

OVERVIEW OF THE YOUNG DRIVER PROBLEM IN THE UNITED STATES

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INTRODUCTION

Around the world there is great diversity in policies and practices regarding young, beginning drivers. Despite these differences, crashes and injuries involving young drivers are acknowledged to be a major health problem in every motorized society.

In the United States, young driver safety is a particular problem. Each state sets its own licensing regulations, but generally licenses are allowed one or two years earlier than in most other countries. Most states allow quick and easy access to a full-privilege driver's license, licenses are inexpensive and the costs of driving relatively low, and there is widespread and easy access to passenger vehicles.

Young drivers ages 16-19 have greatly elevated crash rates in comparison with older drivers, and motor vehicle crashes involving both drivers and passengers are a major contributor to the deaths in this age group. The crashes of young drivers are patterned differently than those of older drivers, and their crash characteristics can provide guidance in addressing the young driver problem. This paper provides an overview of the extent of the motor vehicle crash problem in this age group and its main features.

CRASH RATES

The young driver problem in the United States is illustrated in Table 1. These data are drawn from several sources: the Nationwide Personal Transportation Survey (NPTS); the General Estimates System, a national probability based sample of police reported crashes; the Fatal Accident Reporting System (FARS), a national census of fatal crashes occurring on public roads; and the Bureau of the Census. The most recent NPTS data are from a 1990 survey, so all the data are based on 1990 figures.

In terms of crash involvement per miles driven (a measure of driving risk) 16-19 year-old drivers have the highest involvement rate when crashes of all levels of severity are considered: 20 crashes per million miles compared with 5 for all other ages combined. Within this age group, however, 16 year-olds (43 crashes per million miles) and 17 year-olds (30 per million) stand out with much higher crash rates than older teenagers

(15 per million for 18-19 year-olds). The experience of 16 and 17 year-olds is of special interest because people of these ages are most likely to be affected by licensing policies pertaining to beginning drivers.

There are similar age relationships when the subset of crashes involving fatalities is considered, although the rate for 16-19 year-olds is exceeded by the age 75 and older group. This is largely due to the fragility of older people; once involved in a crash they are more likely than younger people to die.

Table 1 also presents population-based crash rates for drivers, which are useful in comparing the extent to which motor vehicle crashes are a problem in an age group and in assessing the relative contribution of different age groups to the overall problem. Drivers 16-19 years old have the highest per capita rates of all age groups, for both fatal crashes and all crashes. However, in this case, 16 year-olds have the lowest rates within the teenage group, reflecting their lower licensing rates (slightly less than half are licensed) and their lower number of miles driven per licensed driver compared with older teenagers (Williams, 1995). These factors moderate the problem generated by the extremely high crash risk of 16 year-olds when they drive. It is notable, however, that despite their limited exposure, 16 year-olds have higher per capita crash rates than any age group outside the teen years.

DEMOGRAPHIC TRENDS

The injury problem of teenagers will likely worsen in coming years, due to demographic trends. In 1980, there were more than 17 million 16-19 year-olds. The population of this age group dropped during the 1980s and early 1990s, reaching a low of 13,650,000 in 1992. This trend has reversed and the population of 16-19 year-olds is increasing (to 14,136,000 in 1995) and is expected to reach 15,947,000 in 2000 and 16,628,000 in 2005.

In addition to their elevated crash likelihood, the injury problem for young people is affected by the fact that they drive older and smaller cars that are less protective and because they are less likely to wear seat belts (Williams et al., 1987; Preusser, Williams, and Lund, 1987).

TABLE 1 CRASH INVOLVEMENT RATES BY DRIVER AGE, 1990

Age	All Crashes Per Million Miles	Fatal Crashes Per 100 Million Miles	All Crashes Per 1,000 Population	Fatal Crashes Per 100,000 Population
16	43	17	84	33
17	30	13	101	42
18	16	8	103	52
19	14	7	95	48
16-19	20	9	96	44
20-24	10	5	81	41
25-29	6	3	64	33
30-34	5	2	51	26
35-39	4	2	47	23
40-44	4	2	42	20
45-49	4	2	39	18
50-54	4	2	34	18
55-59	4	2	31	16
60-64	4	3	27	16
65-69	7	4	27	16
70-74	8	5	25	17
75+	12	12	18	17

CAUSES OF DEATH AMONG YOUNG PEOPLE

Deaths from motor vehicle crashes represent the largest health problem for 16-19 year-olds, accounting for 34 percent of all their deaths in 1992, down from 42 percent in 1982. The decrease is due to a rise in teenage deaths from homicide, particularly among males and blacks. Homicides accounted for 24 percent of teenage deaths in 1992.

There are substantial gender and racial differences in the extent to which motor vehicle crashes contribute to the deaths of 16-19 year-olds. In 1992, the percentage of all deaths accounted for by motor vehicles was 31 percent for males and 44 percent for females; it was 42 percent among whites and 13 percent among blacks. In 1992 more than half of the deaths of black 16-19 year-olds were from homicides.

CRASH CHARACTERISTICS

Driving at Night

Per mile driven, nighttime driving is much riskier than daytime driving for people of all ages. In 1990, 18

percent of the miles driven by 16-19 year-olds took place between 9:00 p.m. and 5:59 a.m., but 45 percent of their fatal crash involvement's happened then. For 16 and 17 year-olds combined, 14 percent of their miles and 39 percent of their fatal involvement's occurred at night. The nighttime fatal crashes of 16 year-olds (and to a lesser extent 17 year-olds) are patterned differently than those of older teenagers, occurring earlier. In fact, 16 year-olds' nighttime crashes occur more often between 10:00 p.m. and midnight than after midnight and are concentrated on Friday and Saturday evenings (Williams et al., 1995).

Other Crash Characteristics

Compared with older drivers, 16-19 year-olds are more likely to be in single-vehicle crashes, to be said by the investigating officer to have made one or more driver errors, to be speeding (driving in excess of the speed limit or too fast for conditions), and to have three or more occupants in the vehicle; they are less likely to have high blood alcohol concentrations (Williams et al., 1995). These crash characteristics are most typical of 16 year-olds. The chief characteristics of young driver

crashes (single-vehicle involvement, speeding, other young people in the car) have been reported throughout the world for this age group (Catchpole, Cairney, and MacDonald, 1993; Laapotti, 1994; Twisk, 1994).

Teenage Passengers

The high vehicle occupancy rate of young drivers in crashes deserves special mention, because the occupants are primarily other teenagers. Most of the discussion in this paper has focused on drivers, but injuries to young people as passengers contribute substantially to the overall problem, accounting for 41 percent of all passenger vehicle occupant deaths for 16-19 year olds in 1993, compared with 27 percent for older people (Williams and Wells, 1995). Two-thirds of all teenage passenger deaths (77 percent of passenger deaths of 16 and 17 year-olds) took place when they were traveling in vehicles driven by other teenagers. More than half (54 percent) of the 1993 fatal crashes of 16 year-olds occurred when they were transporting other teens, without an adult in the car.

Alcohol

Alcohol-impaired driving is still a significant problem among young drivers, but its contribution has markedly decreased in recent years. In 1994, 13 percent of fatally injured drivers ages 16 or 17 had high blood alcohol concentrations (BACs) of 0.10 percent or greater and 21 percent were alcohol positive, whereas in the early 1980s, about 40 percent had high BACs and more than half had been drinking (Insurance Institute for Highway Safety, 1995). Twenty-nine percent of 18-19 year-olds had high BACs in 1994, compared with 49 percent of drivers ages 21-30.

CONCLUSION

In conclusion, the combination of youth and inexperience creates a serious young driver problem. Its size is such that additional efforts to control it are needed. Features of young driver crashes identified in this paper

(speeding, high nighttime risk, low seat belt use, other teenagers in the car) can assist in identifying ways to deal with this problem.

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