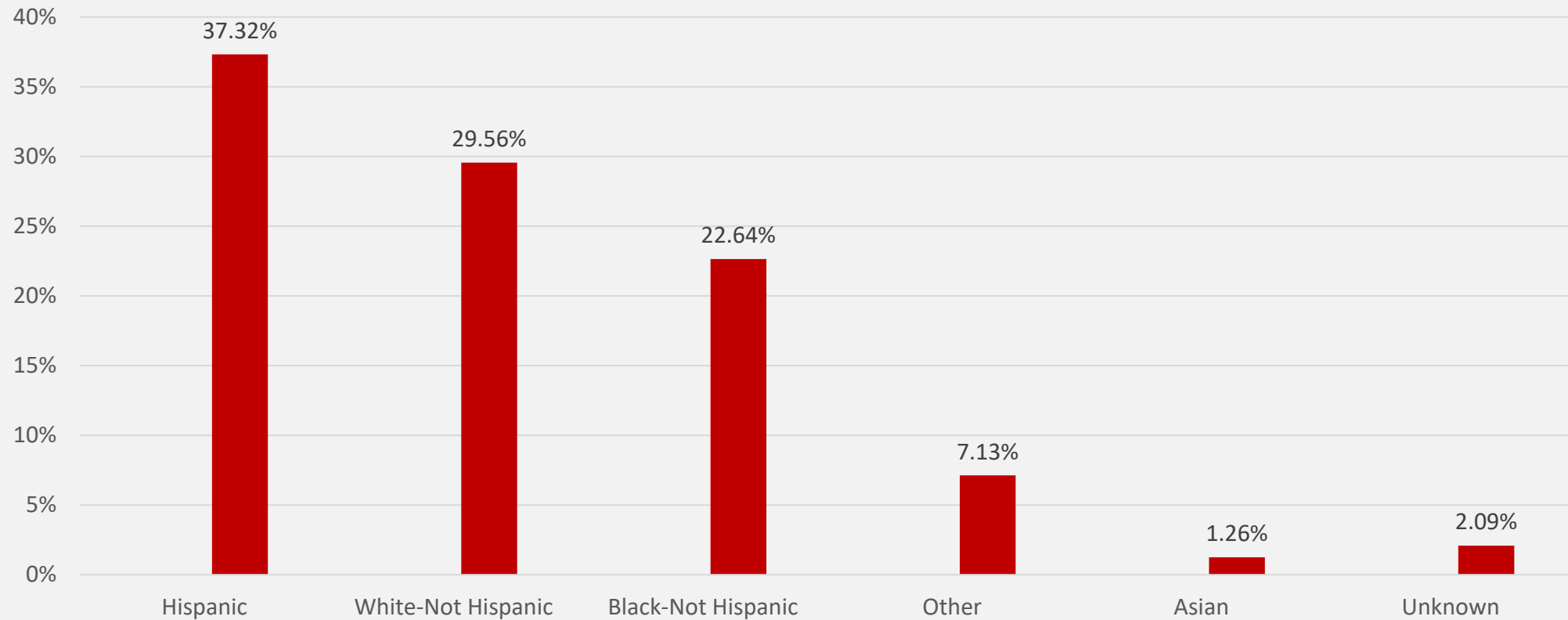
Age Group	Record Count
Age 0-1	84
Ages 1-4	154
Ages 5-9	96
Ages 10-14	143
Total	477



# 2019-2021 Pediatric Data Non-Fatal Race and Ethnicity

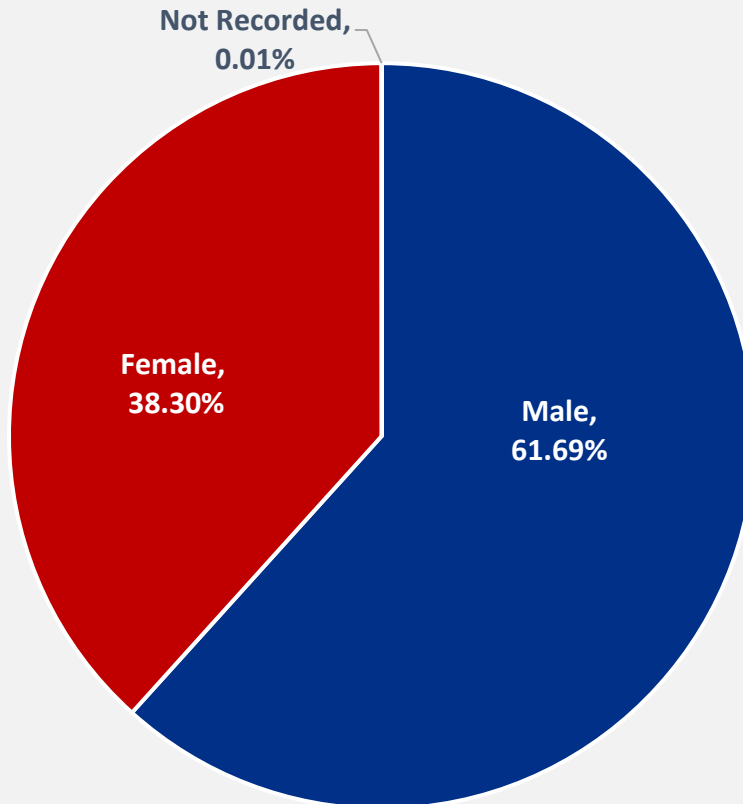


# 2019-2021 Pediatric Data Fatal Race and Ethnicity

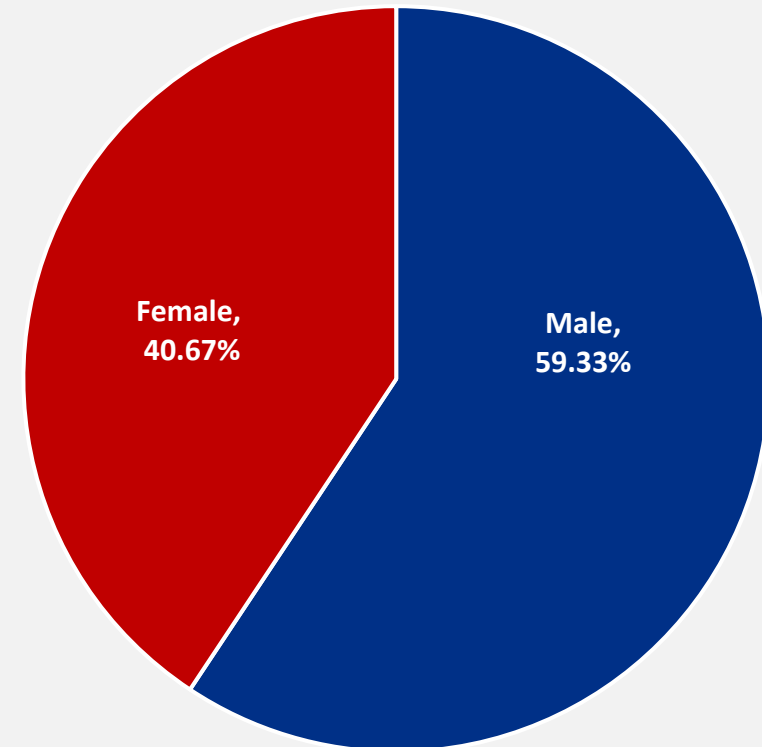


# 2019-2021 Pediatric Data Gender

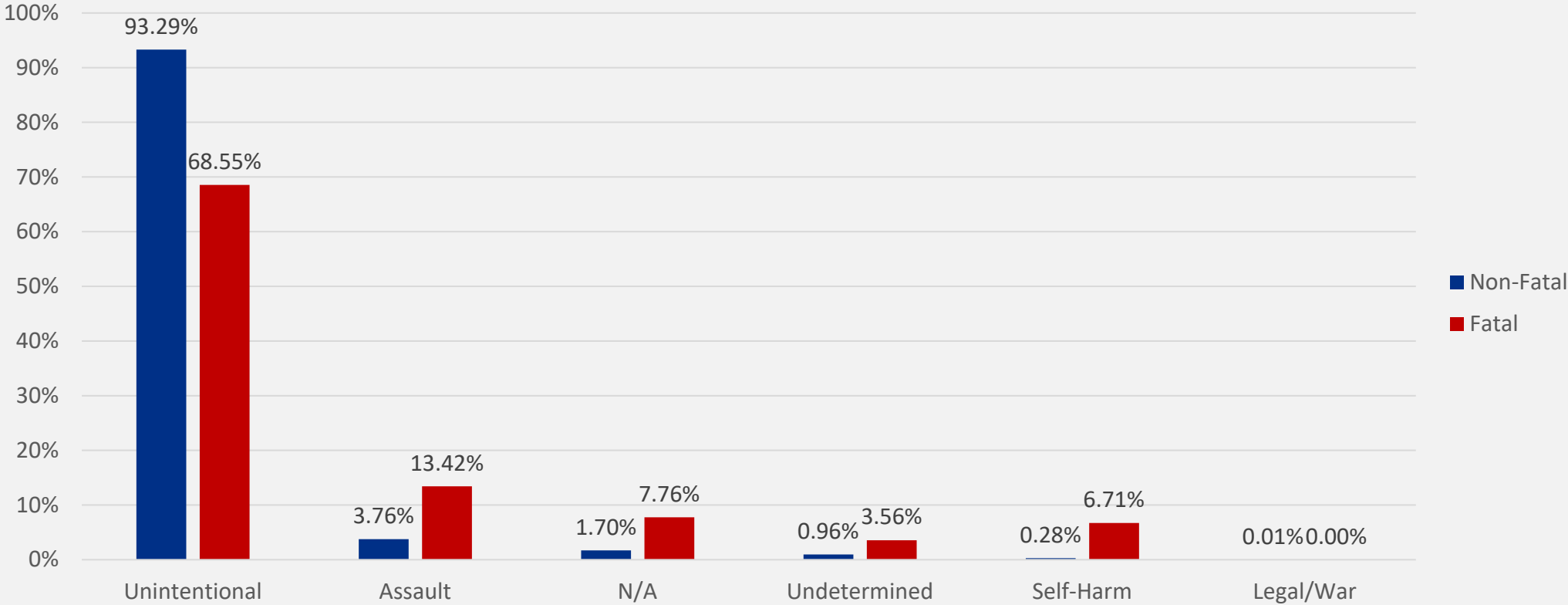
## Non-Fatal



## Fatal



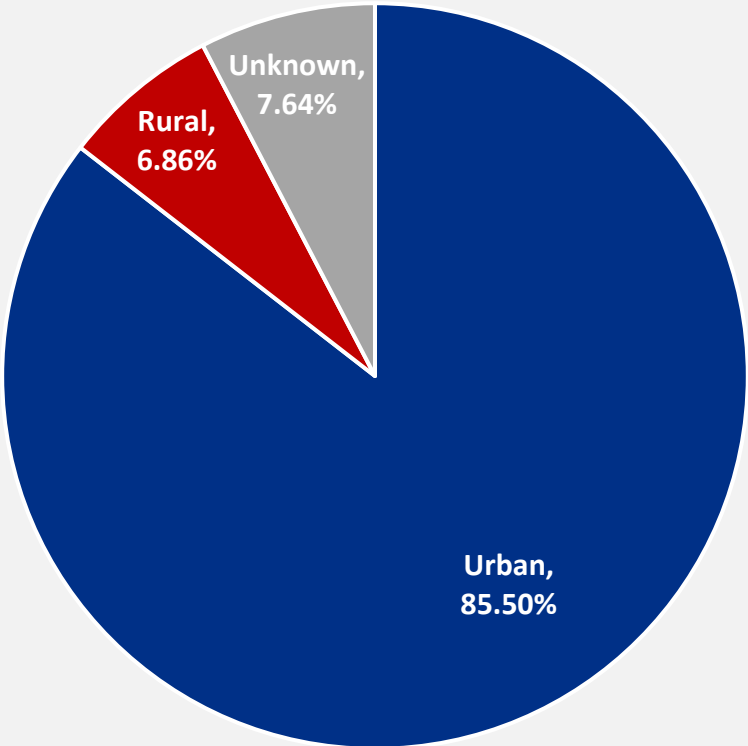
# 2019-2021 Pediatric Data Intent



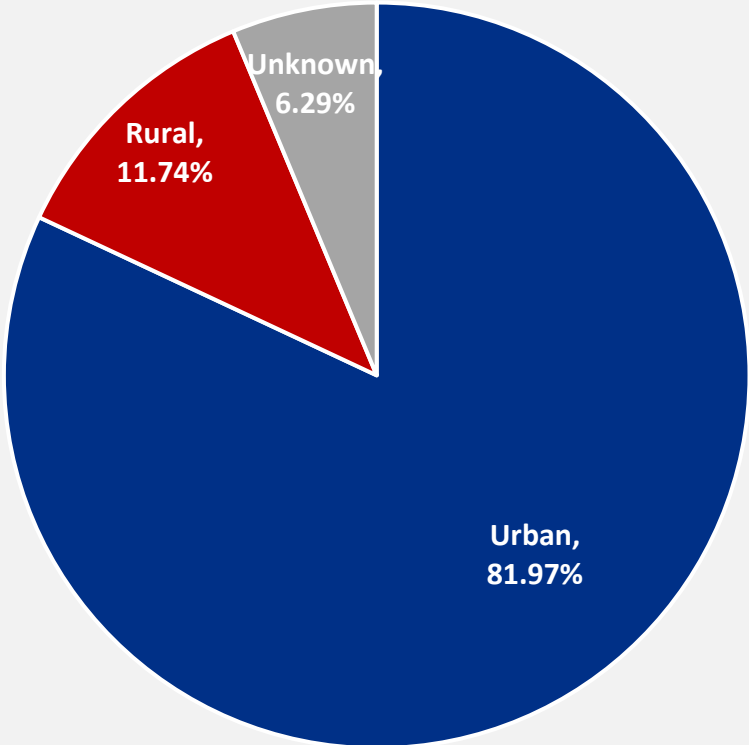
# 2019-2021 Pediatric Data

## Urban versus Rural

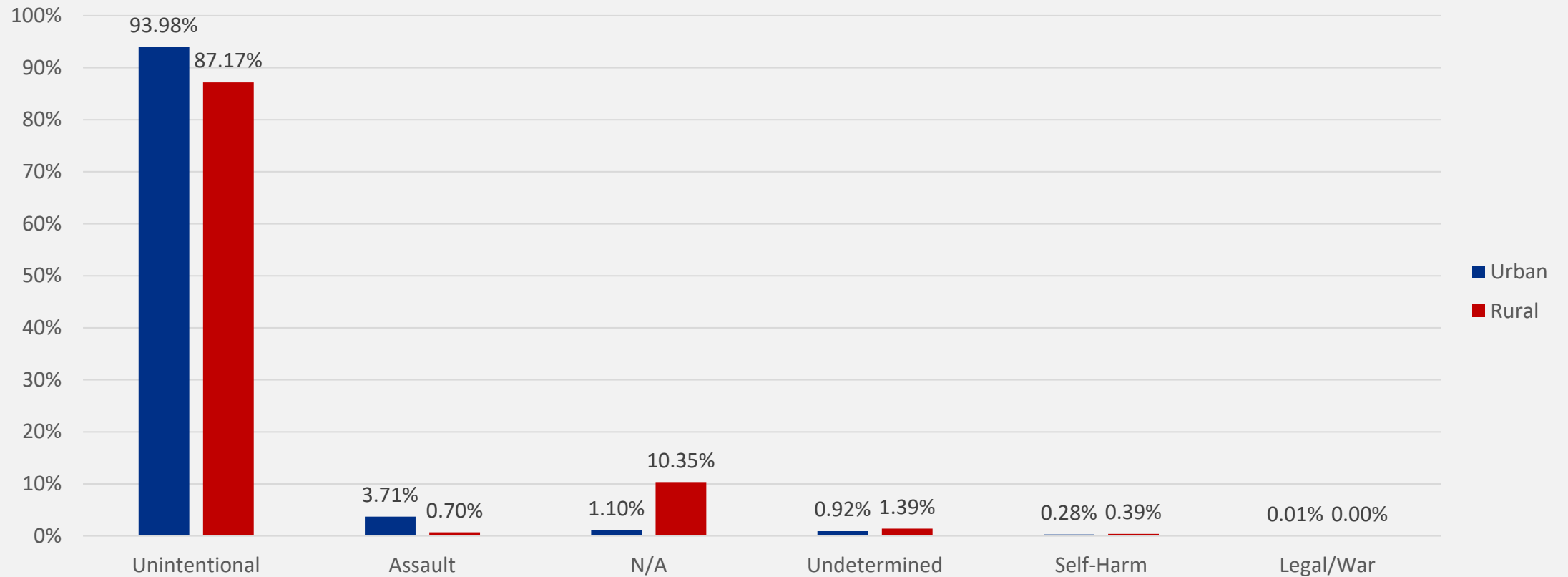
### Non-Fatal



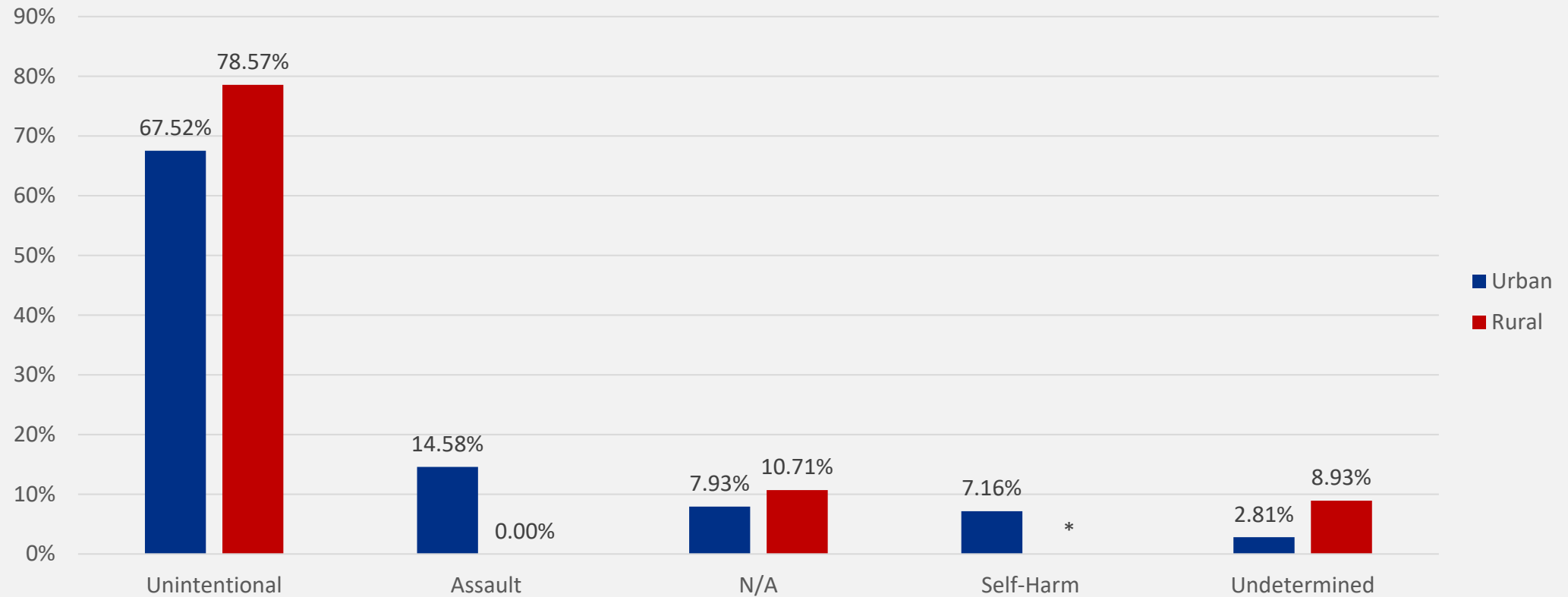
### Fatal



# 2019-2021 Pediatric Non-Fatal Intent by Urban versus Rural



# 2019-2021 Pediatric Fatal Intent by Urban versus Rural





# 2019-2021 Pediatric Non-Fatal Mechanism of Injury (MOI)

MOI	2019	2020	2021
Fall	45.46%	42.36%	45.01%
Struck by / Against	9.48%	7.22%	8.53%
Motor Vehicle Traffic (MVT) - Occupant	8.27%	8.39%	9.44%
Hot Object / Substance	6.12%	7.02%	5.50%
Bites and Stings, Nonvenomous	3.59%	4.93%	4.23%
Motor Vehicle (MV)-Nontraffic	3.34%	5.21%	4.42%
Pedal Cyclist	2.75%	4.09%	2.63%
Cut / Pierce	2.56%	2.75%	2.67%
Other Land Transport (ATV, etc.)	1.89%	2.18%	2.05%

Totals will not equal 100% - list is the top MOIs

# 2019-2021 Pediatric Fatal MOI

MOI	2019	2020	2021
MVT - Occupant	21.97%	25.79%	24.14%
MVT - Pedestrian	11.56%	4.40%	4.83%
Fall	10.40%	12.58%	11.72%
Firearm	9.25%	12.58%	10.34%
Other Specified, Child / Adult Abuse	4.62%	8.81%	15.17%
Struck By / Against	4.05%	*	3.45%
Drowning / Submersion	3.47%	4.40%	*
Suffocation	2.89%	5.03%	*
Fire / Flame	2.89%	*	*

Totals will not equal 100% - list is the top MOIs

# 2019-2021 Pediatric Non-Fatal Emergency Department (ED) Disposition

ED Disposition	Percent
Transferred to Another Hospital	31.30%
Floor Bed	22.85%
Home without services	15.71%
Operating Room	10.33%
Observation unit (unit that provides < 24 hour stays)	6.95%
Intensive Care Unit (ICU)	6.12%
Not Applicable**	4.65%
Admitted to Telemetry Step Down Unit	0.94%
Other (jail, institutional care, mental health)	0.80%
Deceased	0.17%
Left Against Medical Advice	0.09%
Home with services	0.03%
Missing	0.06%

Not Applicable\*\* = directly admitted to the hospital

# 2019-2021 Pediatric Non-Fatal Hospital Designation

Designation Level	2019	2020	2021
Trauma Center Level 1	32.19%	34.23%	42.72%
Trauma Center Level 2	17.58%	19.80%	14.49%
Trauma Center Level 3	16.08%	13.92%	13.51%
Trauma Center Level 4	22.11%	19.63%	18.58%
Hospital	4.06%	4.78%	4.74%
Pediatric Facilities	2.99%	2.76%	2.74%
STEMI (ST-elevation myocardial infarction) Center	0.09%	0.09%*	0.11%
Rural Access Hospital	0.00%	*	*
Missing/ Not Known	4.90%	4.79%	3.09%

# 2019-2021 Pediatric Fatal Hospital Designation

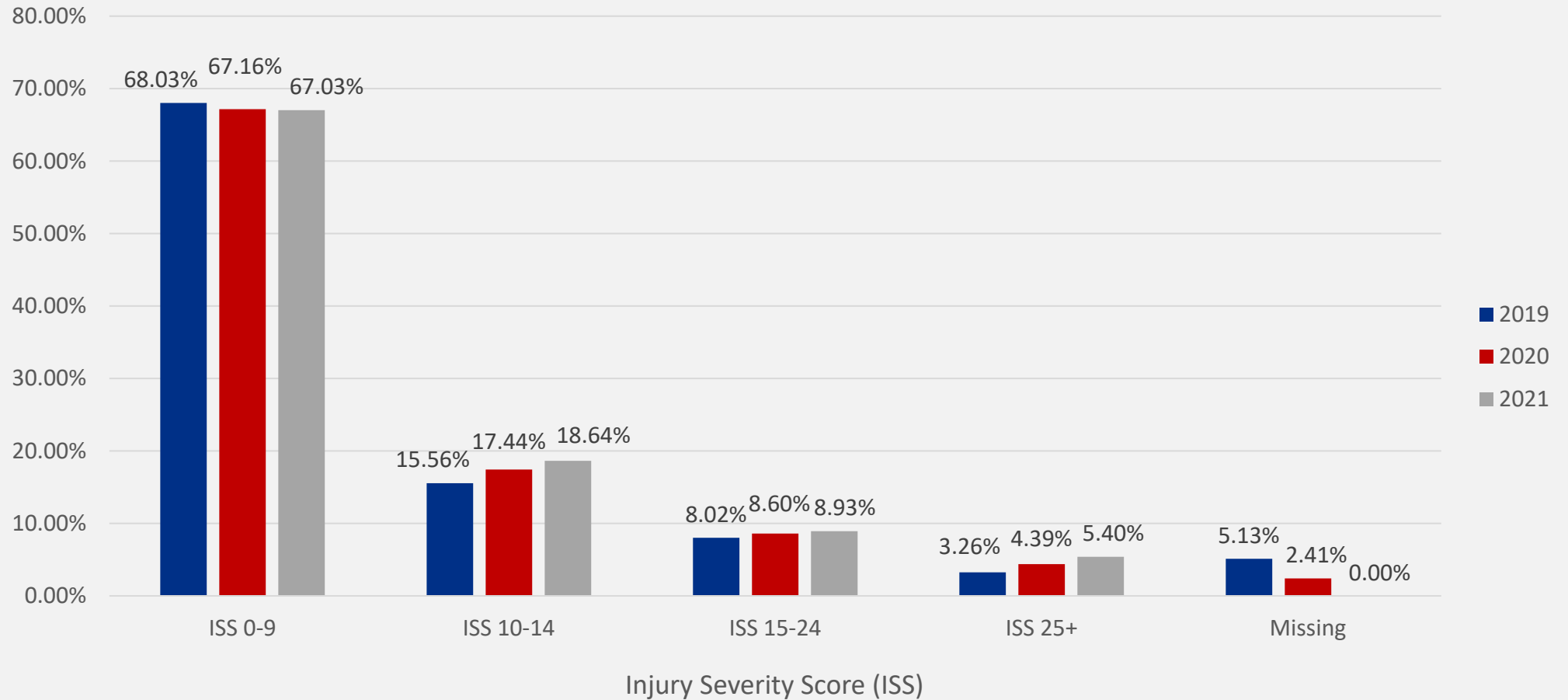
Designation Level	2019	2020	2021
Trauma Center Level 1	34.68%	34.59%	45.52%
Trauma Center Level 2	15.03%	16.35%	14.48%
Trauma Center Level 3	25.44%	11.32%	14.48%
Trauma Center Level 4	14.45%	27.05%	17.93%
Other**	7.51%	5.66%	4.83%
Missing / Not Known	2.89%	5.03%	*

Other\*\* = includes Hospital, Pediatric Center, and STEMI Center

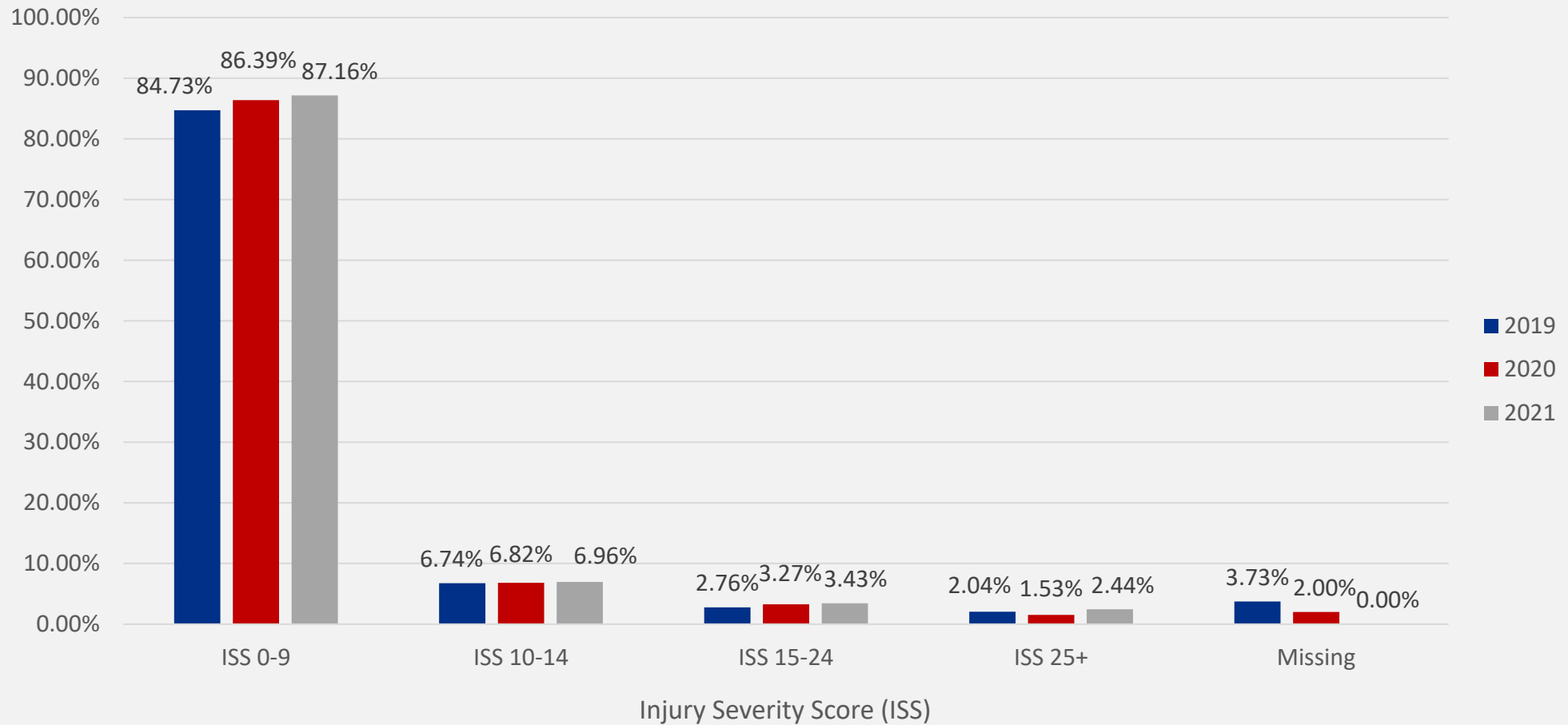
# Injury Severity Score (ISS) – All Pediatric

ISS Score	2019	2020	2021
0-9	83.69%	84.01%	84.52%
10-15	7.23%	7.80%	8.61%
16-24	3.45%	4.01%	4.07%
25+	1.89%	2.02%	2.80%
Missing	3.74%	2.16%	0.00%

# ISS Scores - Age Less Than 1

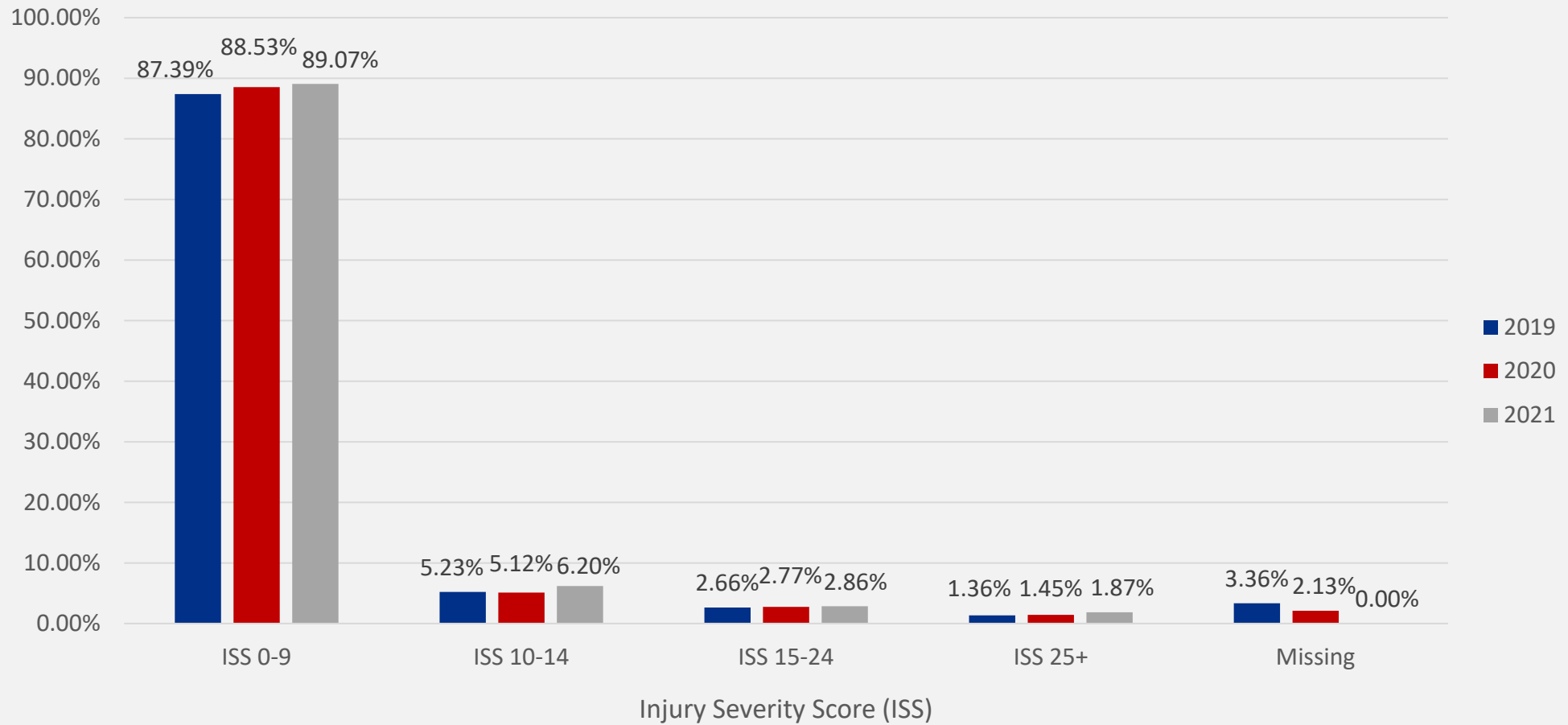


# ISS Scores - Ages 1-4

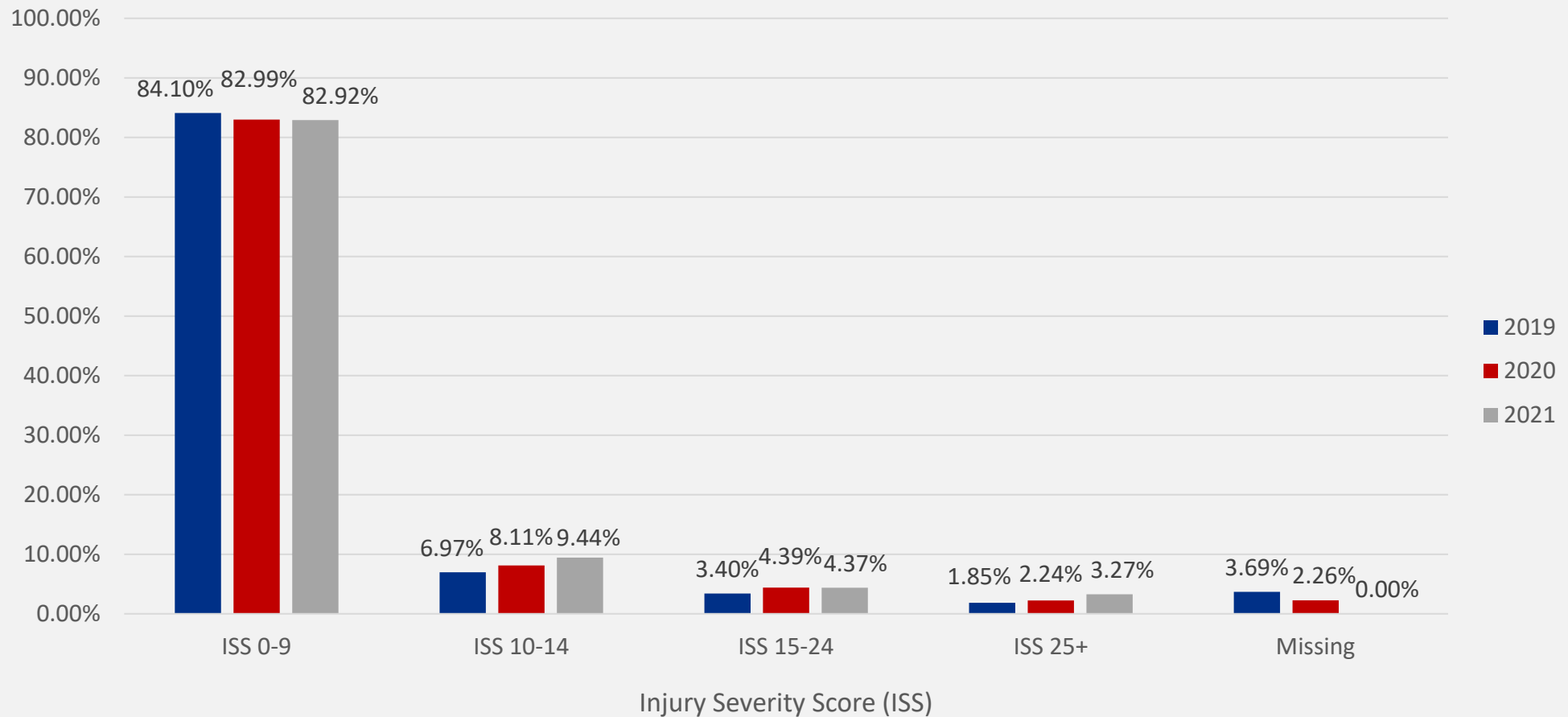




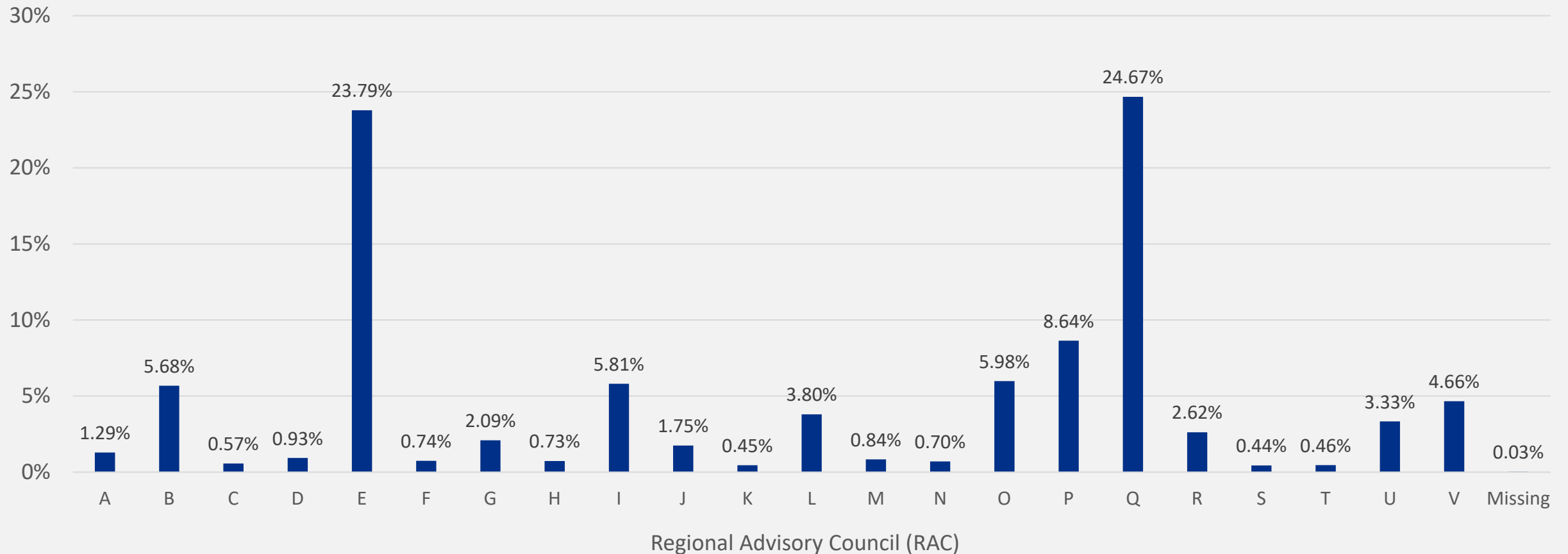
# ISS Scores – Ages 5-9



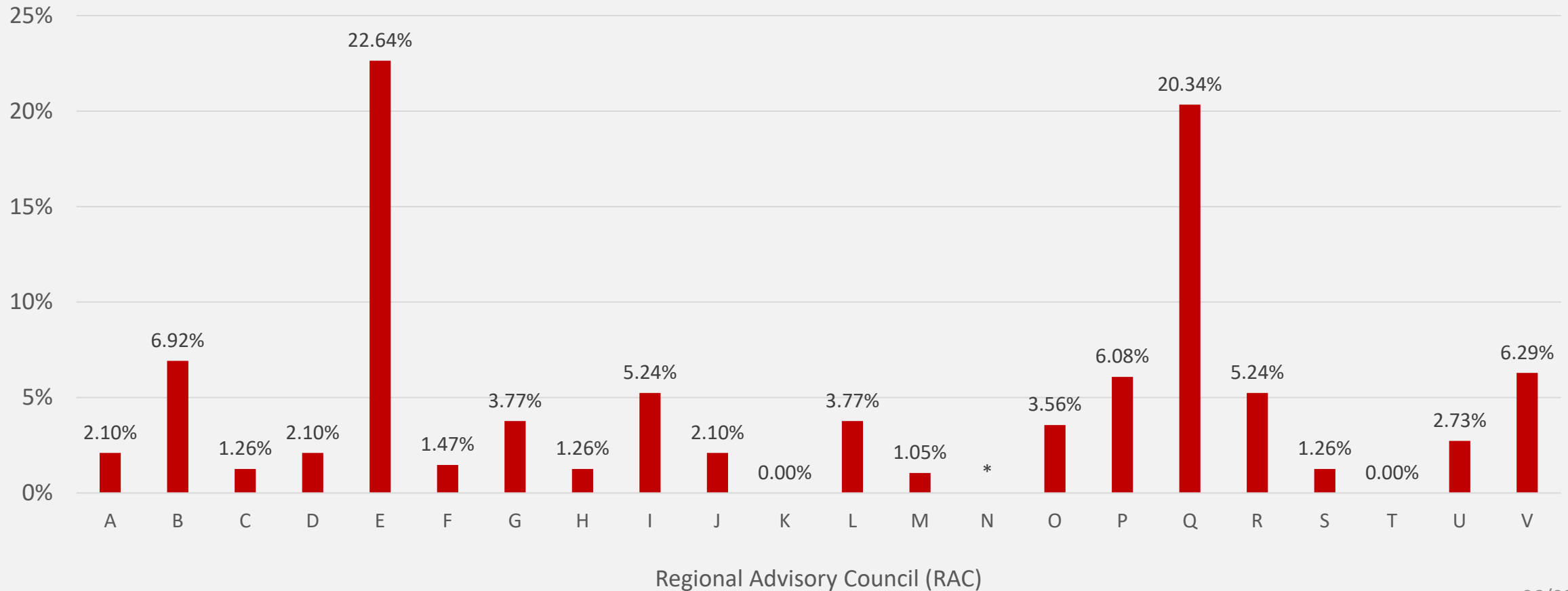
# ISS Scores - Ages 10-14



# 2019-2021 Pediatric Non-Fatal By Regional Advisory Council (RAC)



# 2019-2021 Pediatric Fatal By RAC



# Resources

- National Trauma Data Bank (NTDB) data dictionary - [facs.org/quality-programs/trauma/tqp/center-programs/ntdb/ntds](https://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](https://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).
- Web-Based Injury Statistics Query and Reporting System - [WISQARS \(Web-based Injury Statistics Query and Reporting System\) | Injury Center | CDC](https://wisqars.cdc.gov/).

# Thank you!

2019-2021 Texas Pediatric Injuries

June 9<sup>th</sup>, 2023

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