

Miles to go

MONITORING PROGRESS IN TEEN DRIVER SAFETY



For decades, the leading health threat to our nation's youth has been motor vehicle crashes. Within the last 10 years, many different organizations have committed to addressing this epidemic. Through advocating for improvements to state Graduated Driver Licensing (GDL) laws, funding research, and increasing parent and teen awareness via targeted programs, these groups are working hard to reduce teen driver-related crashes.

Last year researchers at the Center for Injury Research and Prevention at The Children's Hospital of Philadelphia (CHOP) Research Institute established several metrics and accompanying benchmarks in a report titled *Miles to Go* to provide stakeholders in teen driver safety the ability to monitor the impact of various initiatives.

In this year's report, the second in an annual series, we focus on the progress made in reducing teen driver-related crashes since 2005. We broadened the context of those initial benchmarks to observe trends over time. For some selected benchmarks, we "drilled down" to the state-specific level, where policy action typically occurs.

Although policy and awareness efforts have had a strong positive impact on these indicators, the human toll from crashes with teens behind the wheel* remains at an unacceptable level. We should continue to monitor and act on the following metrics to further reduce the number of crashes with teens behind the wheel and their associated injuries and fatalities.

Causes of Death for Teens (Page 3)

- Leading causes of death for 15- to 19-year-olds

Fatalities (Page 4)

- Number of fatal crashes with teens behind the wheel
- Number of people killed in crashes with teens behind the wheel

Injuries (Page 5)

- Number of police-reported tow-away crashes with teens behind the wheel resulting in a significant injury
- Number of people injured in police-reported tow-away crashes with teens behind the wheel

Involvement (Page 5)

- Number of police-reported crashes with teens behind the wheel
- Number of people involved in police-reported crashes with teens behind the wheel

State-by-State Crash Fatality Rates (Pages 6 & 7)

- Fatality rate (per 100,000 population) with teens behind the wheel by state

Because certain surveillance databases are not updated annually, we plan to publish some of the metrics biannually. These may include:

- Speeding among teens behind the wheel killed in crashes
- Alcohol use among teens behind the wheel
- Seat belt use among teens behind the wheel and teen passengers

*Throughout this report, "teens behind the wheel" refers to people ages 15 to 19 years driving passenger vehicles and "peer passengers" refers to teens of the same age.

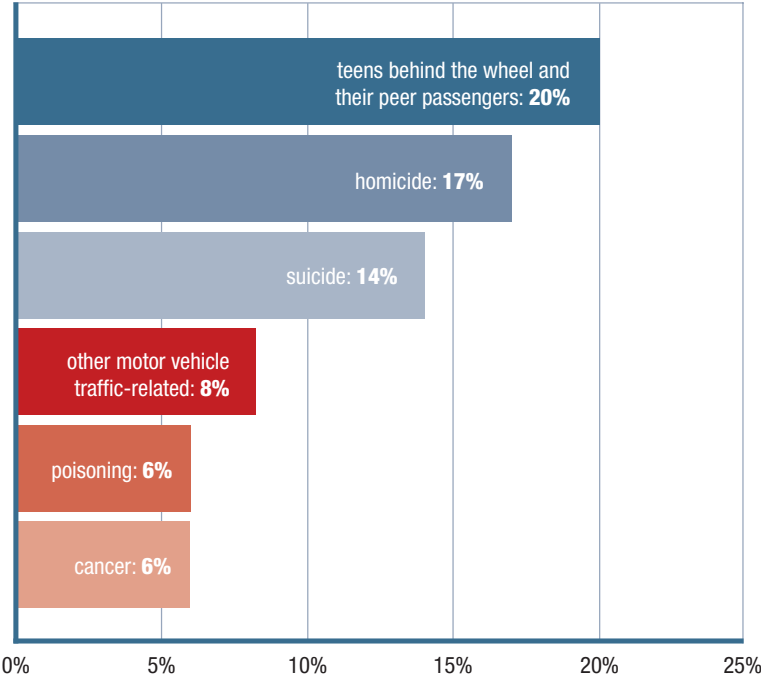




We are sharing this information to motivate action and measure progress, as well as to emphasize the importance of teen driver safety for those who set direction in public health and traffic safety.

ASSESSING THE BURDEN

Leading Causes of Death for 15- to 19-Year-Olds
United States, 2009
Total number of teens who died: **11,520**



- Teens behind the wheel and their peer passengers accounted for one in every five deaths to 15- to 19-year-olds in the U.S.
- Motor vehicle crashes killed nearly five times as many teens as cancer or poisoning.

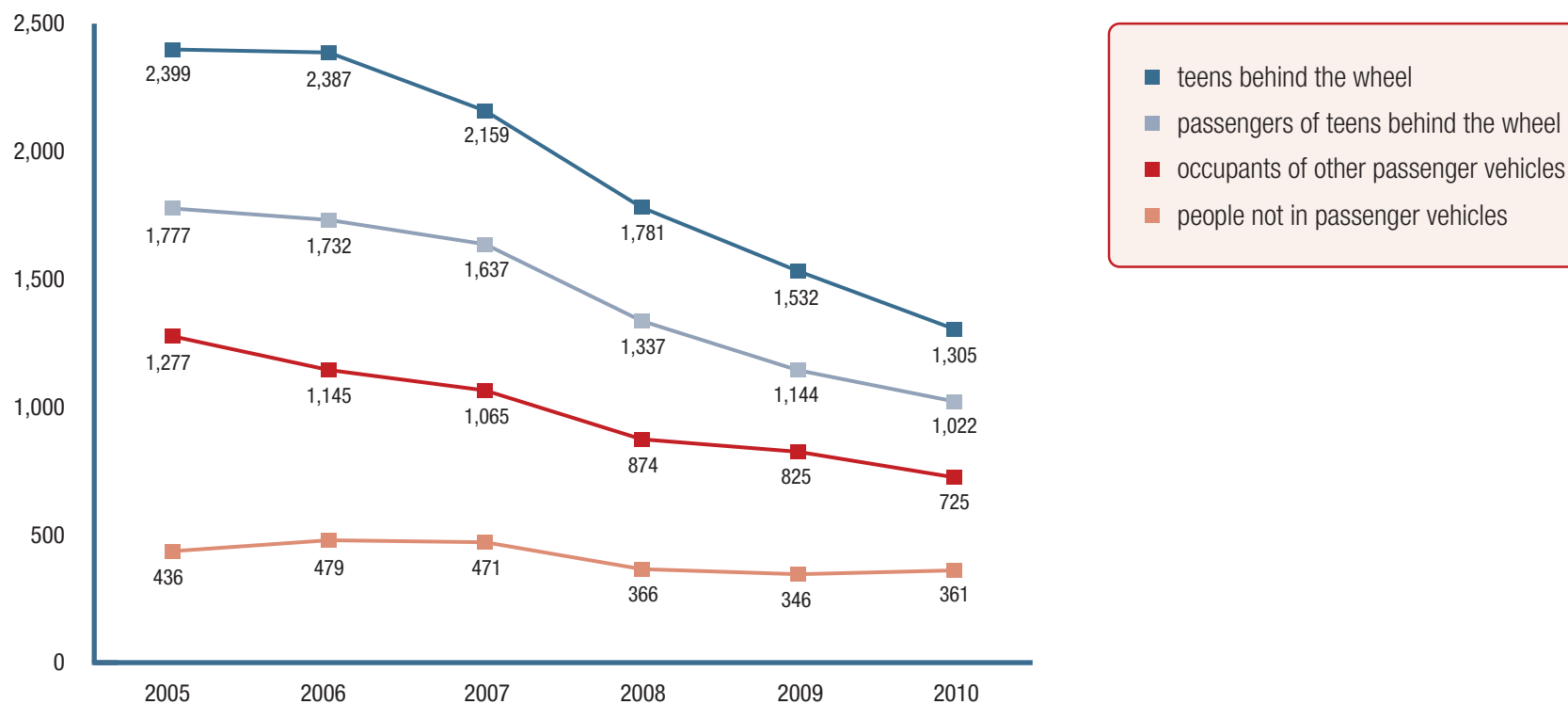
Data source for “teens behind the wheel and their peer passengers” and “other motor vehicle traffic-related”: 2009 Fatality Analysis Reporting System, National Center for Statistics and Analysis, National Highway Traffic Safety Administration. “Other motor vehicle traffic-related” deaths include deaths to teens in motor vehicle crashes in which the teen may have been a pedestrian, bicyclist or occupant in a vehicle not driven by a teen.
Data source for all other leading causes of death: Web-based Injury Statistics Query and Reporting System, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

CHARTING THE PROGRESS

The following charts illustrate the consequences of crashes with teens behind the wheel from 2005 to 2010. Our analyses of long-term trends show that the number of teen driver-related crashes is going down, along with the number of related fatalities. The overall impact of crashes with teens behind the wheel (ages 15 to 19 years driving passenger vehicles) is staggering, with teen driver fatalities only part of the story. Thousands more – including friends, family members, and others on the road – suffer physical injuries, psychological trauma, and disruption to their daily lives.

Crash Fatalities with Teens Behind the Wheel (2005-2010)

Total number of deaths in 2010: **3,413**
Total number of fatal crashes in 2010: **3,198**



- From 2005 to 2010, deaths to teens behind the wheel declined 46 percent.
- In 2010, 1,849 fewer teens behind the wheel and their passengers died in crashes as compared to 2005.

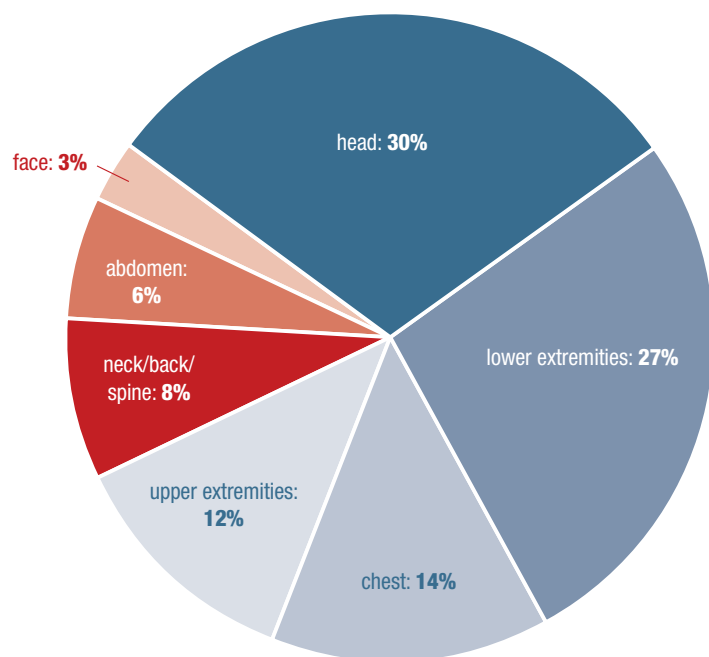
- In 2010, three of every 10 deaths resulting from crashes with a teen behind the wheel were to people outside the teen's vehicle, a category of victims often forgotten in teen driving safety discussions.

People Injured in Tow-away Crashes with Teens Behind the Wheel (Annual Average, 2009-2010)

Average number of injured persons*: **94,479 per year**

Average number of tow-away crashes with an injury:
60,264 per year

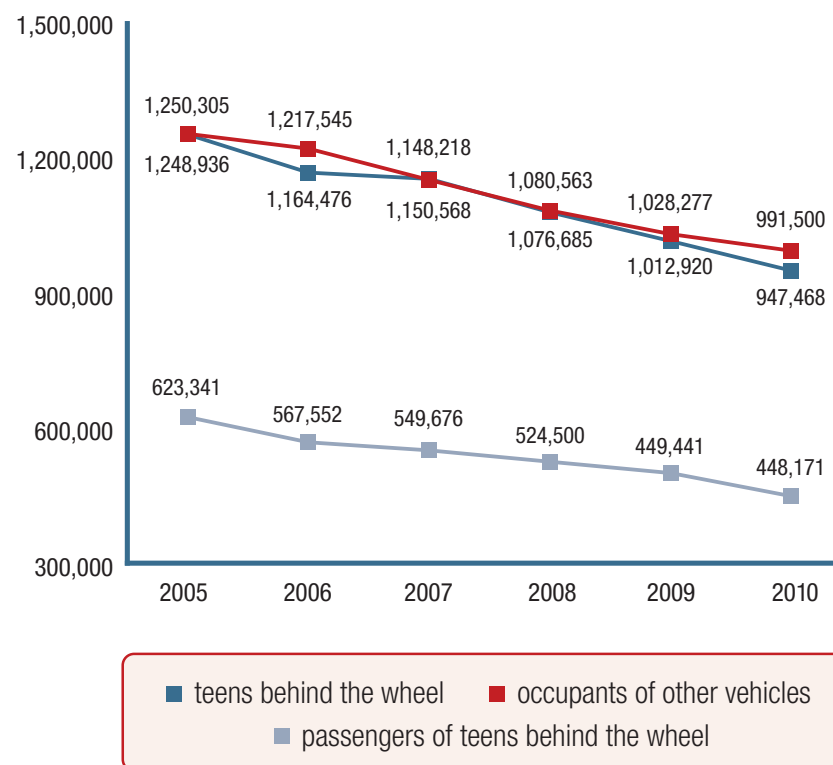
Distribution of Injuries Among Teens*



- A sample of 55,542 teens behind the wheel and their peer passengers injured in crashes while in newer vehicles has detailed information available on injuries. The pie chart above shows a breakdown of injuries by body region.
 - The head (skull fractures and injuries to the brain) was the most commonly injured body region, a serious concern as recovery from these injuries is often incomplete.
 - Fractures of the arms and legs and injuries to the chest, including rib fractures and injuries to the lungs and heart, were also commonly injured body regions.

People Involved in Police-reported Crashes with Teens Behind the Wheel (2005-2010)

Total number of people involved in 2010: **2,387,139**
Total number of police-reported crashes in 2010: **887,233**



- The number of people involved in police-reported crashes with a teen behind the wheel declined 24 percent between 2005 and 2010.
- In these crashes, there were nearly as many occupants in other vehicles involved as teens behind the wheel.

*Data Source (Injured): National Automotive Sampling System Crashworthiness Data System (NASS-CDS). Police-reported fatality, disabling, or evident injury.

*Data Source: NASS-CDS. We combined the two most recent years due to the sample design resulting in large year to year fluctuations and calculated an annual average for those two years. NASS-CDS includes police-reported, tow-away crashes on public roadways. Significant injuries are defined as injuries with a score of 2 or greater on the Abbreviated Injury Scale (AIS), as reported in NASS-CDS.

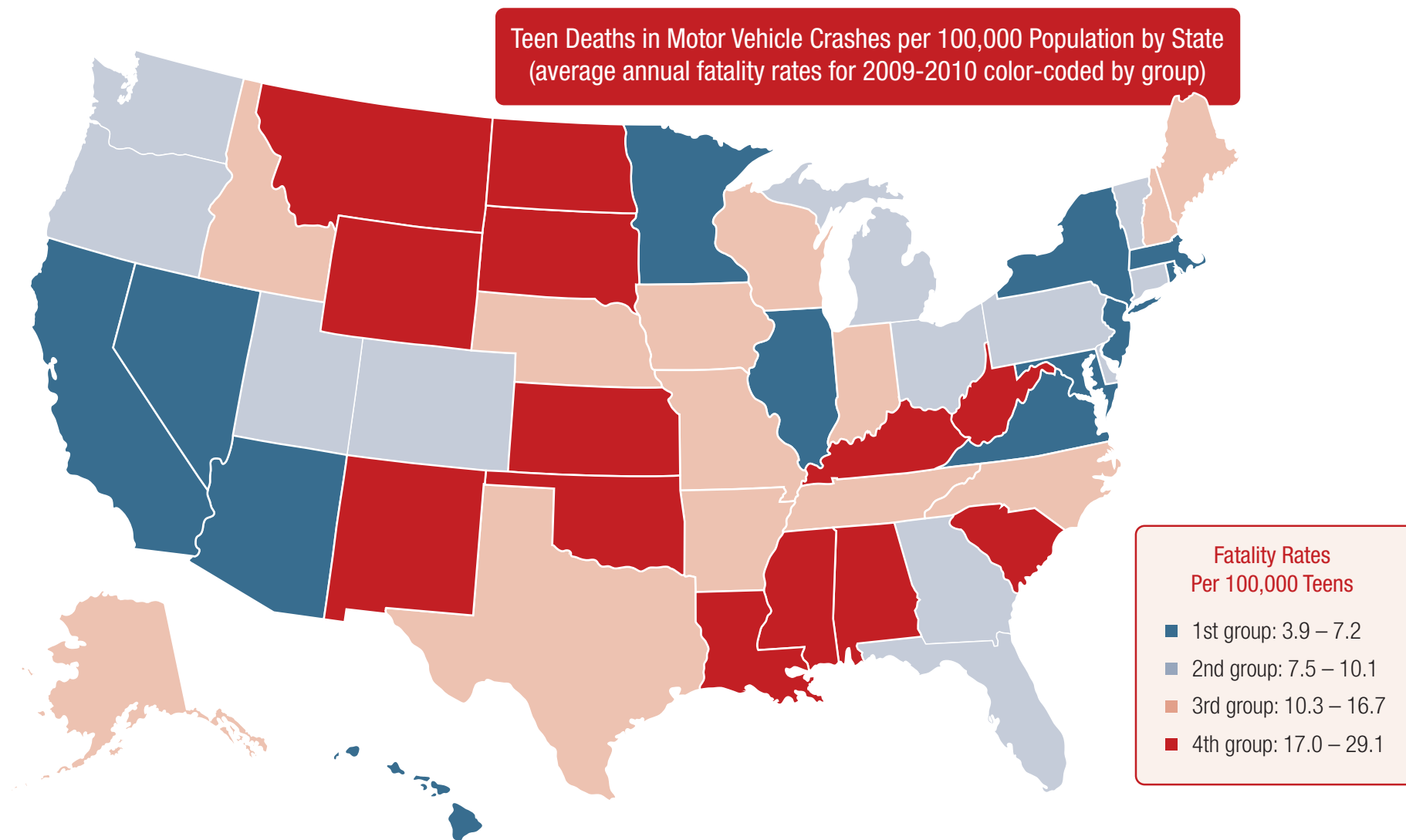
Data Source (Involved): National Automotive Sampling System, General Estimates System (NASS-GES).

MAPPING THE POTENTIAL

We calculated the average annual crash fatality rate for two time periods, 2005-2006 and 2009-2010. Then we ranked states according to their 2009-2010 fatality rate into four groups from the lowest (best) rate to the highest (worst) rate.

Graduated Driver Licensing (GDL) is one intervention proven effective at reducing fatal teen crashes. States with comprehensive GDL laws generally have lower fatality rates than those with less robust GDL laws. GDL works by keeping novice teen drivers out of high-risk driving situations, such as driving at night or with peer passengers, while giving them the opportunity to develop driving skills in lower-risk situations.

Policymakers from states ranked in the first and second groups should be commended for their strong GDL laws. We have the potential to further reduce fatality rates if states ranked in the third and fourth group make their GDL laws more comprehensive.



Crash Fatalities with Teens Behind the Wheel (number of deaths per 100,000 teens)

State	Avg. Annual Fatality Rate 2009-2010	Avg. Annual Fatality Rate 2005-2006	% change 05/06 – 09/10
United States	9.5	16.2	-41.2%
Massachusetts	3.9	8.7	-55.2%
California	4.3	11.3	-62.2%
New Jersey	4.5	9.5	-52.4%
New York	5.0	7.4	-33.0%
Maryland	5.8	11.2	-48.6%
Hawaii*	5.8	10.6	-45.3%
Arizona	5.9	19.0	-69.2%
Rhode Island*	6.2	8.0	-22.2%
Nevada	6.3	13.8	-54.3%
Illinois	6.4	13.6	-52.7%
Virginia	7.2	16.4	-56.4%
Minnesota	7.2	14.7	-51.2%
1st group avg.	5.7	12.0	-52.6%

Connecticut	7.5	9.4	-19.6%
Colorado	7.8	13.4	-41.7%
Washington	8.0	11.2	-28.5%
Oregon	8.0	15.0	-46.5%
Vermont*	8.6	17.4	-50.3%
Ohio	8.7	14.1	-38.4%
Michigan	8.7	11.1	-21.2%
Utah	8.9	12.1	-27.1%
Georgia	8.9	19.7	-54.5%
Florida	9.2	19.1	-51.9%
Delaware*	9.3	16.9	-45.1%
Pennsylvania	10.1	13.4	-24.3%
2nd group avg.	8.7	14.4	-39.9%

* less than 15 total deaths during 2009-10

State	Avg. Annual Fatality Rate 2009-2010	Avg. Annual Fatality Rate 2005-2006	% change 05/06 – 09/10
Wisconsin	10.3	19.4	-46.7%
Alaska*	10.4	4.5	128.7%
New Hampshire	10.6	11.4	-6.6%
Texas	11.0	16.7	-33.9%
Iowa	12.2	19.8	-38.5%
Indiana	12.8	19.1	-32.8%
North Carolina	13.7	20.6	-33.5%
Tennessee	13.7	25.0	-45.0%
Missouri	13.9	30.3	-54.2%
Maine	15.2	23.3	-35.1%
Idaho	16.0	22.1	-27.6%
Arkansas	16.2	29.9	-45.9%
Nebraska	16.7	27.9	-40.3%
3rd group avg.	13.3	20.8	-36.0%

South Carolina	17.0	22.7	-25.2%
West Virginia	17.0	24.8	-31.5%
Kentucky	17.0	27.6	-38.2%
Louisiana	18.3	21.3	-14.1%
New Mexico	18.3	21.6	-15.1%
Alabama	18.7	31.7	-41.0%
Kansas	19.9	19.5	1.8%
Oklahoma	21.0	24.5	-14.5%
North Dakota	22.1	27.6	-20.0%
Mississippi	22.6	34.7	-34.7%
South Dakota	24.3	34.2	-29.0%
Wyoming	24.6	41.0	-40.0%
Montana	29.1	26.3	10.6%
4th group avg.	20.8	27.5	-24.5%

- Fatality rates for teens behind the wheel and their peer passengers vary significantly by state. In 2009-10, the average ranged from a low of 3.9 deaths per 100,000 teens in Massachusetts to a high of 29.1 deaths per 100,000 teens in Montana.
- The average annual fatality rate for all 50 states in 2009-10 was 9.5 deaths per 100,000 teens, a 41 percent decrease from the 2005-06 average of 16.2 deaths per 100,000 teens.
- Five states (CT, MA, NJ, NY, RI) have maintained rates of less than 10 deaths per 100,000 teens since 2005-06.
- 12 states (AZ, CA, FL, GA, IL, MA, MN, MO, NJ, NV, VA, VT) have reduced their teen fatality rates by more than 50 percent between 2005-06 and 2009-10.

Data source: Population Estimates by State, Bureau of the Census, U.S. Department of Commerce. See back cover for a detailed description.

Data source: Fatality Analysis Reporting System (FARS), National Center for Statistics and Analysis, National Highway Traffic Safety Administration.

Note: To calculate an average annual fatality rate, we divided the number of deaths to teens behind the wheel and their peer passengers by the total number of 15- to 19-year-olds in the population for each year. To reduce year to year variation, we used the average number of each two-year time period.

SOURCES

The Fatality Analysis Reporting System (FARS) is a nationwide census providing annual data regarding fatal injuries suffered in motor vehicle traffic crashes. For this report, we included crashes occurring within all 50 U.S. states. To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway customarily open to the public and result in the death of a person (occupant of a vehicle or a nonmotorist) within 30 days of the crash. FARS was conceived, designed, and developed by the National Center for Statistics and Analysis (NCSA) of the National Highway Traffic Safety Administration (NHTSA). Available at www-fars.nhtsa.dot.gov/Main/index.aspx.

The National Automotive Sampling System – Crashworthiness Data System (NASS-CDS) is a nationwide crash data collection program sponsored by the U.S. Department of Transportation (DOT) and operated by the NCSA of NHTSA. NASS-CDS contains detailed data on a representative sample of thousands of police-reported crashes involving at least one towed passenger car, light truck, or van in transport on a trafficway and causing property damage and/or personal injury. Available at www.nhtsa.gov/NASS.

The National Automotive Sampling System - General Estimates System (NASS-GES) is a nationally representative sample of police-reported motor vehicle traffic crashes of all types, from minor to fatal. In order for a crash to be eligible for the GES sample, a police accident report (PAR) must be completed, it must involve at least one motor vehicle traveling on a trafficway, and result in property damage, injury, or death. Available at www.nhtsa.gov/NASS.

US Intercensal Population Estimates by State (July 1, 2005-July 1, 2010) provide a consistent time series of population estimates that reflect the most recent 2010 census results. Bureau of the Census, U.S. Department of Commerce. Available at www.census.gov/popest/data/intercensal/index.html.

The Web-based Injury Statistics Query and Reporting System (WISQARS) is an interactive query system updated annually by the National Center for Injury Prevention and Control at the Centers for Disease Control and Prevention (CDC). It provides data on fatal injuries, violent deaths, and nonfatal injuries treated in U.S. hospital emergency departments. Available at www.cdc.gov/injury/wisqars/index.html.

The information in this report was selected based on several practical criteria:

- It was drawn from credible sources of data on teens and crashes.
- It was drawn from sources of data that are regularly updated and can therefore be used to measure progress.
- It included findings published in the peer-reviewed scientific literature or from an official government data source.



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