

Traffic Safety Facts

Research Note

Fatal Crashes Involving Young Drivers

Summary

Fatalities from crashes involving young drivers have accounted for just under one-fifth of all fatalities on the Nation's roads. This population of young drivers has specific characteristics that set them apart from older drivers as well as a specific set of laws pertaining to their ability to drive. Previous research has shown that young drivers lack the experience behind the wheel that most older drivers have, do not have the same maturity level as older drivers, and are more prone to risk-taking behavior.¹ These characteristics influenced the development of graduated driver licensing (GDL) programs in different areas of the country to provide opportunities for experience, lessen the opportunity for risk-taking behavior, and educate young drivers about hazards on roadways. While these programs are greatly beneficial, young driver-related crashes remain a prevalent issue in our Nation.

- Youths 15 to 20 years old represented 9 percent of the U.S. population in 2007 and 6 percent of the licensed drivers; however, 19 percent of the fatalities in the United States in 2007 were related to young-driver crashes.
- Approximately two-thirds of the people killed in fatal young-driver crashes are the young drivers themselves or the passengers (of all ages) of the young drivers.
- Of the passengers killed riding in vehicles with young drivers, 67 percent are in the same 15-to-20-year-old age group as the drivers.
- Fifty-six percent of the fatal crashes and 57 percent of the fatalities involving young drivers occur on rural roadways.

GDL typically consists of three distinct stages: (1) the learner's permit stage in which teen drivers may only drive with a fully licensed adult in the vehicle; (2) provisional or intermediate license stage, in which novice teen drivers may drive unsupervised, but with certain restrictions in place;

and (3) full licensing. The provisional or intermediate stage includes various driving restrictions, including nighttime driving, disallowing teen drivers to drive after a certain curfew, and passenger restrictions, disallowing teen drivers to drive with other teen passengers in the vehicle. As of July 2009, 48 States plus the District of Columbia have a nighttime driving restriction in place for young drivers in their provisional license phase. Forty-two States plus DC have passenger restrictions for young novice drivers. At age 18, provisional license restrictions are typically lifted (IIHS, July 2009).

Data Analysis

Data from NHTSA's Fatality Analysis Reporting System (FARS) have been used for this Research Note. Young-driver-involved crashes are those in which the driver of at least one of the vehicles or motorcycles involved in the crashes was driven or operated by someone 15 to 20 years old. Data for licensed drivers and the definition of roadway type (rural or urban) are provided by the Federal Highway Administration. U.S. population data is provided by the U.S. Census Bureau.

Motor vehicle crashes are the leading cause of death for 15- to 20-year-olds, based on 2005 figures that are the latest mortality data currently available from the National Center for Health Statistics. For the purposes of this document, the term "*young driver*" is defined as a person 15 to 20 years old who was driving a vehicle or operating a motorcycle.

In 2007, 6,982 young drivers were involved in 6,669 fatal crashes (Table 1). A total of 7,650 fatalities occurred in those crashes. Fatalities of individuals involved in young-driver-related fatal crashes have fluctuated slightly over the previous 10 years, with a general decrease occurring since 2002. There was a 13-percent decrease in fatalities involving young drivers from 1998 to 2007, from 8,819 to 7,650. From the peak of 9,251 fatalities in 2002, there has been a 17-percent decrease in fatalities.

¹ NHTSA. Teen Driver Crashes: A Report to Congress. July 2008. DOT HS 811 005.

Table 1. Fatal Crashes Involving Young (15- to 20-Year-Old) Drivers, by Year

Year	Fatal Crashes Involving Young Drivers	Young Drivers Involved	Total Fatalities in Crashes Involving Young Drivers
1998	7,635	7,987	8,819
1999	7,813	8,187	9,139
2000	7,860	8,224	9,097
2001	7,789	8,166	9,064
2002	7,968	8,325	9,251
2003	7,585	7,937	8,727
2004	7,599	7,942	8,782
2005	7,161	7,500	8,241
2006	7,180	7,493	8,211
2007	6,669	6,982	7,650

Source: NCSA, FARS 1998-2006 (Final), 2007 (Annual Report File)

Over the previous 10 years, the young drivers killed in these fatal crashes have accounted for 39 to 43 percent of the total fatalities (Table 2). In 2007, 3,174 of those killed in young-driver-related crashes (41%) were the young drivers themselves (Chart 1). Thus, the remaining 59 percent of those killed in fatal crashes involving young drivers were people

other than the drivers. Approximately two-thirds of the people killed in these crashes are the young drivers themselves or the passengers of the young drivers.

Young drivers often travel with passengers of their own age group. By this account, passengers of this age group are more frequently killed in these crashes than passengers of other ages – a total of 2,029 passenger fatalities. In 2007, 1,359 fatalities (67%) were the young passengers of the young drivers (Chart 2). More than three-fourths of the occupants of the young drivers were younger than 20.

The number of fatalities to occupants of other vehicles and to nonoccupants has declined by 13 percent and 23 percent, respectively, from 1998 to 2007. However, the proportion of the total young-driver-related fatalities that these groups comprise has remained relatively constant throughout the 10-year period. During 2007, 1,822 people were killed in other vehicles during a young-driver-related crash. Nonoccupant fatalities in young-driver-related crashes totaled 625 in 2007. Data for 2007 fatalities in crashes involving young drivers by State are presented in Table 5 at the end of this document.

Table 2. Fatalities in Crashes Involving 15- to 20-Year-Old Drivers by Person Type and Year

Year	Young Driver (Age 15-20)	Passenger of Young Driver, by Age Group				All Others		Total
		<15	15-20	>20	Total*	Other Vehicle Occupants	Nonoccupants	
1998	3,431 (39%)	331	1,578	573	2,489 (28%)	2,091 (24%)	808 (9%)	8,819
1999	3,564 (39%)	347	1,636	590	2,578 (28%)	2,245 (25%)	752 (8%)	9,139
2000	3,621 (40%)	308	1,629	589	2,535 (28%)	2,185 (24%)	756 (8%)	9,097
2001	3,617 (40%)	284	1,615	623	2,529 (28%)	2,172 (24%)	746 (8%)	9,064
2002	3,838 (41%)	274	1,679	604	2,565 (28%)	2,153 (23%)	695 (8%)	9,251
2003	3,675 (42%)	297	1,522	576	2,399 (27%)	1,997 (23%)	656 (8%)	8,727
2004	3,634 (41%)	317	1,530	548	2,402 (27%)	2,113 (24%)	633 (7%)	8,782
2005	3,474 (42%)	229	1,429	533	2,197 (27%)	1,946 (24%)	624 (8%)	8,241
2006	3,490 (43%)	235	1,387	550	2,177 (27%)	1,912 (23%)	632 (8%)	8,211
2007	3,174 (41%)	218	1,359	445	2,029 (27%)	1,822 (24%)	625 (8%)	7,650

Source: NCSA, FARS 1998-2006 (Final), 2007 (Annual Report File)

*Total includes passengers of unknown age

** Percentages may not add to 100 due to rounding

Chart 1. People Killed in Crashes Involving Young Drivers, 2007

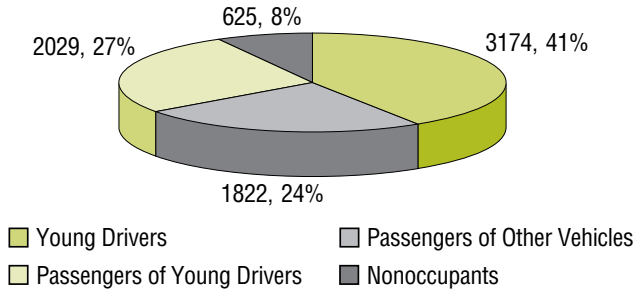
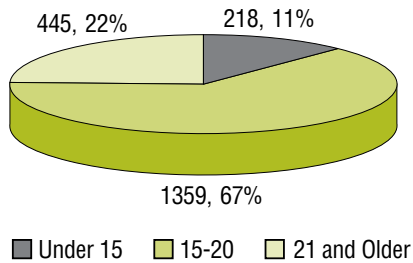


Chart 2. Fatalities of Passengers in Young Drivers' Vehicles by Age Group, 2007



The percentage of fatalities that occurred in young driver-related crashes is far greater than the percentage of either the population or the licensed drivers for that same age group. In 2007, youths 15 to 20 years old represented 9 percent of the U.S. population. With respect to licensed drivers, youths 15 to 20 years old represented 6 percent of all licensed drivers in the United States. Some States do not include restricted drivers or graduated licensed drivers in this figure; therefore, the number of licensed youths here may be low. Despite this potential under-representation of licensed youths, the high percentage of fatalities involved in young-driver-related crashes in 2007 – 19 percent of all the fatalities in the United States – exceeds the percentage of reported licensed youths and the percentage of youths in the country. There were 41,059 fatalities from motor-vehicle crashes in 2007 in the United States and 7,650 (19%) of those occurred in crashes involving young drivers.

In fatal crashes, the driver involvement rate per licensed drivers was also markedly higher for young drivers – almost twice as high as overall driver involvement rate for fatal crashes. For drivers 16 to 20 years old in 2007, there were 52.8 drivers per 100,000 licensed drivers involved in fatal crashes. The overall driver involvement rate for fatal crashes was 27.1 drivers per 100,000 licensed drivers (*Traffic Safety Facts 2007*).

Single-Vehicle versus Multi-Vehicle Crashes

Fatal crashes involving young drivers were evenly divided between single-vehicle and multi-vehicle crashes in 2007. Single-vehicle, fatal crashes comprised 50 percent of the young-driver-related fatal crashes, resulting in 48 percent of

the fatalities – 3,302 fatal crashes and 3,664 fatalities. Likewise, 50 percent of the fatal crashes were multi-vehicle crashes resulting in 52 percent of the fatalities – 3,367 fatal crashes and 3,986 fatalities (Table 3).

Table 3. Young Driver Crashes and Fatalities in 2007 by Crash Type

Crash Type	Number of Crashes	Fatalities in Crashes
Single-Vehicle	3,302 (50%)	3,664 (48%)
Multi-Vehicle	3,367 (50%)	3,986 (52%)
Total	6,669	7,650

Source: NCSA, FARS 2007 (Annual Report File)

Rural versus Urban Roadways

Young drivers were more frequently involved in fatal crashes that occurred on rural roadways than urban roadways. Of the 6,669 fatal crashes involving young drivers, 3,737 crashes occurred on rural roadways, resulting in 4,339 fatalities. Rural roadways therefore represent 56 percent of the fatal crashes and 57 percent of the fatalities involving young drivers (Table 4). This is only slightly higher than the 55 percent of all fatal crashes that occurred on rural roadways in 2007. Among those fatal crashes in rural areas involving young drivers, 1,945 (52%) were single-vehicle crashes, resulting in 2,166 fatalities (50%).

In 42 percent of the young-driver-related fatal crashes in 2007, the crash occurred on urban roadways. A total of 3,206 fatalities occurred in those 2,834 urban, young-driver-related fatal crashes. The majority of the urban-roadway fatal crashes involving young drivers were multi-vehicle crashes (54% of urban, young-driver-related crashes).

Table 4. Fatal Young Driver Crashes and Fatalities in 2007 by Land Use and Crash Type

Land Use	Crash Type	Number of Fatal Crashes	Fatalities in Crashes
Rural	Single-Vehicle	1,945 (52%)	2,166 (50%)
	Multi-Vehicle	1,792 (48%)	2,173 (50%)
	Total	3,737 (56%)	4,339 (57%)
Urban	Single-Vehicle	1,307 (46%)	1,446 (45%)
	Multi-Vehicle	1,527 (54%)	1,760 (55%)
	Total	2,834 (42%)	3,206 (42%)
Total*		6,669	7,650

Source: NCSA, FARS 2007 (Annual Report File)

*Total includes unknown land use

Other Young-Driver Facts

Occupant Protection

Regular seat belt use is the single most effective way to protect people and reduce fatalities in motor vehicle crashes. The 2007 National Occupant Protection Use Survey (NOPUS) states that overall restraint use has increased slightly from the previous year, to 82 percent. However, belt use among

people 16 to 24 was only 77 percent. In 2007, of the 15- to 20-year-old passenger vehicle occupants killed in all fatal crashes, 61 percent (of those whose restraint use was known) were unrestrained. Of the total fatalities in which restraint use was known in 2007, 54 percent of the vehicle occupants killed were unrestrained.

Alcohol Involvement

Although alcohol consumption is illegal for young people, it is nevertheless a prevalent problem with youth and young drivers. In 2007, 31 percent of young drivers 15 to 20 years old who were killed had blood alcohol concentrations (BACs) of .01 grams/deciliter (g/dL) or greater, and 26 percent of young drivers had BACs of .08 g/dL or greater. These figures are relatively similar to the overall driving population in which 37 percent involved BACs of .01 g/dL or greater and 32 percent involved BACs of .08 g/dL or greater in 2007.

Restraint use is affected by alcohol involvement for drivers as well. Drivers are less likely to use restraints after drinking. In 2007, 64 percent of young drivers in passenger vehicles involved in fatal crashes who had been drinking were unrestrained. Of the young drivers who had been drinking and were killed in crashes, 75 percent were unrestrained.

Speeding

Speeding is considered a primary concern in all crashes, as 31 percent of all fatal crashes involve speeding as a contributing factor. Young males 15 to 20 years old are the most likely to be speeding. In 2007, 39 percent of male drivers 15 to 20 years old who were involved in fatal crashes were speeding at the time of the crashes. With respect to all ages of females, young females had the greatest likelihood of speeding-related crashes as well, accounting for 24 percent of the fatal crashes.

Discussion

The number of fatal crashes involving young drivers as well as the total fatalities in these crashes has decreased 13 percent from 1998 to 2007. Historically, the people most frequently killed in young-driver crashes are the young drivers themselves, 41 percent in 2007. An additional 27 percent of the fatalities in young-driver crashes in 2007 were the passengers of young drivers and two-thirds of those individuals were in the same 15- to 20-year-old age group as the drivers. The number of young-driver-related crashes was evenly split between single-vehicle and multi-vehicle crashes. Young drivers were involved in more rural crashes than urban crashes. Risk-taking behavior including failure to use

restraints, alcohol use (despite being underage), and speeding were prevalent in the fatal young-driver crashes. In 2007, 61 percent of the 15- to 20-year-old passenger vehicle occupants killed in fatal crashes were unrestrained. Twenty-six percent of young drivers who were killed in 2007 were driving while impaired (BAC \geq .08). Of all ages and genders of drivers, young males 15 to 20 are the most likely to be speeding at the time of a fatal crash.

Literature Review

Rural Roadways

A study by Allstate Insurance Company found stronger support of the increased risk of young-driver-related crashes in rural areas. The study concluded that crash rates for teens are double in rural areas, compared with cities and suburbs, with a rate of 51.5 per 100,000 teens compared with 25.4 in metro areas (Insurance Information Institute, 2009).

Alcohol

According to the Centers for Disease Control and Prevention's Youth Risk Behavior Survey, in 2007, 29 percent of students rode one or more times during the 30 days before the survey in cars or other vehicles driven by someone who had been drinking alcohol. Eleven percent of students drove cars or other vehicles one or more times during the 30 days before the survey when they had been drinking alcohol (CDC, 2008).

References

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Table 5. Fatalities in Crashes Involving Young (15- to 20-Year-Old) Drivers, by Person Type and State – 2007

State	Young Driver (Age 15 to 20)	Passenger of Young Driver, by Age				All Others		Total
		<15	15-20	>20	Total*	Other Vehicle Occupants	Nonoccupants	
Alabama	107	7	37	7	51	39	10	207
Alaska	6	2	6	1	9	4	2	21
Arizona	77	5	25	17	47	45	14	183
Arkansas	66	2	20	11	34	28	5	133
California	238	15	127	57	199	157	75	669
Colorado	32	5	18	5	28	20	9	89
Connecticut	22	1	14	0	15	21	4	62
Delaware	10	0	4	2	6	5	2	23
District of Columbia	1	1	1	1	3	0	2	6
Florida	219	18	89	41	149	185	81	634
Georgia	120	7	70	18	95	74	11	300
Hawaii	6	0	1	0	1	12	3	22
Idaho	21	5	11	1	17	5	2	45
Illinois	118	11	48	21	80	53	31	282
Indiana	70	3	38	7	48	48	11	177
Iowa	39	4	18	5	27	23	7	96
Kansas	40	5	12	3	20	18	5	83
Kentucky	62	2	29	9	40	28	8	138
Louisiana	72	5	34	10	49	51	15	187
Maine	13	1	7	0	8	6	1	28
Maryland	45	1	21	6	28	20	20	113
Massachusetts	36	0	23	5	28	16	3	83
Michigan	93	7	45	8	60	67	18	238
Minnesota	45	2	9	8	19	30	4	98
Mississippi	88	8	19	5	32	34	6	160
Missouri	87	5	41	11	57	33	6	183
Montana	16	3	8	5	16	3	2	37
Nebraska	31	3	13	3	19	21	2	73
Nevada	28	1	8	2	11	23	10	72
New Hampshire	10	0	5	0	5	3	3	21
New Jersey	35	2	31	3	36	25	18	114
New Mexico	27	3	17	5	26	9	7	69
New York	93	3	40	10	54	49	40	236
North Carolina	121	5	44	15	64	79	31	295
North Dakota	13	0	6	2	8	3	0	24
Ohio	104	3	37	17	57	58	16	235
Oklahoma	57	4	21	8	33	27	8	125
Oregon	36	0	15	7	22	20	7	85
Pennsylvania	141	9	56	10	75	74	17	307
Rhode Island	6	0	6	1	7	3	0	16
South Carolina	75	7	32	11	51	44	9	179
South Dakota	9	0	5	0	5	7	2	23
Tennessee	117	4	35	9	48	58	7	230
Texas	251	27	89	45	162	162	51	626
Utah	24	1	10	2	13	16	6	59
Vermont	3	2	2	1	5	5	0	13
Virginia	86	9	36	12	58	34	11	189
Washington	49	3	23	4	30	20	10	109
West Virginia	32	1	16	3	20	11	4	67
Wisconsin	65	4	33	9	46	43	9	163
Wyoming	12	2	4	2	8	3	0	23
NATIONAL	3,174	218	1,359	445	2,029	1,822	625	7,650
Puerto Rico	39	1	14	5	20	21	13	93

Source: NCSA, FARS 2007 (Annual Report File)

* Total includes passengers of unknown age.

Shaded States do not have three-tiered graduated driver licensing systems. These States have two-tiered systems. While many States have three distinct stages to their GDL systems, some States only have two. Three-tiered programs refer to States that have three distinct stages (learners, provisional, and full) and two-tiered refers to States with only two licensing stages, omitting the provisional stage.