

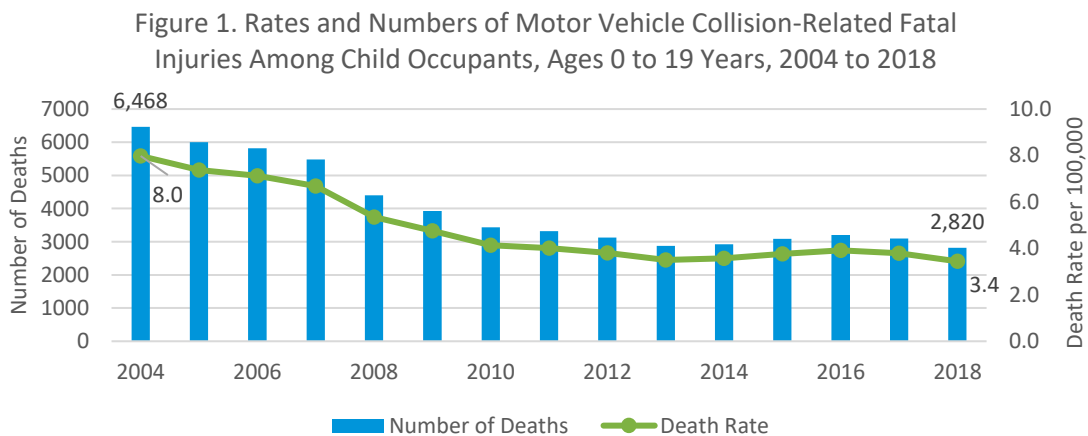
Motor Vehicle Occupant Safety Fact Sheet

LAST UPDATED MARCH 2020

Nearly 32,000 children between the ages of 0-19 were killed as occupants* of motor vehicles in the U.S. in the decade between 2009 to 2018.¹

Fatal Injuries

- In 2018, 2,820 children[†] suffered motor vehicle collision (MVC)-related fatal injuries as child occupants, at a rate of 3.74 per 100,000 children (Figure 1).^{1,2}
- Between 2004 and 2018, there was a 56 percent decrease in the number of MVC-related fatal injuries among child occupants (this equaled a 58 percent reduction in the death rate).^{1,2}



- In addition to child occupants killed in MVCs, children also die due to vehicular heatstroke and back over injuries.
 - In 2019, 52 children, ranging in age from 2 months to 13 years, died from heatstroke or suspected heatstroke while left in cars.³

* An occupant is defined by NHTSA as any person who is in or upon a motor vehicle in transport, including drivers, passengers, and persons riding on the exterior of a motor vehicle.

[†] For the purposes of this fact sheet, children include those ages 19 years and under.



- Between 1998 and 2019, 849 children— or 39 per year — died as a result of vehicular heatstroke.³
- An estimated 267 deaths occur annually because of a vehicle backing up into a person; of these deaths, 31 percent are children under 5 years of age.⁴

Nonfatal Injuries

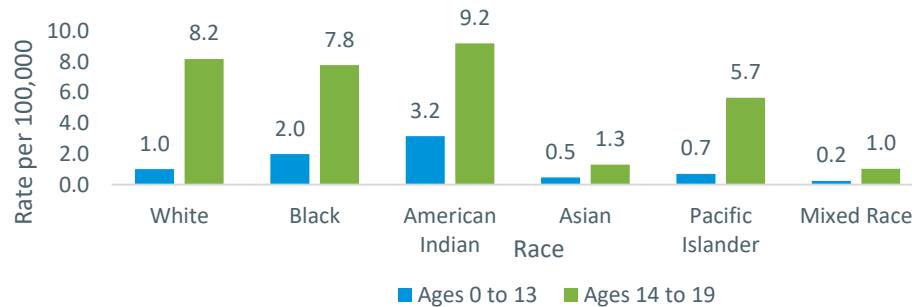
- It is estimated that more than 400,000 children suffered MVC-related nonfatal injuries as occupants in 2018, at a rate of about 500 per 100,000 children.^{2,5}
- Between 2004 and 2018, there was a 31 percent decrease in the number of MVC-related nonfatal injuries among child occupants (this equaled a 32 percent reduction in the rate of nonfatal injury).^{1,2}

Risk Factors

- **Age:** In 2018, older children ages 15-19 accounted for 7 in 10 (72 percent) of MVC-related fatal injuries among child occupants and died at more than 7 times the rate of children ages 0 to 14 (9.7 per 100,000 vs. 1.3 per 100,000, respectively).^{1,2} Children ages 0-4, 5-9 and 10-14 accounted for roughly equal proportions of the number of child occupants killed in MVCs in 2018 (10 percent, 8 percent and 10 percent of deaths, respectively).¹
- **Gender:** Boys are more likely than girls to be killed as occupants in MVCs; nearly 6 in 10 (59 percent) of fatal injuries in 2018 were among boys.¹
- **Race:** In 2018, the rates of MVC-related fatal injuries among child occupants were highest among American Indian and Alaska Native children (5.1 per 100,000) and lowest among Asian children (0.7 per 100,000).^{1,2} This is a change from 2017, when Black or African American children had the highest rates. Similar patterns were also found when age was considered, with fatality rates being highest among American Indian, White and Black children, regardless of age (Figure 2).



Figure 2. Rates of MVC-Related Fatal Injuries by Race and Age Group, Ages 0 to 13 and 14 to 19, Year 2018



- Geographic Location:** The rates of MVC-related fatal injuries among child occupants varied between states. The rates were highest in Wyoming, Mississippi and South Dakota and lowest in New Jersey, Rhode Island and Illinois (Table 1). Fifty-six percent of the fatal MVC-related injuries among child occupants in 2018 occurred on rural roads.¹

Table 1. Numbers and Rates per 100,000 of MVC-Related Fatal Injuries Among Child Occupants by State, U.S., Ages 0 to 19, Year 2018^{1,2}

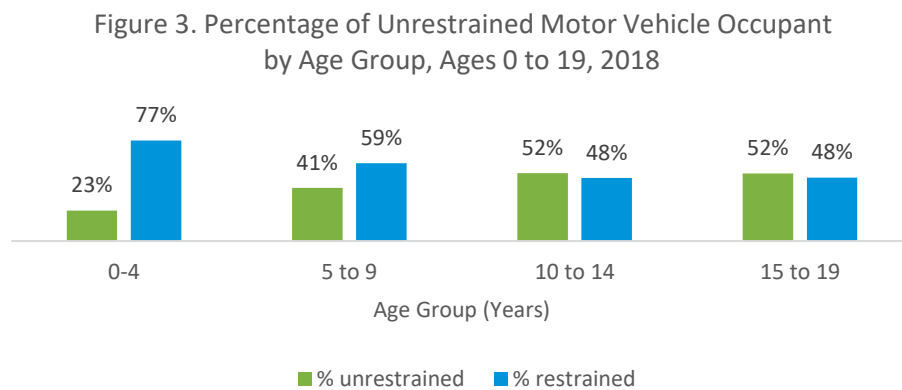
State	#	Rate*	State	#	Rate*	State	#	Rate*	State	#	Rate*
AK	8	3.9	ID	22	4.6	MT	18	7.2	RI	<5	1.7
AL	96	8.0	IL	57	1.8	NC	103	4.1	SC	72	5.8
AR	52	6.5	IN	82	4.7	ND	5	2.5	SD	20	8.3
AZ	82	4.4	KS	49	6.2	NE	30	5.8	TN	88	5.4
CA	244	2.4	KY	56	5.0	NH	13	4.4	TX	341	4.2
CO	57	4.1	LA	59	4.8	NJ	20	0.9	UT	30	2.9
CT	15	1.8	MA	18	1.2	NM	28	5.2	VA	58	2.7
DC	<5	0.7	MD	39	2.6	NV	22	2.9	VT	9	6.8
DE	10	4.6	ME	9	3.1	NY	46	1.0	WA	41	2.2
FL	198	4.2	MI	64	2.6	OH	87	3.0	WI	35	2.4
GA	113	4.0	MN	37	2.6	OK	50	4.8	WV	23	5.6
HI	6	1.8	MO	78	5.1	OR	37	3.9	WY	14	9.4
IA	38	4.6	MS	68	8.5	PA	68	2.2			

*Rates based on small numbers (<20 fatal injuries) can be unstable and should be interpreted with caution.

- Day of the Week:** In 2018, 37 percent of MVC-related fatal injuries among child occupants occurred on either a Saturday or Sunday.¹



- Restraint Use:** For the 2,550 children killed as occupants in MVCs in 2018 where restraint use was known and applicable, 48 percent were unrestrained. The proportion of unrestrained fatal injuries increased with increasing age, from 23 percent for children under 5 years, to 41 percent for 5- to 9-year-olds and 52 percent for both 10- to 14-year-olds and 15- to 19-year-olds (Figure 3).^{1,2}



- Occupant Type:** Sixty percent of 15- to 19-year-olds killed as occupants in MVCs in 2018 were the driver of the vehicle.¹

Cost of Fatal and Nonfatal Injuries[‡]

- It is estimated that medical care and work loss costs combined for fatal and nonfatal MVC-related occupant injuries among children in the U.S. totaled at least \$10.4 billion in 2017.⁶
- More than half of the combined costs of MVC occupant injuries among children in 2017 were incurred from nonfatal injuries that resulted in hospitalization (\$6.1 billion). Nonfatal injuries resulting in emergency department (ED) treatment and release cost an estimated \$2.3 billion in combined costs and fatal injuries an estimated \$2 billion in combined costs.⁶

[‡] Cost of injury data calculated using most recent year of data available within the CDC’s Web-based Injury Statistics Query and Reporting System (WISQARS) Cost of Injury Reports application for fatal and nonfatal injuries, which only includes nonfatal injuries that were serious enough to require an ED visit. Total combined medical and work loss costs are likely underestimated, as WISQARS cost estimates do not include ED treatment costs for injured children who were hospitalized.



For more information or questions on the information contained in this factsheet, please contact the SKW Research Department via email at: mchandler@safekids.org

References

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