

AN ANALYSIS OF TEEN-AGE DRIVER CRASHES 2005-2008

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INTRODUCTION

This study was conducted at the request of an advocate group that wanted information to assist them in developing public information and education countermeasures for teen-age drivers. While most past CAPS studies of youth-involved drivers were limited to 16-20 year olds, the advocate group was also interested in 15 year olds, and they were not interested in 20 year olds. This led to the creation of the following subsets of data in order to obtain the information requested:

For CARE Frequencies:

- Age 16-19 Causal Driver
- Age 16-19 Causal Driver Injury Crashes
- Age 16-19 Causal Driver Fatal Crashes
- Age 15 Causal driver
- Age 15 Causal driver Injury Crashes
- Age 15 Causal driver Fatal Crashes

For CARE IMPACTS:

- Age 16-19 Causal Driver vs. Not Age 16-19 Causal Driver
- Age 15 Causal driver vs. Not Age 15-19 Causal Driver

In Alabama 15-year-olds can only legitimately drive a motor vehicle if they have a learner's permit or a special motorcycle license. They are only permitted to drive a vehicle other than a motorcycle accompanied by an adult in the front seat.

All of the results below were obtained from data over a four-year period from 2005 through 2008 (inclusive). The following analyses were performed considering causal drivers in the following categories:

- All Alabama teen drivers (including age 15);
- Age 16-19 causal drivers – this would exclude the few 15 year olds who either had a learner's permit or who were licensed motorcycle drivers;
- Only age 15 causal drivers as compared to non-teen, i.e., age 20 and older, causal drivers;

The findings from these analyses are given below.

Alabama Teen Drivers age 15-19

This analysis compared the characteristics of crashes involving 15-19 year old causal drivers with those of other ages. There were two aspects that particularly noticeable above that of the identical 16-19 year old analysis given in the next section:

- A much higher percentage of 15-19 drivers than other age drivers are involved in crashes during the morning and afternoon rush hours, and during all evening hours from afternoon rush hour to midnight. (There is a significant spike during the hour after school lets out.) This is the time when most teens are driving (to and from school), and it demonstrate to some extent restrictions that might be placed on them from driving at other times. It may also show to some extent the relative inability of teen drivers to navigate through heavier traffic as compared to older more experienced drivers. See the discussion on single vehicle crashes below that relates to this issue.
- There is a pronounced increase in the percentage of 15-19 year old drivers involved in crashes around holiday weeks, spring break, the end of school year (May), the beginning of school year (August), and Fall Break. These would all be times of potentially increased driving activity as well as increased social activity.

Combining the 15-19 year olds tends to buffer out the effect of the 15 year olds, and perhaps to some effect add emphasis to a particular attribute. Note the results of the 15 year old comparison given below where this is not the case. Prior to that, however, we will consider just the 16-19 year old causal drivers.

Age 16-19 Causal Drivers

This part of the study looked at only the 16-19 year olds in the comparison, with the 15 year olds excluded. This would consider the more typical drivers in this age classification since the 15 year olds are limited to motorcycles or learner's permits.

- During the four year period, 82,836 crashes had a teen driver age 16-19 as the cause of the crash. This was out of a total of 543,441 crashes, and it represents 15.2% of the total crashes during this period. Drivers in this age group account for only about 7.6% of the licensed drivers, so they have about twice as many crashes as would be expected by their number in the population of drivers. This is a conservative estimate since generally drivers in this age group would not drive as much as the older ages, which would include long-term commuters and truck drivers.
- Of the 82,836 crashes caused by 16-19 year olds, 23,506 (28.4%) were single-vehicle crashes, while 59,330 (71.6%) involved other drivers. Of these other drivers, 8,246 (13.9%) were also age 16-19 and 51,084 (86.1%) were other ages. (This would include a small number of 15 year olds.) The 13.9% of "victim drivers," i.e., non-causal drivers, can be compared with the 7.6% of the drivers in the general population, again yielding a highly significant comparison. Two explanations for this disparity might be: (1) this age

group tends to share the road at the same time of day – e.g., before and after school; and (2) at other times they tend to herd together. This might be coupled with their collective inexperience and the fact that the second driver could also contribute to the cause.

- The 82,836 crashes caused by 16-19 year olds involved 230,227 persons – close to three people per crash. Of these, 95,527 (41.5%) were age 16-19 and 61,820 (26.8%) were ages other than 16-19. 72,880 (31.7%) were unknown. At the time that these data were collected ages were not collected on uninjured occupants, so the numbers need to be interpreted in that way. Nevertheless, these numbers indicate that teen drivers often had passengers with them.
- Analyzing these passengers further, 43,111 (18.7% of all people involved in crashes caused by a 16-19 year old drivers) were passengers of the teen causal driver. Of those passengers injured, about half (2,842) were also age 16-19. The injury rate for passengers was about 6.7%
- Of the 82,836 crashes caused by teen drivers aged 16-19, 451 (.5%) of them were fatal, killing 519 people. Of the deceased, 350 (67.4%) were age 16-19, and 168 (32.4%) were other ages. Only one fatally injured person had an unknown age.
- The crashes caused by 16-19 drivers resulted in 19,414 (23.4%) injury crashes, injuring 53,019 people. Of the injured, 24,131 (45.5%) were age 16-19, and 17,528 (33.1%) were other ages; 11,360 (21.4%) people's ages were unknown or not recorded.
- Causal drivers age 16-19 seemed to demonstrate a quite comparable crash cause type as that of older causal drivers with one major exception. The younger drivers were more than twice as likely to be over the speed limit, and they were less than half as likely to be Driving Under the Influence.

Age 15 Causal Drivers

One final analysis was performed that compared just the age 15 crash-causal drivers to those causal drivers of age 20 years and over. There were only 1,326 crashes caused by age 15 drivers during the 2005-2008 four-year period. However, this comparison provides a view into what might be considered the “extreme of immaturity” as far as drivers are concerned. The following were some of the key findings:

- Of the crashes that had an age 15 causal driver, 471 (35.5%) were single-vehicle crashes. This is significantly greater than the 28.4% of the 16-19 year olds, indicating a dramatically greater number of unforced errors of this youngest driver age group.
- Of the 64.5% of the crashes that involved at least one other driver, 114 (8.6%) of the “victim drivers” were age 15-19. This is about as expected from their proportion in the

driving population, and thus it is significantly less than the 13.9% that we found for the 16-19 causal drivers.

- The 15 year old driver-caused crashes involved a total 4,126 people (drivers and occupants), of which 1,543 (37.4%) were aged 15-19 and 882 (21.4%) were ages other than 15-19. 1,701 (41.2%) were unknown (probably uninjured with ages in the same proportion as those injured). These numbers are comparable to what was found with the 16-19 year old causal drivers and the discussion above on this subject would apply.
- Of the 1,326 crashes caused by 15 year old drivers, 18 (1.4%) of them were fatal, killing 20 people. Of these, 12 were 15 year olds, two were 14 and one was 13. While not a large enough sample to draw statistical conclusion, the raw numbers speak for themselves. Young drivers tend to kill young people.
- Of the crashes caused by 15 year olds, 426 (32.1%) were injury crashes, injuring 1,169 people. 554 (47.4%) of the injured were age 15-19, and 331 (28.3%) were other ages. Of interest is that 88 of the injured were of age 14 or less.
- Causal drivers of age 15 are about 4 times more likely to be over the speed limit than older causal drivers, and about twice as likely to hit roadside objects such as ditches, trees, poles, mailboxes, etc., or to overturn.