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Health and Human  
Services

**Texas Department of State  
Health Services**

# Leading Causes of Injuries 2018-2020 and Double Transfers 2019-2020

Prepared by the Office of Injury Prevention  
May 24, 2022

Jia Benno, MPH  
Office of Injury Prevention Manager

# Methodology



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# Emergency Medical Services/Trauma Registries - notes

- The data used were traumatic injuries reported by hospitals. (Specified in Texas Administrative Code, Title 25, Chapter 103)
- The data used were reported to the Emergency Medical Services and Trauma Registries (EMSTR) through a passive surveillance system. Non-fatal and fatal data was based on the trauma dataset, not hospitalization or death files.
- Transfers between hospitals resulted in more than one record as each hospital must independently report to EMSTR.
- Non-missing cells with nonzero values less than 5 were suppressed and noted by an asterisk.



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# Variables Identified 2018-2020

## Intent

- Unintentional
- Assault
- Self-harm
- Undetermined
- Legal/War

## Mechanism

- Fall
- Motor Vehicle – Occupant
- Firearm
- Struck by/Against
- Cut/Pierce
- Hot Object/Substance
- Motor Vehicle – Motorcyclist
- Motor Vehicle – Pedestrian

## Demographics



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# Texas Population 2018-2020

## Pediatric Population Estimates (Ages 0-17)

- 2018 – 7,370,193 (Census)
- 2019 – 7,437,514 (Census)
- 2020 – 7,515,129 (Census)



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# NON-FATAL TRAUMA HOSPITALIZATIONS



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# Non-Fatal Hospitalizations 2018-2020

## Pediatric

Year	Counts	Rates
2018	18,640	252.91
2019	20,105	270.32
2020	18,817	250.39



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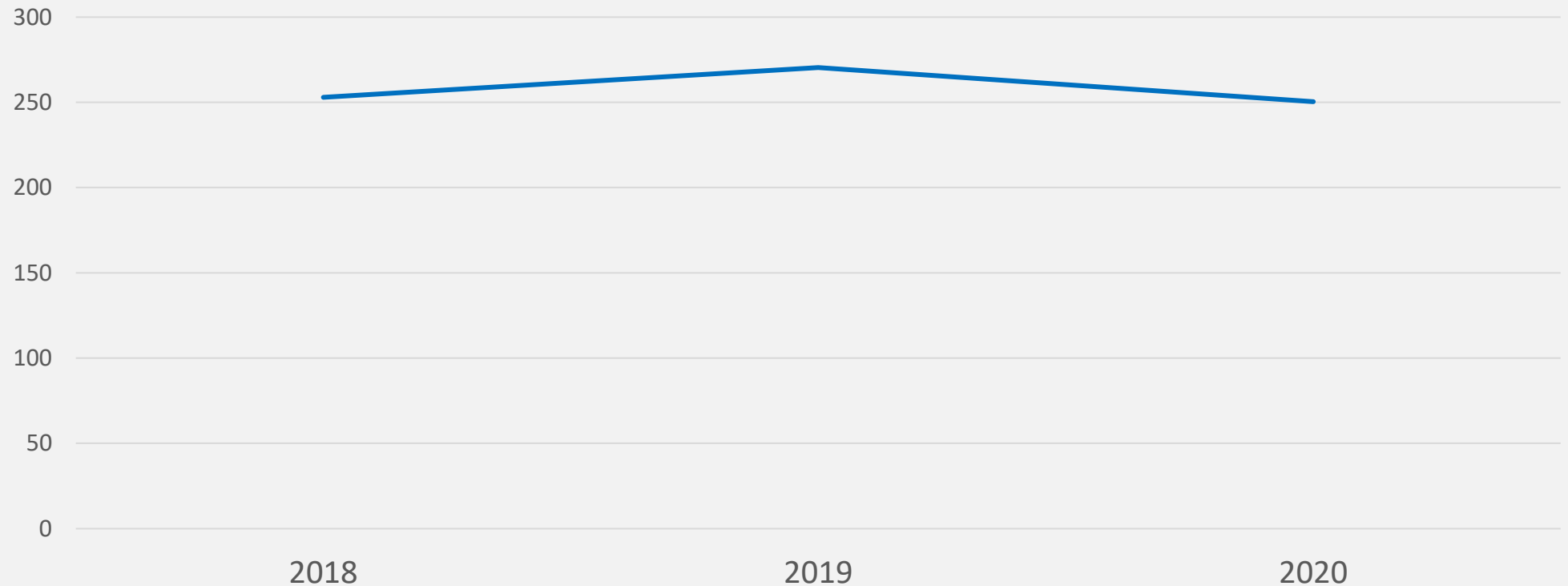
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# Pediatric Non-Fatal Rate per Year 2018-2020

Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population,  
2018-2020



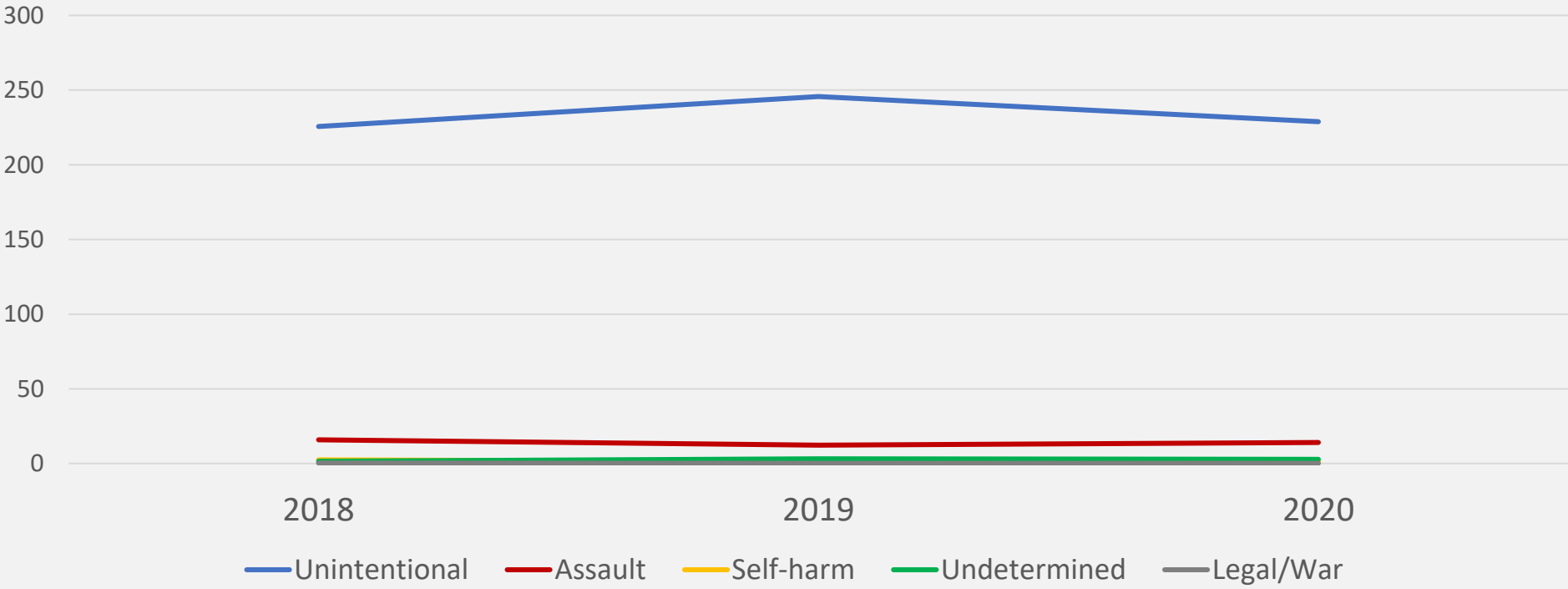
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# Pediatric Non-Fatal by Intent 2018-2020

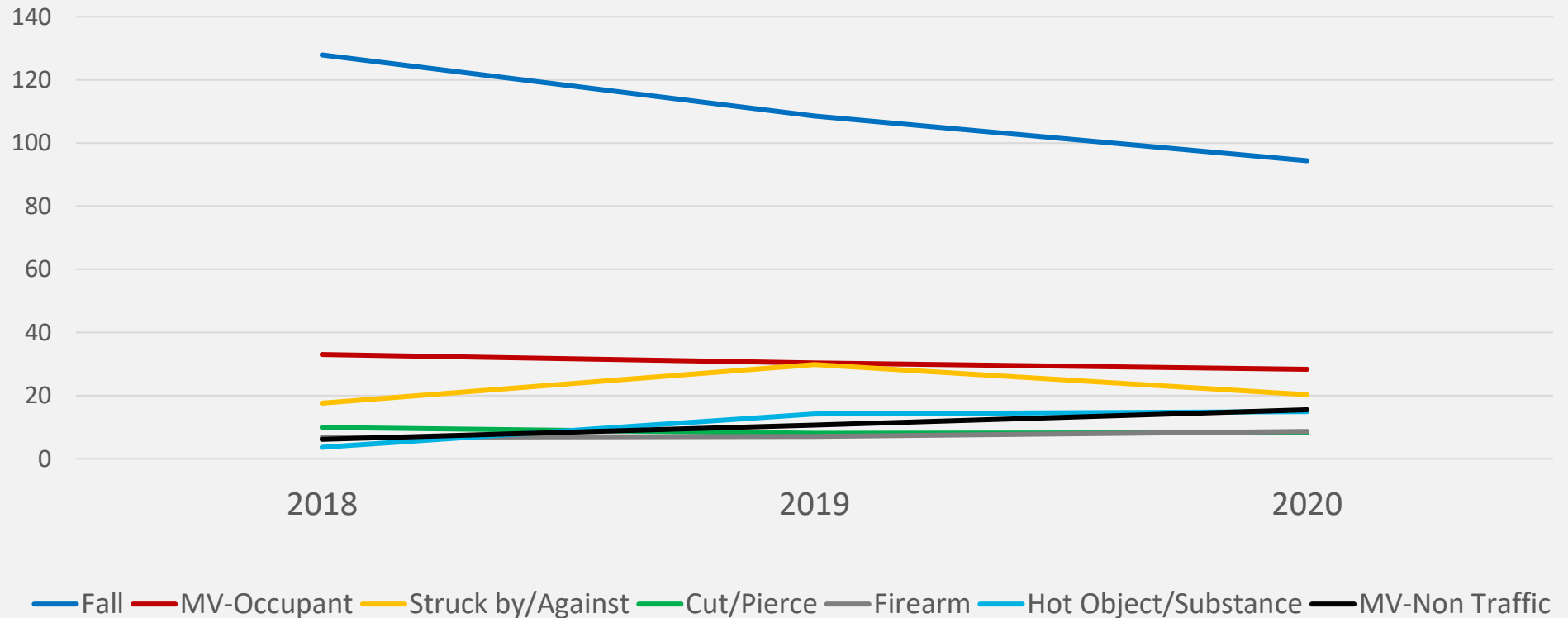
Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population by Intent, 2018-2020



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# Pediatric Non-Fatal by Mechanism 2018-2020

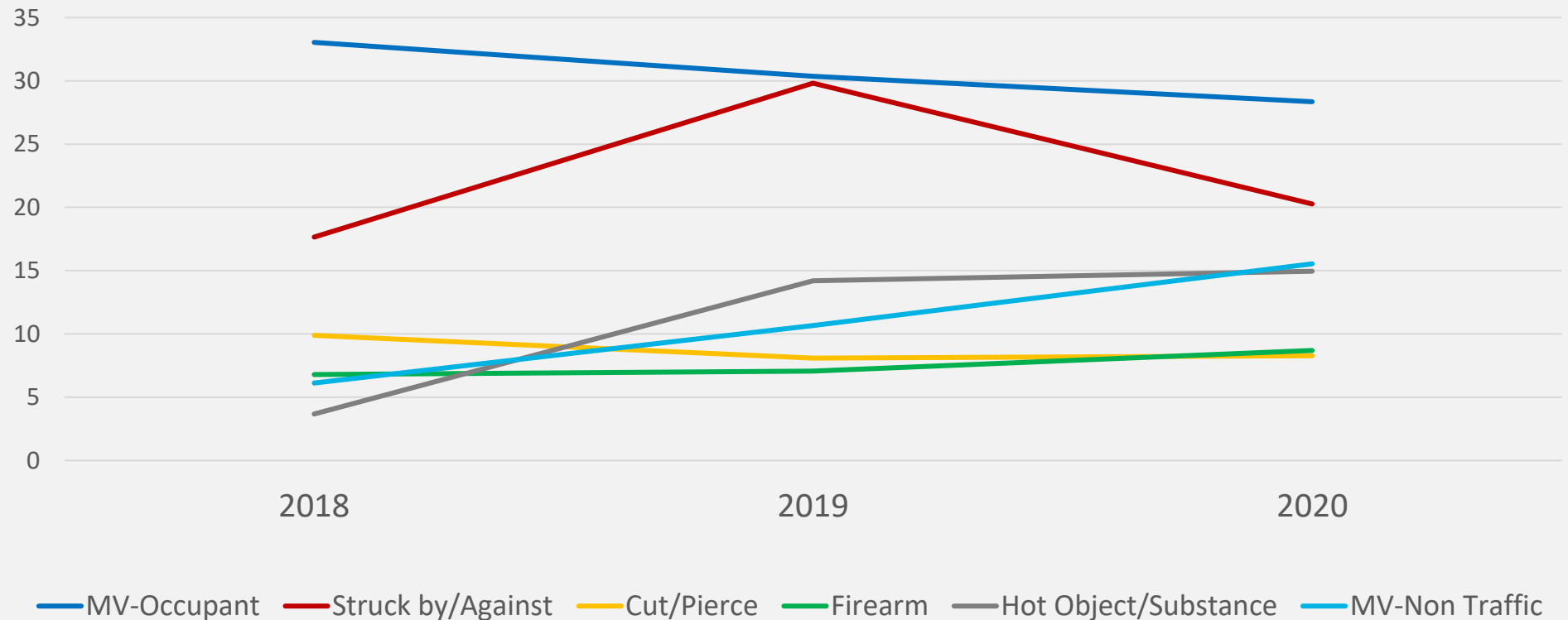
Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population by Mechanism, 2018-2020



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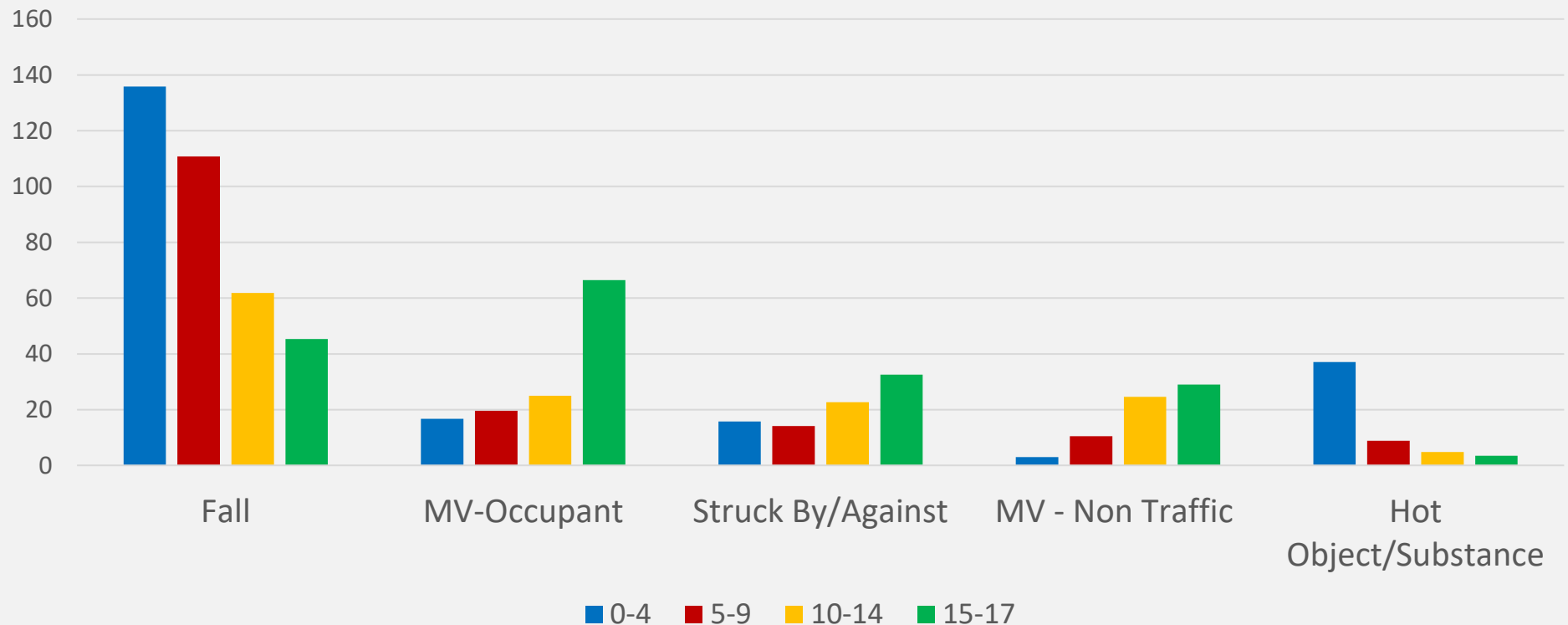
# Pediatric Non-Fatal by Mechanism 2018-2020 Removing Falls

Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population by Mechanism, 2018-2020



# Pediatric Non-Fatal Mechanism by Age Group 2020

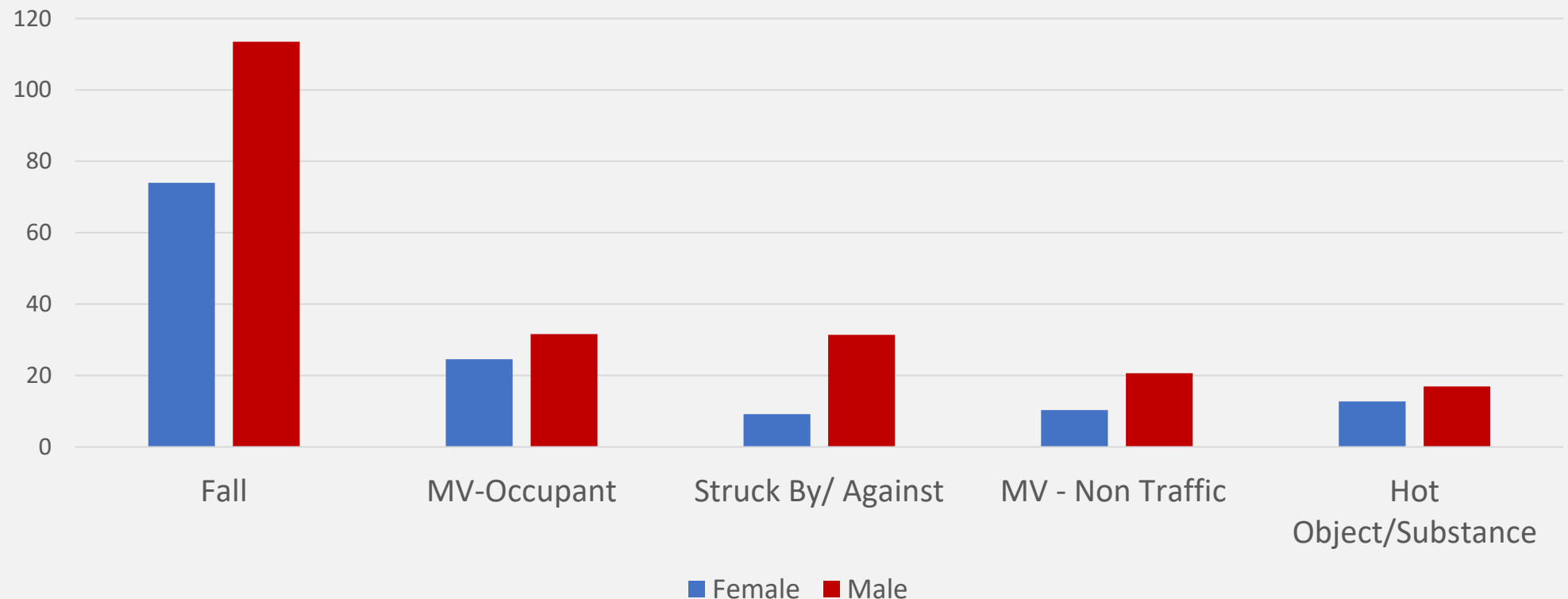
Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population by Mechanism and Age, 2020



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# Pediatric Non-Fatal by Mechanism and Sex 2020

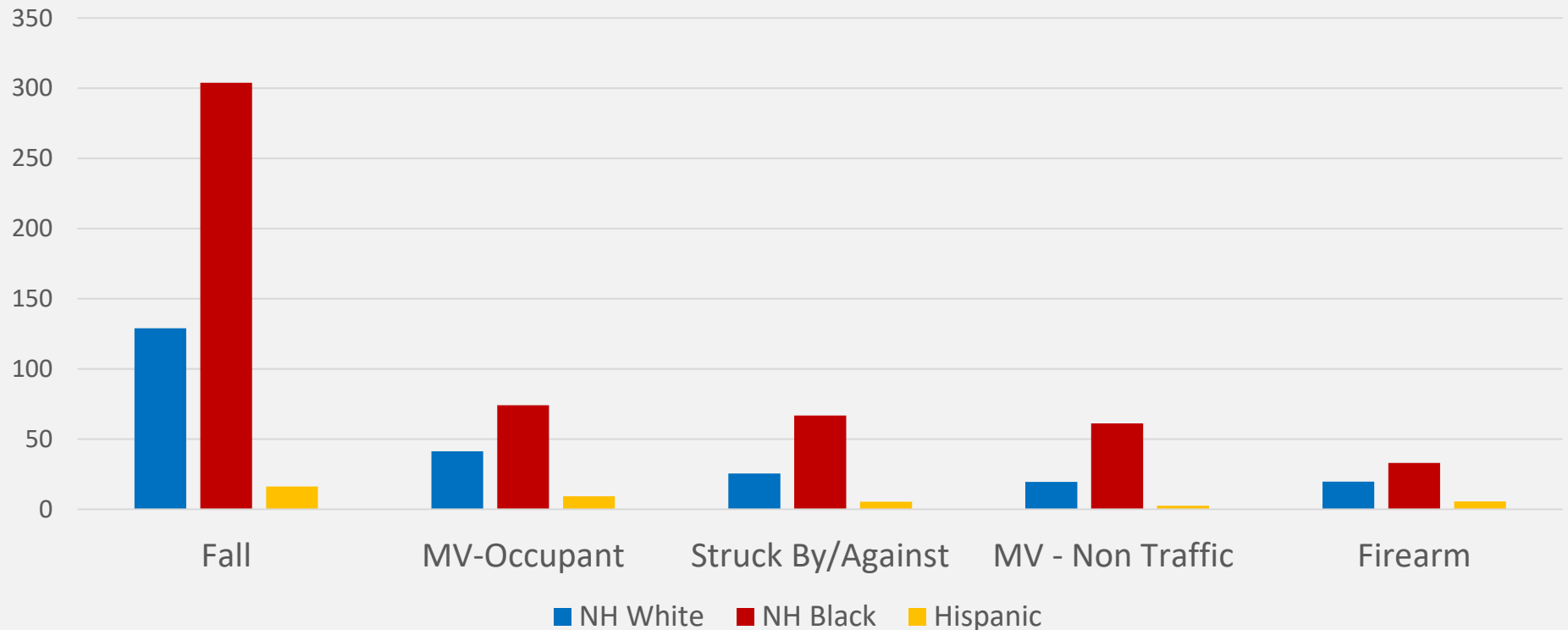
Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population  
by Mechanism and Sex, 2020



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# Pediatric Non-Fatal by Race and Ethnicity 2020

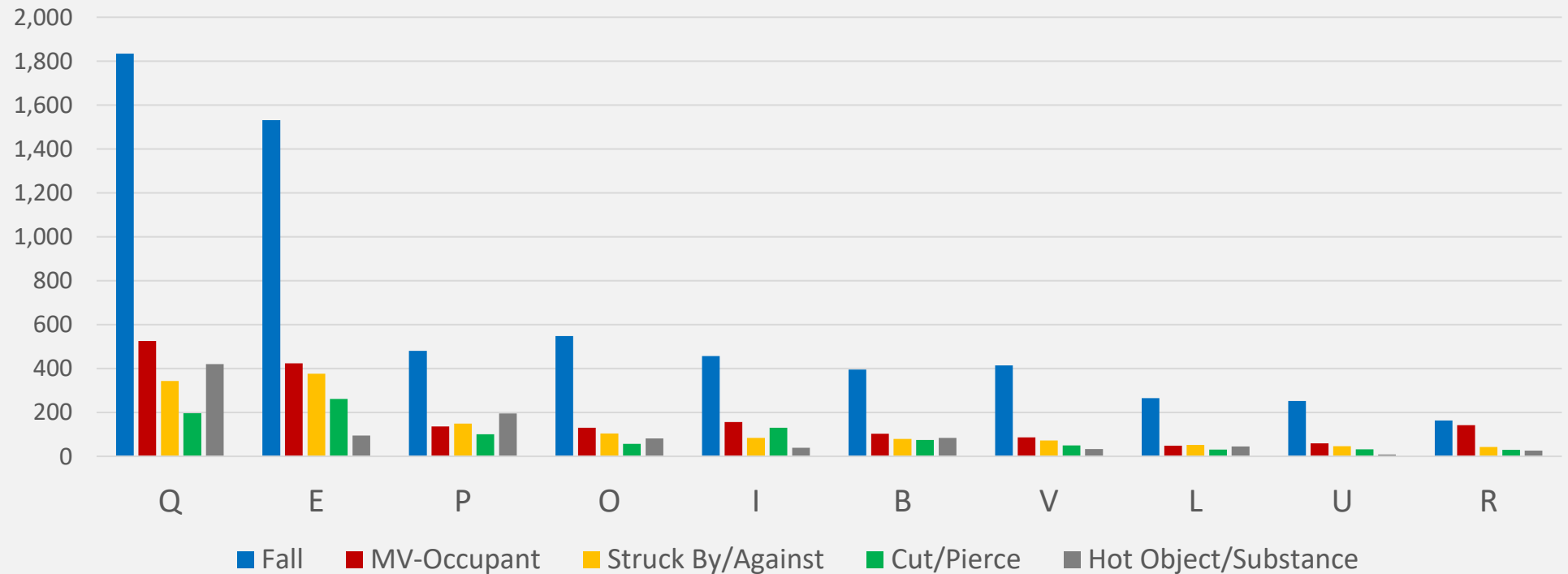
Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population  
by Race and Ethnicity, 2020



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# Pediatric Non-Fatal by Trauma Service Area (TSA) and Mechanism 2020 – Top 10

Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population by TSA and Mechanisms of Injury, 2020

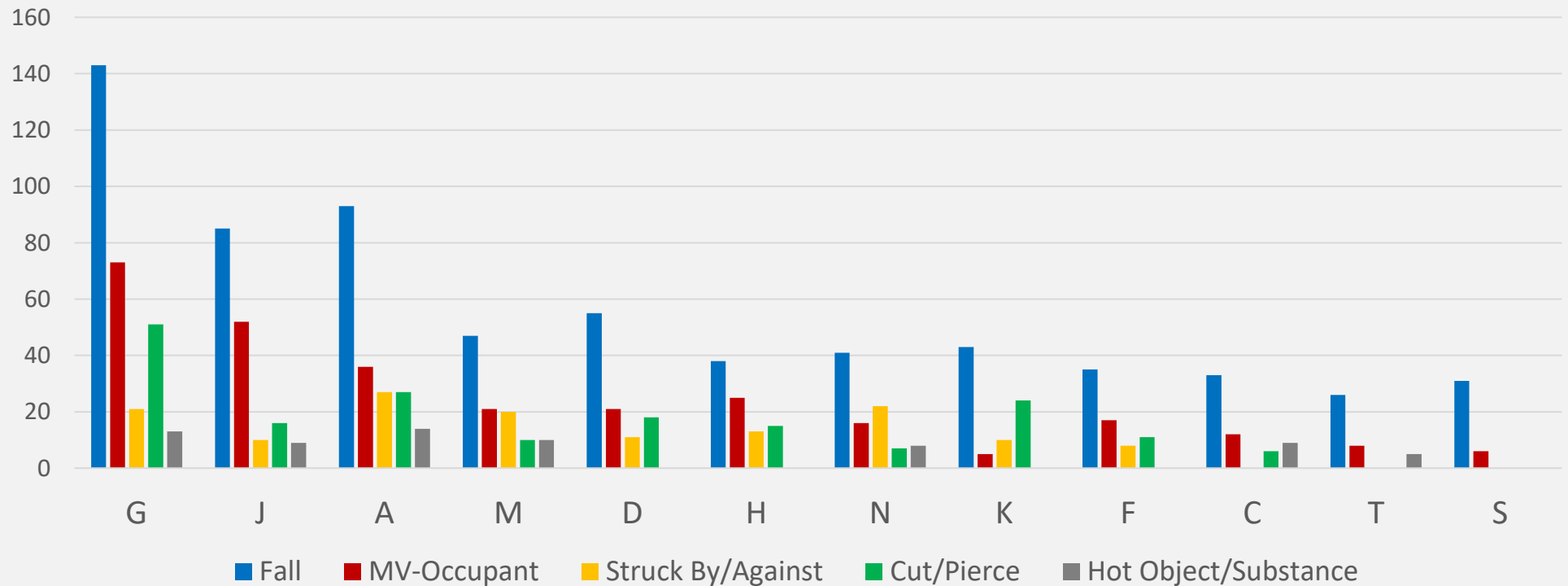


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# Pediatric Non-Fatal by TSA and Mechanism 2020 – lower 12

Pediatric Non-Fatal Trauma Hospitalization Rate per 100,000 Population by TSA and Mechanisms of Injury, 2020



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# Summary of Non-Fatal Data Pediatric

- Non-fatal rates remained relatively constant for 2018-2020.
- Unintentional injury was the leading intent.
- Falls were the leading mechanism of injury. Rate of falls decreased significantly between 2018 and 2020.
- Ages 0-4 had the highest rate of non-fatal falls and hot object / substance; Ages 15-17 had the highest rate of non-fatal MV-occupant, struck by / against, and MV-non-traffic.
- Males had higher rates for all mechanisms of non-fatal injuries.
- Non-Hispanic Black children had higher rates of non-fatal injuries across all mechanisms.

# FATAL TRAUMA HOSPITALIZATIONS



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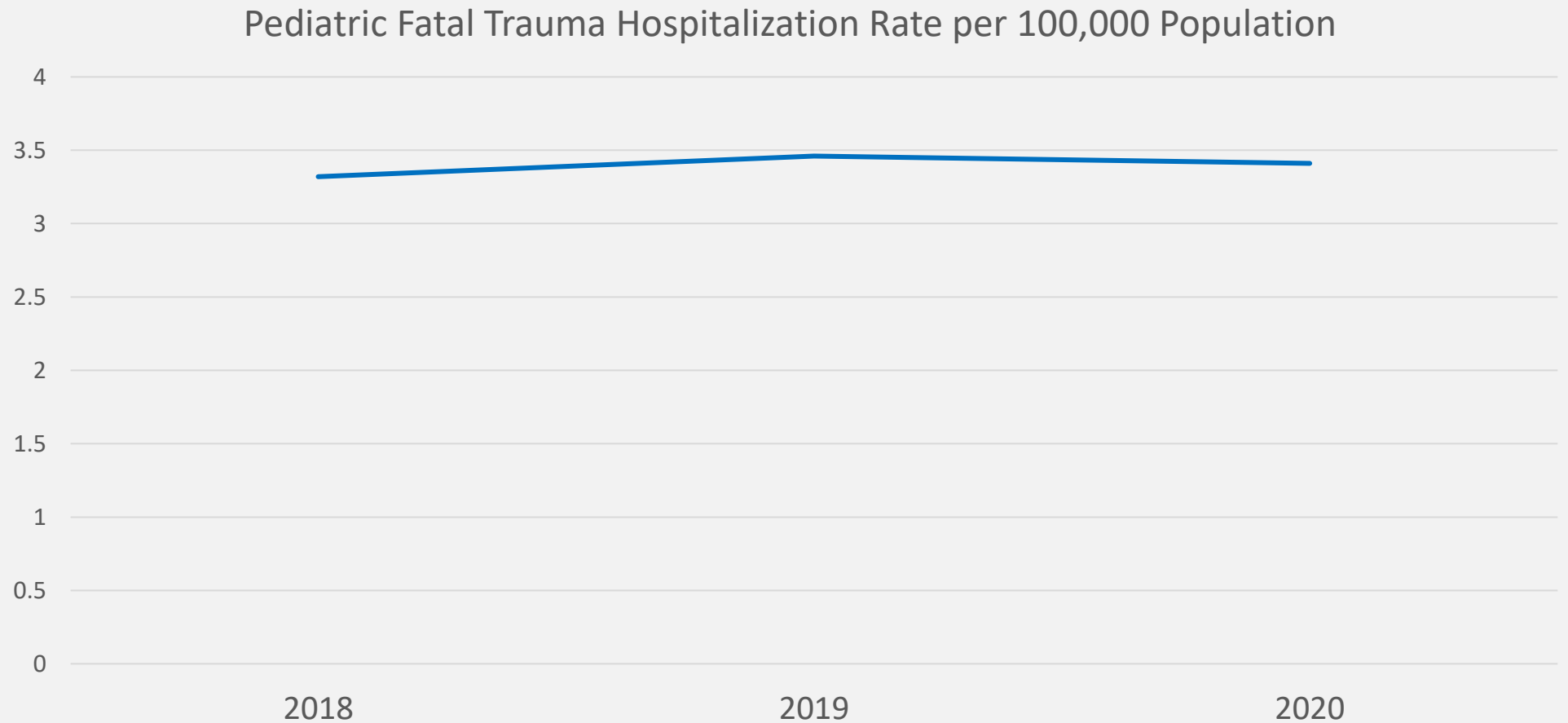
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# Fatal Hospitalizations 2018-2020

## Pediatrics

Year	Counts	Rates
2018	245	3.32
2019	257	3.46
2020	256	3.41

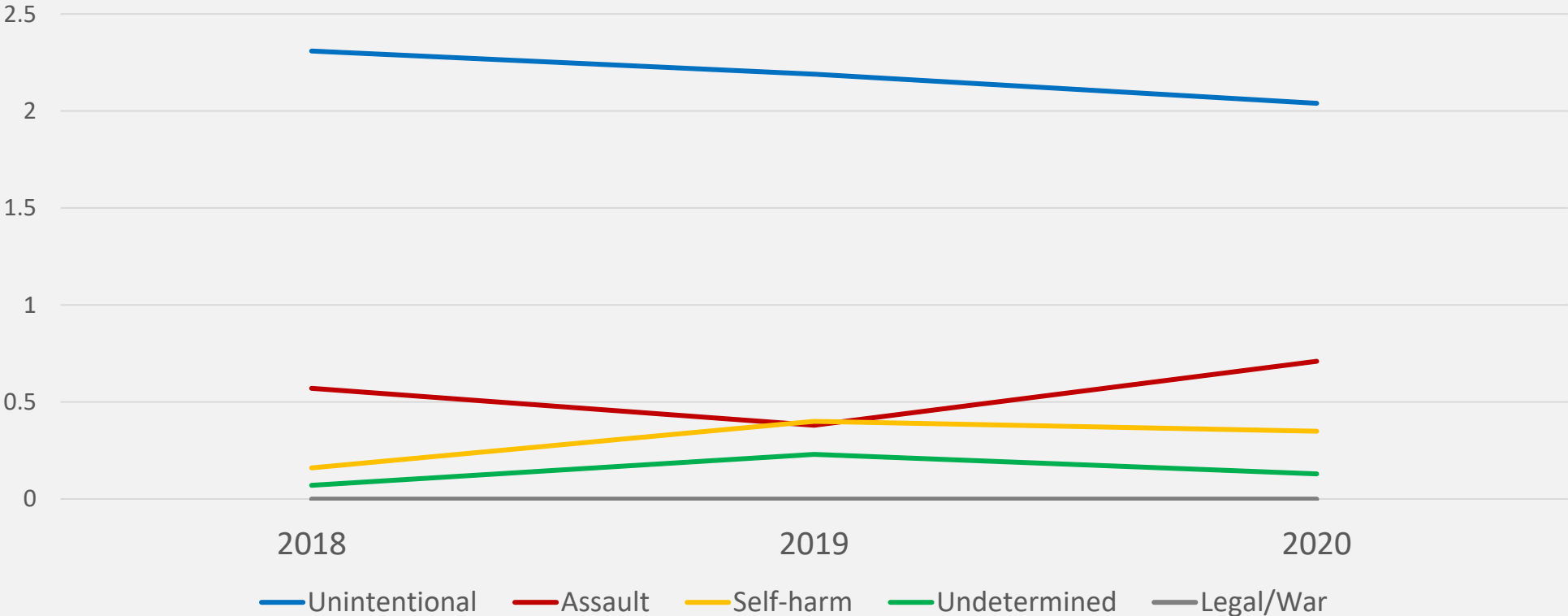
# Pediatric Fatal Rate per Year 2018-2020



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# Pediatric Fatal by Intent 2018-2020

Pediatric Fatal Trauma Hospitalization Rate per 100,000 Population by Intent

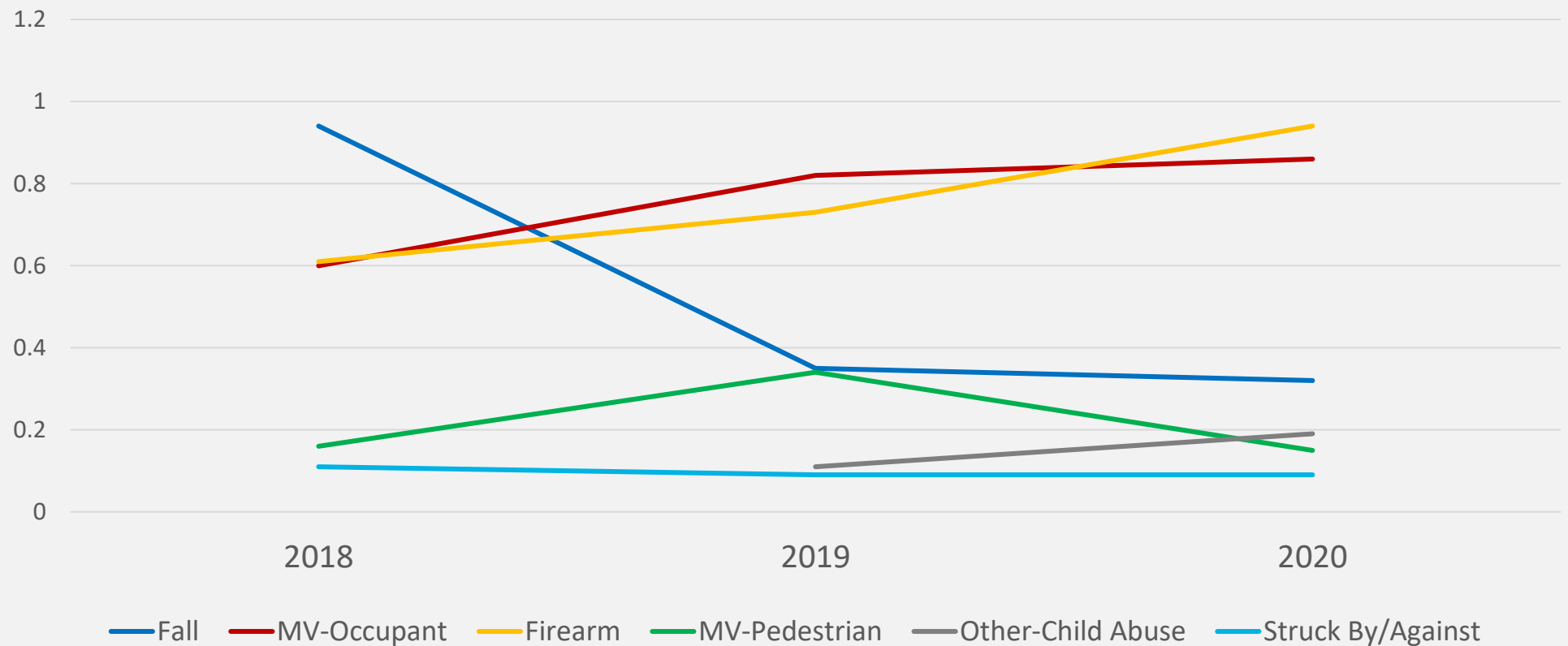


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# Pediatric Fatal by Mechanism

## 2018-2020

Pediatric Fatal Trauma Hospitalization Rate per 100,000 Population by Mechanism



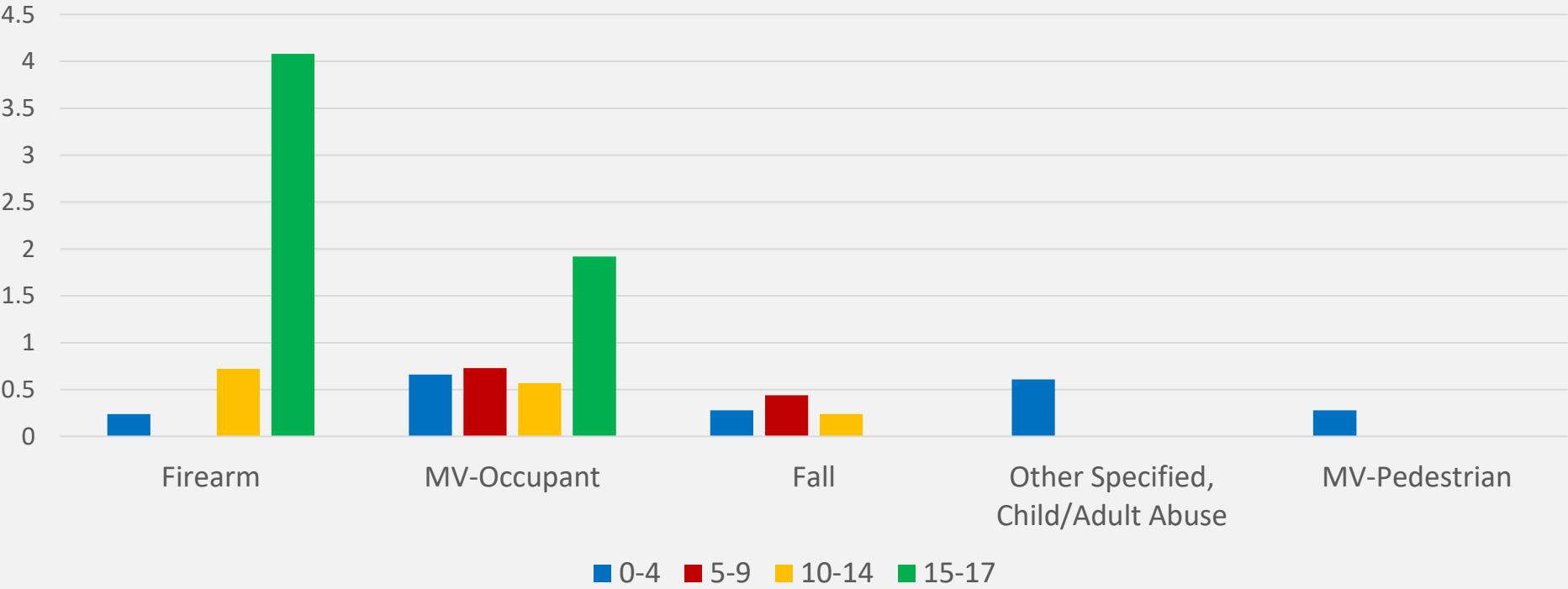
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# Pediatric Fatal Mechanism by Age Group 2020

Pediatric Fatal Trauma Hospitalization Rate per 100,000 Population by Mechanism and Age, 2020

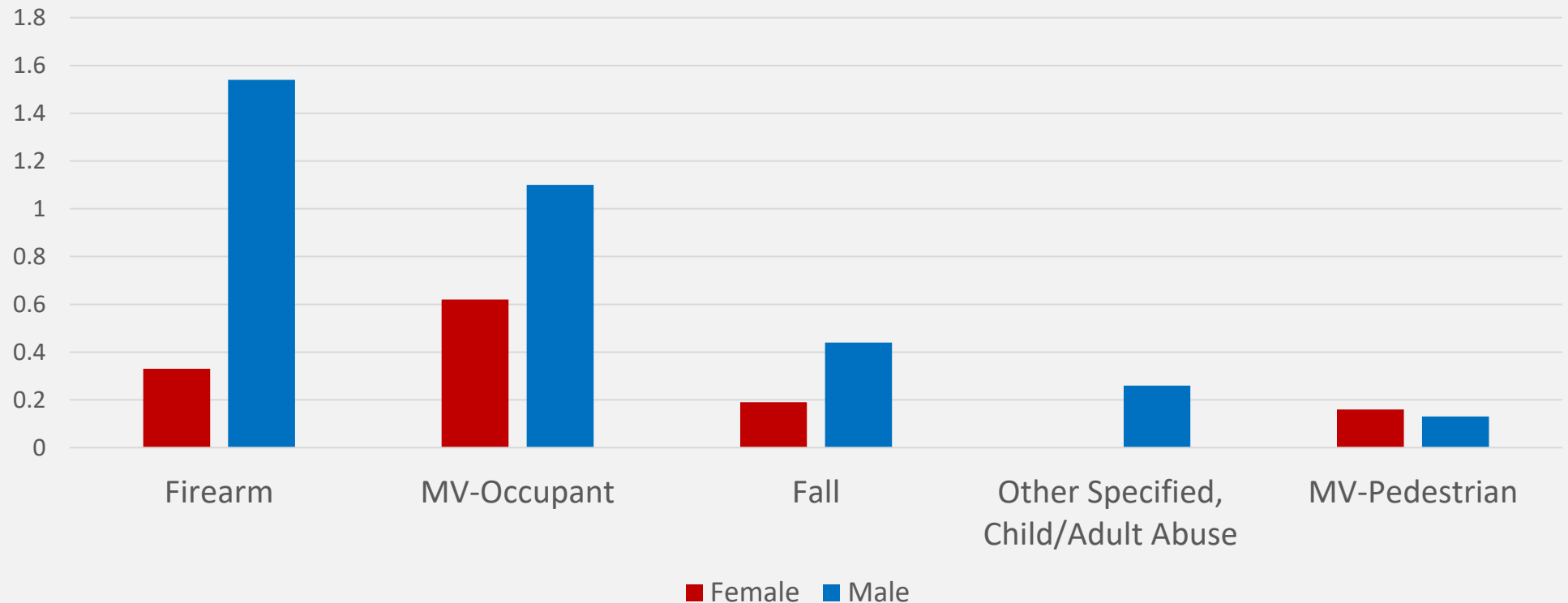


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# Pediatric Fatal by Mechanism and Sex 2020

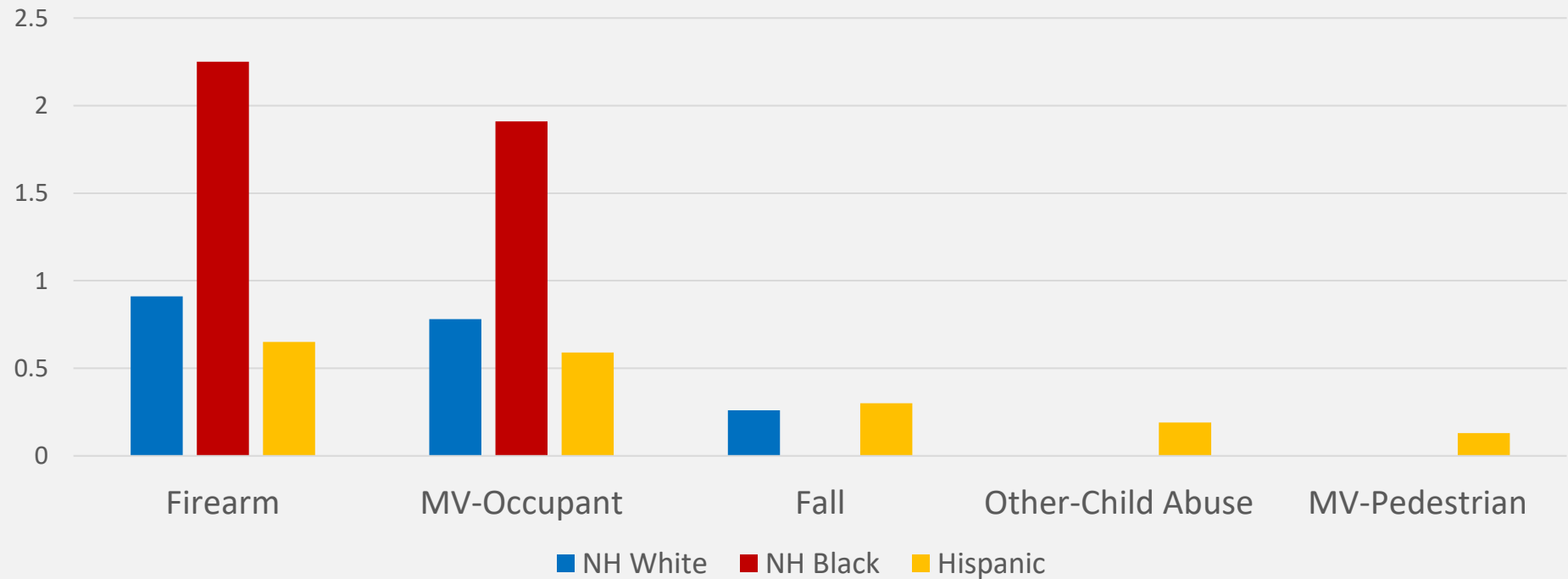
Pediatric Fatal Trauma Hospitalization Rate per 100,000 Population by Mechanism and Sex, 2020



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# Pediatric Fatal by Race and Ethnicity 2020

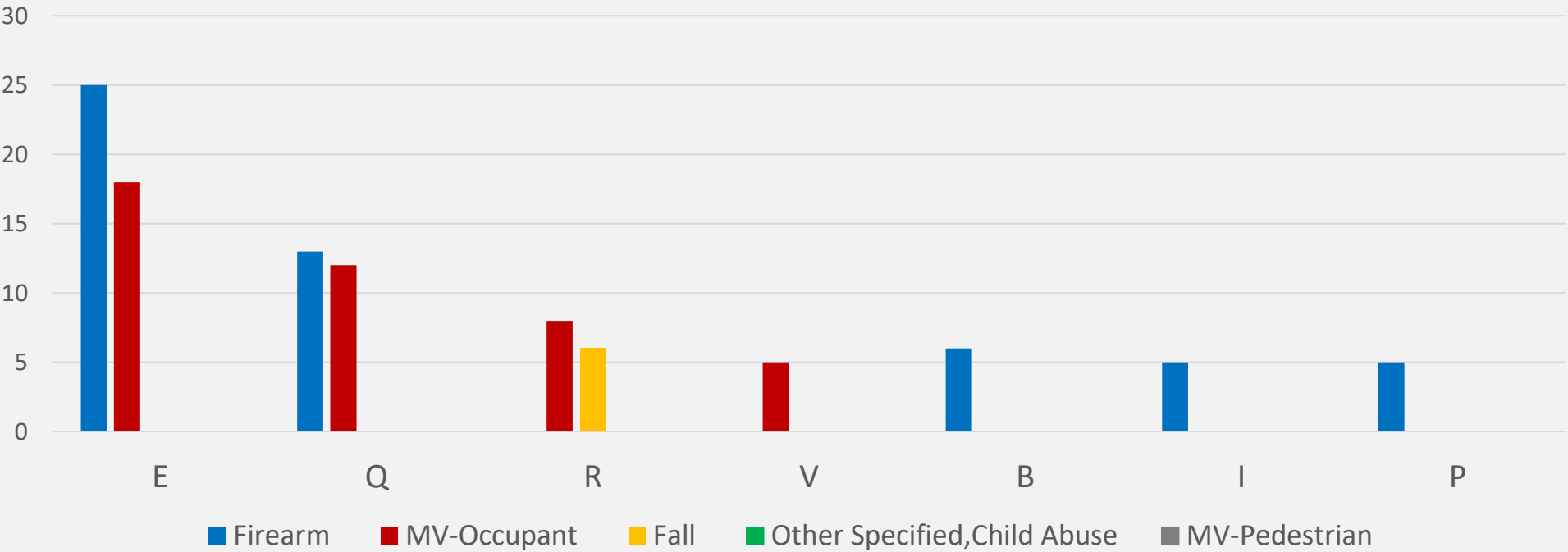
Pediatric Fatal Trauma Hospitalization Rate per 100,000 Population by  
Race and Ethnicity, 2020



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# Pediatric Fatal Hospitalizations by TSA and Mechanism 2020

Pediatric Fatal Trauma Hospitalization Rate per 100,000 Population by TSA and Mechanisms of Injury, 2020



Note: the remaining TSAs are not displayed as the corresponding records are all under 5 and were suppressed.



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# Summary of Fatal Data Pediatric

- Fatal rates remained constant from 2018-2020.
- Unintentional injury remained the primary intent and decreased steadily over the three-year period.
- In 2018, falls were the primary mechanism for all ages, but the rate decreased between 2018 and 2019/2020. For 2019 and 2020, MV-occupant and firearms were the leading mechanism for fatal pediatric hospitalizations.
- Ages 15-17 had the highest rates of fatal firearms and MTV-occupants.
- Males had higher rates of firearm, MV-occupant, fall, and child abuse.
- Non-Hispanic Blacks had higher rates of fatal firearm and MV-occupants.



# 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)
- Injury Indicators Case Definitions: Thomas KE, Johnson RL. State injury indicators report: Instructions for preparing 2019 data. Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2021.

NOTE: Coding is based on the ICD10CM (International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM))



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# Double Transfers 2019 and 2020 Data



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# Double Transfers Methodology

Double Transfers – When patients are transferred from one facility to another facility.

Key variables – Hospitals receiving transferred patients and their emergency department discharge disposition.



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# Double Transfers by Age, 2020

N=19,092

## Transferred to Another Facility

Age	Count	Percentage
0-4	99	37.64%
5-9	52	19.77%
10-14	70	26.62%
15-17	42	15.97%
Total	263	100%



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# Double Transfers by Hospital Designation, 2020

## Transferred to Another Facility

Hospital Designation	Count	Percentage
Level 1	218	82.89%
Level 2	*	*
Level 3	9	03.42%
Level 4	11	04.18%
Hospital	9	03.42%
Missing	13	04.94%
Total	263	100%



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# Double Transfers by Age, 2019

N=20,374

## Transferred to Another Facility

Age	Count	Percentage
0-4	78	34.21%
5-9	52	22.81%
10-14	58	25.44%
15-17	40	17.54%
Total	228	100%



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# Double Transfers by Hospital Designation, 2019

## Transferred to Another Facility

Hospital Designation	Count	Percentage
Level 1	192	84.21%
Level 2	6	2.63%
Level 3	6	2.63%
Level 4	12	5.26%
Hospital	*	*
Missing	9	3.95%
Total	228	100%



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# QUESTIONS?



# Thank you!

Leading Causes of Injuries 2018-2020  
Doubles Transfers 2019-2020

Jia Benno, OIP Manager  
[injury.web@dshs.texas.gov](mailto:injury.web@dshs.texas.gov)