

Rail Safety Fact Sheet

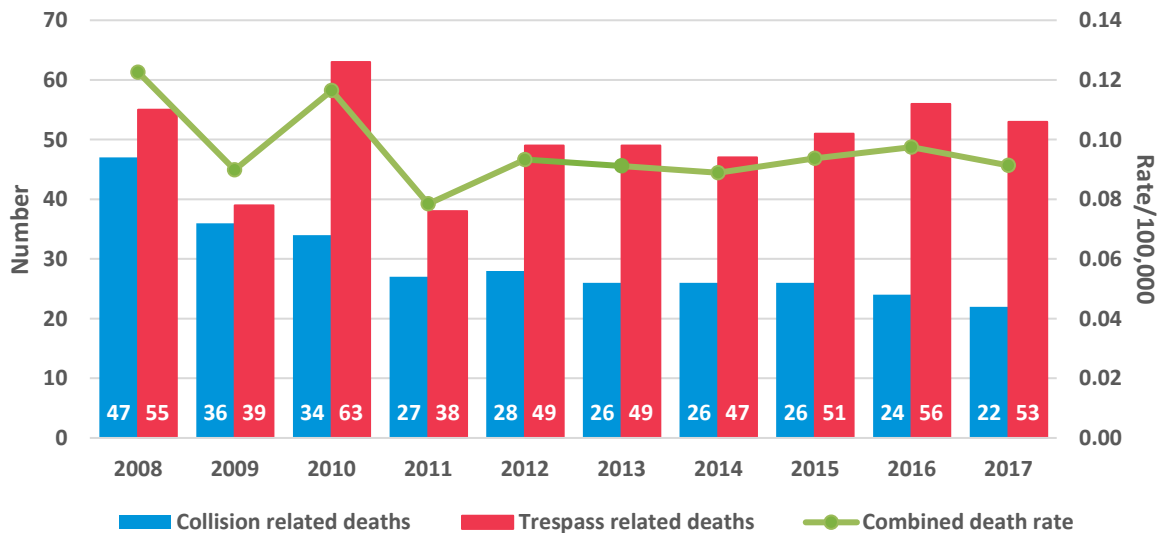
LAST UPDATED JULY 2018

Unintentional injuries are the leading cause of death, injury and disability among American children ages 1 to 19, and this includes rail-related injuries. This fact sheet provides information on rail-related injury incidents involving either collisions at grade crossings or trespass around tracks and trains.¹

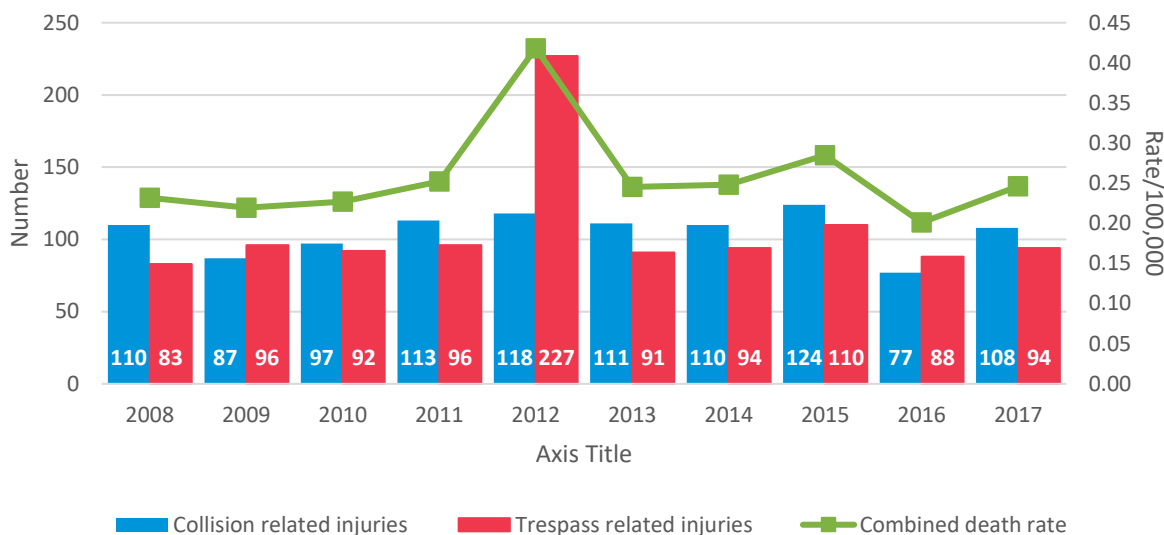
Overall Injuries

- According to reports to the Federal Railroad Administration (FRA) in 2017 alone, **75** children ages 0-19 died in rail-related injury incidents and another 213 were injured.²
- Between 2008 and 2017, nearly **800** children ages 0-19 years died in rail-related injury incidents. For every fatality, there were 2.7 non-fatal injuries reported.²
- The fatality rate has not changed much in the last six years and was 0.09/100,000 in 2017.
- In the 0-19 age group, 63 percent of fatalities and 50 percent of injuries are the result of trespass around tracks and trains, making trespass the biggest safety issue.²
- While rail-related fatalities and injuries involving either collisions at grade crossings or trespass are more common in adults, children 0-19 years make up **about 10 percent of both fatalities and injuries.**²

**Rail-related Collision and Trespass Deaths
Children 0 to 19 Years, 2008-2017**



Rail-related Collision and Trespass Injuries Children 0 to 19 Years, 2008-2017



Collisions at Grade Crossings

- Collisions at grade crossings typically involve a motor vehicle colliding with the train, often because of inattention/distraction or an effort to *beat the train*; however, they can also involve bicycles and pedestrians crossing at grade crossings.
- From 2008 to 2017, 2,511 fatalities and 7,132 non-fatal injuries occurring as a result of collisions at grade crossings were reported to the FRA.
- Children 0-19 years make up 12 percent of the fatalities involving collisions at grade crossings and 16 percent of non-fatal injuries involving collisions at grade crossings.
- 22 percent of injuries to children resulting from grade crossing collisions are fatal compared to 27 percent among adults.
- Both fatal and non-fatal injuries to children related to grade crossings were slightly more frequent in the summer months, with 40 percent taking place from May-August compared to 30 percent for both January-April and September-October.
- While just under half of non-fatal injuries to children at grade crossings occur between 6:00 pm and 5:59 am, 67 percent of fatalities occur during this time period.

Trespass

- Trespass incidents typically involve using the *right of way* (rail tracks and the property on either side of them) as a shortcut or for recreational purposes (e.g., photography, walking, hiking,



hunting, ATV, snowmobile, etc.), but some may also involve criminal activity (e.g., graffiti, catching a ride).

- From 2008 to 2017, 4,642 fatalities and 14,661 non-fatal injuries occurring as a result of trespass were reported to the FRA.
- Children 0-19 years make up 12 percent of the total number of trespass fatalities and 9 percent of non-fatal trespass injuries.
- 32 percent of reported trespass incidents involving children are fatal compared to 24 percent of trespass incidents involving adults.
- Non-fatal injuries to children related to trespass were most frequent in November at 19 percent, with 41 percent occurring during September-December compared to 25 percent from January-April and 33 percent from May-August. However, fatal injuries were more common during the summer months, with 39 percent taking place from May-August compared to 30 percent for January-April and 31 percent for September-December.
- Trespass-related incidents involving children are more likely to occur between 6:00 am and 5:59 pm.; 41 percent of fatalities and 15 percent of non-fatal injuries occur between 6:00 pm and 5:59 am.

Other Factors

- In 2017, teenagers ages 15-19 years accounted for **77 percent** of rail-related injury incidents involving either collisions at grade crossings or trespass in the 0-19-year-old age group.²⁻³
- **Boys** are more likely to suffer fatal rail-related injuries than girls; **72 percent** of fatalities are among boys and **27 percent** among girls.⁴
- Fatality rates are highest among **American-Indian/Alaska Native** and **Hispanic** children (both at 0.12/100,000) and lowest among **Asian** children (0.02/100,000).⁴



Rail-related Collision and Trespass Injuries by Age Group, 2008-2017



Geography

- California, Texas and Illinois have the highest number of rail-related fatalities related to grade crossing collisions and trespass in the 0-19 age group for the time period 2008-2017, but the three states with the highest population-based fatality rate for grade crossing collisions and trespass combined were **Vermont, Indiana and Mississippi.**²
- New Jersey, Texas and California had the highest number of non-fatal injuries in this age group related to grade crossing collisions and trespass for the time period 2008-2017; the three states with the highest population-based injury rates for grade crossing collisions and trespass combined were **North Dakota, New Jersey and Louisiana.**²
- New Jersey, California and New York had the highest number of trespass incidents (deaths and injuries) in this age group for the time period 2008-2017; the three states with the highest population-based rate for fatal and non-fatal trespass injuries combined were **New Jersey, Louisiana and Montana.**²
- Texas, Indiana and California had the highest number of grade crossing collision incidents (deaths and injuries) in this age group for the time period 2008-2017; the three states with the highest population-based rate for fatal and non-fatal grade crossing collision injuries for the time period 2008-2017 were **North Dakota, Arkansas and Indiana.**²



Table 1 – Rail-related Injury Incidents Involving Collisions at Grade Crossings or Trespass

State	Total Number of Deaths	Total Number of Injuries	Overall Rail-related Death Rate	Overall Rail-related Injury Rate	Overall Trespass Rate*	Overall Collision Rate*
ALABAMA	14	74	0.11	0.59	0.16	0.54
ARIZONA	8	16	0.04	0.09	0.08	0.05
ARKANSAS	16	50	0.20	0.63	0.22	0.62
CALIFORNIA	107	142	0.10	0.14	0.16	0.08
COLORADO	9	18	0.07	0.13	0.12	0.07
CONNECTICUT	3	10	0.03	0.11	0.08	0.07
DC	<5	<5	NA	NA	NA	NA
DELAWARE	<5	6	NA	0.26	0.22	NA
FLORIDA	28	46	0.06	0.10	0.11	0.06
GEORGIA	30	76	0.11	0.27	0.17	0.21
IDAHO	6	16	0.13	0.34	0.15	0.32
ILLINOIS	48	123	0.14	0.36	0.26	0.24
INDIANA	41	107	0.23	0.60	0.27	0.56
IOWA	13	51	0.16	0.62	0.32	0.46
KANSAS	12	30	0.15	0.37	0.26	0.26
KENTUCKY	15	54	0.13	0.48	0.20	0.41
LOUISIANA	22	88	0.18	0.71	0.36	0.53
MAINE	<5	5	NA	0.17	0.03	0.13
MARYLAND	11	18	0.07	0.12	0.17	0.03
MASSACHUSETTS	8	16	0.05	0.10	0.11	0.04
MICHIGAN	17	41	0.07	0.16	0.08	0.15
MINNESOTA	9	40	0.06	0.28	0.15	0.19
MISSISSIPPI	18	31	0.22	0.37	0.16	0.43
MISSOURI	18	51	0.11	0.32	0.18	0.26
MONTANA	<5	9	0.12	0.36	0.32	0.16
NORTH CAROLINA	29	40	0.11	0.16	0.15	0.12
NORTH DAKOTA	<5	17	0.22	0.92	0.11	1.03
NEBRASKA	7	30	0.14	0.58	0.15	0.56
NEVADA	<5	6	0.01	0.08	0.10	0.00
NEW JERSEY	17	186	0.08	0.83	0.87	0.03
NEW MEXICO	11	8	0.20	0.14	0.25	0.09
NEW YORK	24	119	0.05	0.25	0.27	0.02
OHIO	34	74	0.11	0.25	0.15	0.21
OKLAHOMA	18	50	0.17	0.48	0.20	0.45
OREGON	10	17	0.10	0.18	0.20	0.08
PENNSYLVANIA	35	74	0.11	0.24	0.28	0.07
RHODE ISLAND	<5	<5	0.04	0.04	0.08	0.00
SOUTH DAKOTA	<5	8	0.04	0.35	0.09	0.30
SOUTH CAROLINA	9	37	0.07	0.30	0.16	0.21
TENNESSEE	19	41	0.11	0.25	0.16	0.20



State	Total Number of Deaths	Total Number of Injuries	Overall Rail-related Death Rate	Overall Rail-related Injury Rate	Overall Trespass Rate*	Overall Collision Rate*
TEXAS	58	176	0.07	0.23	0.15	0.15
UTAH	9	13	0.09	0.13	0.08	0.14
VERMONT	<5	<5	0.27	0.07	0.27	0.07
VIRGINIA	20	29	0.10	0.14	0.18	0.05
WASHINGTON	17	24	0.10	0.14	0.12	0.11
WEST VIRGINIA	<5	18	0.09	0.42	0.30	0.21
WISCONSIN	<5	35	0.03	0.24	0.07	0.20
WYOMING	<5	<5	0.13	0.20	0.26	0.07

References/Notes

1. The fatality and injury rates based on Federal Railroad Administration data presented include incidents involving either collisions at grade crossings (locations where tracks cross roads) or trespass around tracks and trains. They **exclude suicide**, injuries to passengers on trains, injuries on or around tracks involving animal bites or work-related injuries. The fatality data from the CDC Wonder Online Database include injuries to passengers and likely underestimate rail-related injuries.
2. Federal Railroad Administration, Office of Safety Analysis. Railroad Injury and Illness Database, Highway-Rail Grade Crossing Accident/Incident Database. Accessed 4.24.2018. Available from: <http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/query/query.aspx>
3. Rates were calculated using population rates from the U.S. Census Bureau for 2008-2016; as 2017 estimates are not available for 2017, 2016 population estimates were used for both the 2016 and 2017 rates. For state-based fatality rates, states with 5 or fewer deaths over the 10-year period were excluded due to instability of the rates.
4. Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2016 on CDC WONDER Online Database, released December 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed April 21, 2018. Available from: <http://wonder.cdc.gov/ucdicd10>.

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