A NATIONAL TEEN DRIVER SAFETY REPORT

Miles to go

ESTABLISHING BENCHMARKS FOR TEEN DRIVER SAFETY

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Over the past several years, teen driving has received increased attention. Many organizations are committed to reducing one of the leading health threats to our nation's teens: crashes with teens behind the wheel. Researchers at the Center for Injury Research and Prevention at The Children's Hospital of Philadelphia (CHOP) Research Institute, with support from State Farm Insurance Companies®, created *Miles to Go* to provide these organizations with a framework for monitoring the impact of various initiatives to improve teen driver safety. As the first baseline report, Miles to Go presents a national status on teen driver safety regarding the following 11 indicators:

Fatalities *(Page 4)*

1. Number of fatal crashes with teens behind the wheel
2. Number of people killed in crashes with teens behind the wheel

Injuries *(Page 5)*

3. Number of tow-away crashes with teens behind the wheel resulting in a significant injury
4. Number of people injured in crashes with teens behind the wheel

Involvement *(Page 5)*

5. Number of tow-away crashes with teens behind the wheel
6. Number of people involved in tow-away crashes with teens behind the wheel

Burden of crashes with teens behind the wheel relative to other causes of death *(Page 6)*

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

Key teen behaviors *(Page 7)*

8. Speeding among teens behind the wheel killed in crashes
9. Alcohol use among teens behind the wheel and passengers
10. Seat belt use among teens behind the wheel and passengers
11. Teens behind the wheel in fatal crashes who were distracted

We chose these indicators for their ability to motivate action and measure progress. Each reflects an opportunity for prevention. By highlighting these indicators, we can develop more effective ways to curb crashes with teens behind the wheel. This set of indicators provides a snapshot of teen driver safety for the nation.

In future years *Miles to Go* will monitor progress in improving these indicators. We hope this information will emphasize the importance of teen driver safety for those who set direction in public health and traffic safety. We all have a stake in developing and implementing strategies and action plans to address teen driver safety.

About the Authors

This report was compiled by researchers at the Center for Injury Research and Prevention (CIRP) at The Children's Hospital of Philadelphia in collaboration with and with generous support from State Farm. CIRP's interdisciplinary team is comprised of experts in the fields of injury prevention; traffic safety; adolescent health; behavioral science; epidemiology; biostatistics; demography; engineering; and public health.

TEENS AND DRIVING

To understand the magnitude of teen driver crashes, it's important to know not only how many teens are driving, but also how many miles they're logging. The following estimates provide context to help understand the significance of driving safety for teens.

Millions of Teens, Millions of Miles

AGE (YEARS)	POPULATION	NUMBER OF LICENSED DRIVERS	AVERAGE ANNUAL MILEAGE PER DRIVER
15	4,199,941	334,168	N/A
16	4,272,369	1,328,511	1,720
17	4,343,810	2,172,041	4,353
18	4,425,810	2,894,449	6,908
19	4,272,428	3,224,766	8,050
TOTAL	**21,514,358**	**9,953,935**	**5,905**

Miles to Go: Facts

- In 2008, 15 to 19-year-olds comprised 7 percent of the US population and 5 percent of all licensed drivers.
- The average annual number of miles driven is more than four-fold higher for 19-year-olds than for 16-year-olds.

Notes: Post-censal population estimates as of July 1, 2008, US Census. Number of licensed drivers as of January 1, 2008, US Department of Transportation, Federal Highway Administration. Average annual miles per driver in 2009, National Household Travel Survey 2009 Survey, US Department of Transportation.

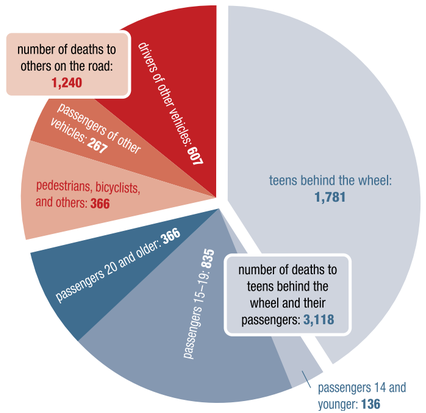
Hope lives here.

INDICATORS MEASURING THE IMPACT OF CRASHES WITH TEENS BEHIND THE WHEEL

The overall impact of crashes with teens behind the wheel (ages 15 to 19 driving passenger vehicles) is staggering. Teen driver fatalities are only the "tip of the iceberg." Thousands more — including friends, family members, and others on the road — suffer physical injuries, psychological trauma, and disruption to their everyday lives. The following charts illustrate the consequences of crashes with teens behind the wheel.

Too Many Deaths:
Crash fatalities with teens behind the wheel (2008)

Total number of deaths: **4,358**
Total number of fatal crashes: **4,026**



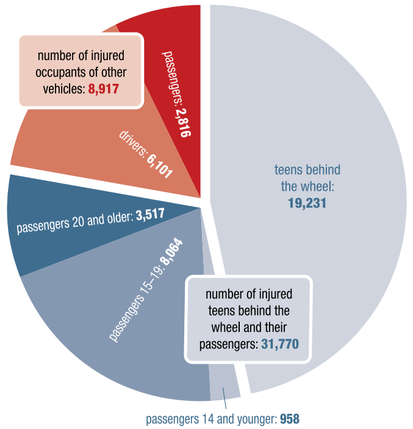
Miles to Go: Facts

- Nearly three-quarters (72 percent) of deaths that occur in crashes with a teen behind the wheel are to teen drivers and their passengers.
- The majority (63 percent) of passenger deaths in the teen driver's vehicle are to peers (ages 15 to 19). An additional 10 percent are to younger children and 27 percent to older youth and adults.
- Nearly three of every 10 deaths that occur in crashes with a teen behind the wheel are to people outside the teen's car, a category of victims often forgotten in teen driving safety discussions.
  - 70 percent of these deaths are to occupants in other vehicles. Bicyclists, pedestrians and others comprise the additional 30 percent.

Data Source: 2008 Fatality Analysis Reporting System (FARS), National Center for Statistics and Analysis, National Highway Traffic Safety Administration. FARS includes crashes involving a motor vehicle traveling on a trafficway customarily open to the public which result in the death of a person within 30 days of the crash. | **Note:** One passenger of a teen behind the wheel with unknown age was included with "passengers 20 and older."

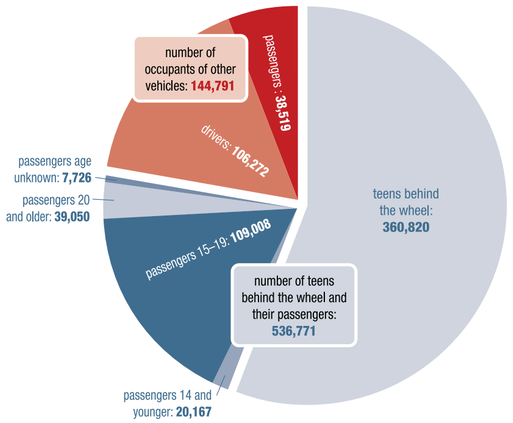
Too Many Injured:
People injured in tow-away crashes with teens behind the wheel (2008)

Total number of injured persons: **40,687**
Total number of tow-away crashes with an injury: **31,243**



Too Many Affected:
People involved in tow-away crashes with teens behind the wheel (2008)

Total number of people involved: **681,562**
Total number of tow-away crashes: **353,970**

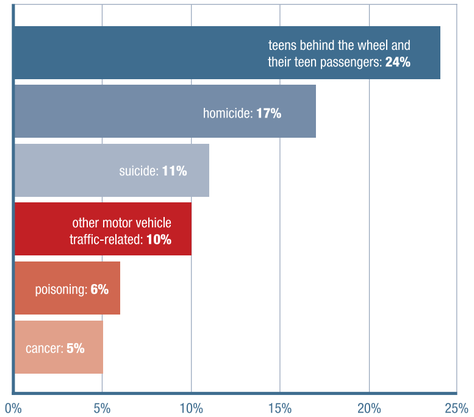


Miles to Go: Facts

- 40,687 of those involved in tow-away crashes with a teen behind the wheel suffered significant injuries (with an Abbreviated Injury Scale [AIS] score of 2 or higher) including: concussions, skull fractures and more serious brain injuries, internal organ injuries, fractures of the spine, ribs, arms or legs, and spinal cord injuries.
  Persons injured included:
  - 19,231 teens behind the wheel
  - 12,539 passengers of teens behind the wheel
  - 8,917 occupants of other vehicles
- In 2008, 681,562 people were involved in 353,970 police-reported tow-away crashes with a teen behind the wheel.
  - 79 percent of those involved in these crashes (536,771 people) were in a vehicle driven by a teen.
- For every death of a teen behind the wheel:
  - More than 10 additional teens behind the wheel suffered significant injuries.
  - More than 200 teens behind the wheel were involved in crashes.

Data Source: 2008 National Automotive Sampling System Crashworthiness Data System (NASS-CDS), National Center for Statistics and Analysis, National Highway Traffic Safety Administration. 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, as reported in NASS-CDS. Information on injuries to pedestrians, bicyclists, and other road users was not available. | **Note:** The "Too Many Injured" pie chart includes both fatal and nonfatal injuries.

Leading Causes of Death for 15 to 19-Year-Olds United States, 2007



Miles to Go: Facts

- Deaths of teens behind the wheel and their peer passengers account for 24 percent of total teen deaths from any cause.
- Motor vehicle crashes end more teen lives than cancer, homicide, and suicide combined.

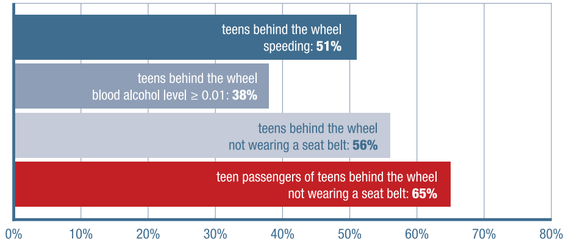
Data source for "teens behind the wheel and their teen passengers" and "other motor vehicle traffic-related": 2007 Fatality Analysis Reporting System, National Center for Statistics and Analysis, National Highway Traffic Safety Administration. "Other motor vehicle traffic-related" deaths include all other teen deaths involving a motor vehicle traveling on a trafficway customarily open to the public which result in death within 30 days of the crash.

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.

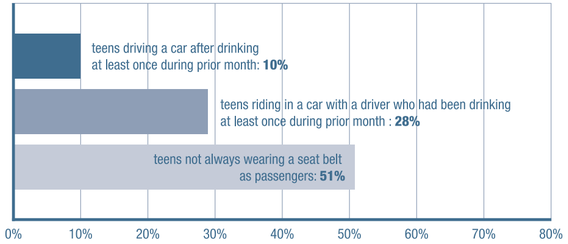
TEEN DRIVING BEHAVIOR INDICATORS

The majority of teen driver crashes are due to inexperience, compounded by distractions, such as cell phone use and peer passengers, and risky or aggressive driving behaviors, such as speeding, alcohol use, and not wearing seat belts. Strong Graduated Driver Licensing (GDL) laws can help to address inexperience by improving driving opportunities for teens to gain experience in lower-risk driving situations. To further reduce the number of deaths and injuries from teen driver-related crashes, interventions and GDL provisions should target the key behaviors of teens in cars that are known to raise the risk of crashing (e.g., alcohol use) or that are known to increase the likelihood of injury or death if a crash occurs (e.g., lack of seat belt use). Here's a summary of current estimates of several key behavior indicators among teen drivers and their passengers involved in fatal crashes and among the general population of US teens.

Key Behaviors of Teens Fatally Injured in Crashes



Key Behaviors of Teens



Miles to Go: Facts

- **Speeding**: More than half of teens behind the wheel fatally injured in crashes were speeding.
- **Alcohol Use**: While only 10 percent of teens report drinking and driving within the prior month, nearly four out of every 10 teens behind the wheel who died in a crash had a blood alcohol content (BAC) of ≥ 0.01 percent.
- **Seat Belt Use**: Only half of teens report "always" buckling up as passengers, while 10 percent report "rarely or never" buckling up. The majority of teens behind the wheel (56 percent) and teen passengers of teens behind the wheel (65 percent) who died in crashes were not wearing seat belts.
- **Distractions**: 16 percent of teen drivers *involved* in fatal crashes were reported to have been distracted while driving.

Data source for fatality statistics on speeding, alcohol, and seat belt use: 2008 Fatality Analysis Reporting System, National Center for Statistics and Analysis, National Highway Traffic Safety Administration. | **Notes:** Speeding was defined as traveling over the posted speed limit, presence of a speeding-related driver contributing factor, or charged with a speeding-related offense. Occupants with unknown restraint status were not included in calculation of restraint use.

Data source for overall teen statistics: 2009 Youth Risk Behavior Surveillance System, Centers for Disease Control and Prevention. Alcohol-related survey questions: "During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?" and "During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?" Seat belt-related question: "How often do you wear a seat belt when riding in a car driven by someone else?"

Data source for distracted driving: Distracted driving was defined using driver-related factors available in FARS, as specified in "Traffic Safety Facts: An Examination of Driver Distraction as Recorded in NHTSA Databases" (DOT HS 811 216), available at www-nrd.nhtsa.dot.gov/cats.

SOURCES

The Fatality Analysis Reporting System (FARS) is a nationwide census providing annual data regarding fatal injuries suffered in motor vehicle traffic crashes occurring within the 50 States, the District of Columbia, and Puerto Rico. 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 US Department of Transportation (DOT) and operated by the NCSA of NHTSA. NASS-CDS contains detailed data on a representative, random 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 Household Travel Survey (NHTS) is a US DOT effort sponsored by the Bureau of Transportation Statistics and the Federal Highway Administration to collect data on both long-distance and local travel by the American public. The nationally representative survey gathers trip-related data such as mode of transportation, duration, distance, and purpose of trip, as well as demographic, geographic, and economic data for analysis purposes. Available at **nhts.ornl.gov**.

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 US hospital emergency departments. Available at **www.cdc.gov/injury/wisqars/index.html**.

The Youth Risk Behavior Surveillance System (YRBSS) monitors priority health-risk behaviors and the prevalence of obesity and asthma among youth and young adults. The YRBSS includes a national school-based survey representative of students in grades 9 – 12 in US public and private schools conducted biannually by the CDC, as well as surveys conducted by state, territorial, and tribal governments, and local education and health agencies. Available at **www.cdc.gov/HealthyYouth/yrbs/index.htm**.

US Census, 2008. In 2009, the National Center for Health Statistics released bridged-race population estimates of the July 1, 2008 resident population of the US based on Census 2000. National post-censal estimates are derived by updating the resident population enumerated in the decennial census using the components of population change: births, deaths, net international migration, and net movement of US Armed Forces and civilian citizens of the US. Available at **wonder.cdc.gov/population.html**.

US Department of Transportation, Federal Highway Administration, Highway Statistics 2008. Available at **www.fhwa.dot.gov/policyinformation/statistics/2008/dl22.cfm**.

The indicators in this report were selected based on several practical criteria:

- They were drawn from credible sources that provide information on teens and crashes.
- They were drawn from sources of data that are regularly updated and can therefore be used to benchmark progress.
- They were published in the peer-reviewed scientific literature or from an official government data source.

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