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Research Note

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Nonoccupant Fatalities Associated With Backing Crashes

NHTSA's National Center for Statistics and Analysis (NCSA) recently completed a study of data from the National Center for Health Statistics (NCHS) to obtain an estimate of the number of nonoccupant fatalities associated with off-road backing crashes. The NCHS data were contrasted with data from the Fatal Accident Reporting System (FARS) on the number of nonoccupants killed in on-road fatal crashes. Fatalities of children aged 1-4 in backing crashes were of particular focus, as the physical stature and comprehension level of younger children place them at greater risk in situations involving backing motor vehicles. Children aged 1-4 were found to be overrepresented (relative to population) in backing crashes, particularly those occurring off-road.

Off-road crashes are those crashes which occur in locations other than public roads, e.g., private parking lots and residential driveways. Since these crashes occur on private property, a police accident report (PAR) may not be filed. Data on fatal off-road backing crashes, therefore, are not collected in FARS, as FARS obtains data on fatal crashes occurring on *public* roads. It is difficult, therefore, to determine the exact number of the fatal off-road backing crashes that occur each year and the number of fatalities involved without relying upon data from NCHS. NCHS obtains information on the cause(s) of death, as recorded on individual death certificates, from each of the 50 states, the District of Columbia, and the five boroughs of New York City.

NCHS and FARS data for 1992 and 1993 were used in this study to obtain average annual estimates of the number of fatalities associated with off-road and on-road fatal backing crashes for children aged 1 - 4 and for all other ages. Data for calendar years 1992 and 1993 are the two most recent years of data available from NCHS. Due to the lack of detailed information on death certificates (the source of the NCHS data), it is not possible to determine the *exact* number of nonoccupants killed in off-road backing crashes. The NCHS data, therefore, provide an estimate of the *maximum* number of fatalities associated with these crashes.

Children aged 1-4 represent 6% of the total U.S. population based on 1995 U.S. Census data, but accounted for 30% of all nonoccupants killed in off-road backing crashes. Based on data from NCHS for 1992-1993, an average of 116 children were fatally injured in off-road backing crashes. Each year, an average 390 fatalities of persons of all ages occur in off-road backing crashes. Table 1 presents these data for children 1-4 and all other ages.

Table 1
Annual Estimates of Nonoccupant Fatalities in Off-Road Backing Crashes
1992-1993 Average

Age Group	Number of Fatalities	% of Total	% of Population
1-4	116	30%	6%
All Other Ages	274	70%	94%
Total	390	100%	100%

Table 2 presents the average number of nonoccupant fatalities in on-road backing crashes based on FARS 1992-1993. During this period, an average of 85 fatalities occurred in backing crashes, 14 of these were children aged 1-4, representing 16% of all on-road backing crashes.

Table 2
Annual Number of Nonoccupant Fatalities in On-Road Backing Crashes
1992-1993 Average

Age Group	Number of Fatalities	% of Total
1-4	14	16%
All Other Ages	71	84%
Total	85	100%

While the number of nonoccupant fatalities in off-road and on-road backing crashes is small relative to the total number of traffic fatalities, it appears that children aged 1-4 are particularly at risk. For additional copies of this research note, please call (202) 366-4198 or fax your request to (202) 366-7078. For questions regarding the data reported in this research, contact Henri Richardson [202-366-5354] or Delmas Johnson [202-366-5382] of the National Center for Statistics and Analysis. This research note and other general information on highway traffic safety may be accessed by Internet users at http://www.nhtsa.dot.gov/people/ncsa.