



2000 Motor Vehicle Traffic Crashes Injury and Fatality Estimates Early Assessment

Introduction

Early Assessment estimates based on the National Highway Traffic Safety Administration's Fatality Analysis Reporting System and NASS General Estimates System revealed that 41,800 people lost their lives and an additional 3,219,000 persons were injured in the more than 6.2 million motor vehicle traffic crashes that occurred during 2000. This report contains these Early Assessment estimates for motor vehicle traffic crashes in 2000 and the resulting injuries and fatalities. They are compared to estimates from the 1999 Annual Files. Trends are shown for selected characteristics in the last section of the report.

These Early Assessment estimates are based on data from sources most of which are incomplete or preliminary. Consequently, Early Assessment estimates will be superseded sometime during the summer of 2000 by numbers and estimates based on completed data files representing all of 2000.

Methodology

Fatality estimates in this report are based on the incomplete 2000 FARS Early Assessment (EA) File and the 1999 Annual Report File. Since the degree of completion in the EA File differs from state to state, and earlier months are more likely to be complete, each state was assigned a cut-off month representing the last month for which the 2000 file appeared to be sufficiently complete. A chi square test using the two files was applied to determine the cut-off month. For each month after the cut-off month, data were used from the 1999 Annual Report File. The resulting database was then inflated to control totals that were computed from the last two available Monthly Fatality Counts (MFC). These MFC tables contain no other variables than the number of fatalities by state and month. They are received each month from the states and are more complete than the EA file because cases can be entered without further detailed information. The two most recent MFCs were compared. If the last two fatality counts for a state-month pair are close enough to each other, that is evidence that that count is final. The sum of the counts that appear to be final formed the basis for the control total by noting the proportion of last year's fatalities that came from those state-month pairs.

Non-fatal crash and injury estimates were obtained using the fully completed first nine months of the National Automotive Sampling System General Estimates System (NASS GES) 2000 data file and

appending extrapolated data for the final three months based on the last three months of 1999. This was accomplished by calculating ratios based on the first three quarters of 1999 and 2000, separately for accident, vehicle and person levels, and applying these factors to the individual weights. Since the NASS GES is based on a sample survey, all estimates based on this file are subject to sampling and non-sampling errors and the sampling variability should be taken into account when interpreting year-to-year differences.

NASS GES estimates and Registered Vehicles have been rounded to the nearest thousand. Additions and percent change were computed before the rounding and may not correspond exactly to the rounded numbers.

Other data sources as shown in Table 1 include *Projected Vehicle Miles of Travel (VMT)* from The Federal Highway Administration (December 2000 Traffic Volume Report), *Population Projection* based on the 1990 census from the U.S. Census Bureau, and *Registered Vehicles*, NHTSA's revision of Federal Highway Administration estimates.

Table 1			
Exposure Data by Year and Percent Change			
2000 Early Assessment			
	1999	2000	Change
Vehicle Miles Traveled	2,691,335M	2,688,312M	-0.1%
Registered Vehicles	212,685,000	217,293,000	2.2%
Population	272,690,813	275,129,687	0.9%

Principal Findings

Crashes, Injuries and Fatalities

An estimated 41,800 people lost their lives in motor vehicle traffic crashes during the year 2000. This represents an increase of 0.5% over the 41,611 fatalities reported for 1999. The U.S. population increased by 0.9% and registered vehicles in the U.S. increased by 2.2% in the same time period. Using these data as measures of exposure, the fatality rates dropped by 0.4% and 1.7% respectively. Vehicle Miles Traveled (VMT), another measure of exposure, decreased slightly (0.1%) from 1999 to 2000, and the fatality rate based on VMT increased by 0.6%.

The number of non-fatal, police reported crashes is estimated at 6,266,000 for 2000. This represents an increase of 24 thousand or about 0.4% over 1999. The number of injured persons in these crashes, however, (estimated at 3,219,000) fell by 0.5% relative to 1999. Correspondingly, injury rates dropped for population (-1.4%) and registered vehicles (-2.6%), but remained constant for VMT.

Table 2
Crashes, and Number of Persons Killed and Injured
Rates by Year for Vehicle Miles Traveled, Population and Registered Vehicles
2000 Early Assessment

	1999	1999 Rates per			2000	2000 Rates per		
		100M VMT	100K Pop	100K Reg Veh		100M VMT	100K Pop	100K Reg Veh
Fatal Crashes	37,043				37,338			
Persons Killed	41,611	1.5	15.3	19.6	41,800	1.6	15.2	19.2
Non-fatal Crashes	6,242,000				6,266,000			
Persons Injured	3,236,000	120	1,187	1,522	3,219,000	120	1,170	1,481

Alcohol

In 2000 the number of estimated fatalities in crashes with one or more drinking drivers and/or non-motorists (16,068) rose by 1.8% compared to 1999. Vehicle alcohol-related occupant fatalities increased from 13,145 to an estimated 13,531 (an increase of 2.9%) while the number of non-motorists killed in these crashes fell 3.9% from 2,641 to 2,538. The number of alcohol-related fatalities in both 1999 and 2000 was very close to 38% of the total number of all fatalities for those years.

The estimated number of occupants injured in alcohol-related crashes (292,000) showed a small increase in 2000 (0.5%). While this number rose slightly, the number of non-occupants injured in these crashes fell by 18% giving an overall decrease in the number of injured persons in alcohol-related crashes.

Table 3
Persons Killed and Injured in Alcohol Related Crashes by Year and Person Type
2000 Early Assessment

	1999	2000	Change
Killed			
Persons Killed	15,786	16,068	1.8%
Percent of All Fatalities	38 %	38%	
Drivers	9,630	9,924	3.1%
Passengers	3,516	3,606	2.6%
All Occupants	13,145	13,530	2.9%
Non-occupants	2,641	2,538	-3.9%
Injured			
Persons Injured	308,000	306,000	-0.5%
Drivers	193,000	199,000	2.7%
Passengers	97,000	93,000	-3.8%
All Occupants	290,000	292,000	0.5%
Non-occupants	17,000	14,000	-18.0%

Vehicle Occupants

Overall, occupant fatalities, estimated at 36,173 in 2000, increased just 1% in relation to the 1999 data. Fatalities in passenger cars (an estimated 20,455) dropped 1.7%, however the number of fatalities in light trucks and vans (an estimated 11,439) rose by 1.7%. The greatest change is in the number of motorcycle riders killed that increased sharply from 2,472 in 1999 to an estimated 2,680 in 2000. This represents an increase of 8.4%.

Estimates of the number of occupants injured produce similar but more pronounced results. Injured occupants of light trucks and vans increased more than 5% while injured riders of motorcycles rose about 15%. Passenger car occupants injured dropped over 3% and the number of large truck occupants injured went down 8%.

Table 4			
Vehicle Occupants Killed and Injured by Vehicle Type and Year			
2000 Early Assessment			
Vehicle Type	1999	2000	Change
Killed			
Occupants Killed	35,806*	36,173*	1.0%
Passenger Cars	20,818	20,455	-1.7%
Light Trucks and Vans	11,243	11,439	1.7%
Large Trucks	758	747	-1.5%
Motorcycles	2,472	2,680	8.4%
Other	410	402	2.0%
Injured			
Occupants Injured	3,097,000	3,080,000	-0.6%
Passenger Cars	2,138,000	2,068,000	-3.3%
Light Trucks and Vans	847,000	893,000	5.5%
Large Trucks	33,000	30,000	-7.7%
Motorcycles	50,000	58,000	15.1%
Other	29,000	31,000	5.9%

* This total includes unknown vehicle type

Restraint use by fatally injured occupants of passenger vehicles increased by 1.3% while the number of those not restrained fell by almost 2%. In comparison with all passenger vehicle occupant fatalities, 61% were not restrained in 2000 compared with 62% not restrained in 1999.

Passenger vehicle deaths in rollover crashes declined from 10,133 in 1999 to 10,108 in 2000. However for occupants of sport utility vehicles (SUVs), rollover deaths increased 2.8% from 1,898 in 1999 to 1,951 in 2000.

Table 5			
Passenger Vehicle Occupants Killed by Restraint Use Status and Crash Type			
2000 Early Assessment			
	1999	2000	Change
Restraint Use Status			
Restraint Used	11,101	11,247	1.3%
No Restraint Used	18,317	17,961	-1.9%
Unknown	2,643	2,685	1.6%
Type of Crash			
Rollover	10,133	10,108	-0.2%
Passenger Cars	4,716	4,661	-1.2%
Vans	780	757	-2.9%
SUVs	1,898	1,951	2.8%
All Other Light Trucks	2,739	2,738	0.0%
Non-rollover	21,928	21,786	-0.6%

Children and Youth

Table 6 shows the breakdown of occupant and non-occupant injuries and fatalities for three age groups of young people. Occupant fatalities for the 0 to 4 age group decreased by 2.3%, however non-occupant fatalities for this age group increased by almost 7%. For the 5 to 15 year old group the number of occupant fatalities dropped 1.8% and more than 10% for non-occupant fatalities. The only age group with an increase in occupant fatalities was the 16 to 20 group with a 2.4% increase.

The youngest age group experienced a drop of about 16% in the number of non-occupants injured and about 6% in the number of occupants injured. Large decreases in the number of injured individuals were also seen for the 5 to 15 year-olds. Non-occupants injured in the 16 to 20 year-old group increased about 7%, and there was little change for occupants in this age group.

Table 7 highlights changes in crash estimates for young drivers, those 16 to 20 years old. Young drivers were involved in fewer injury and property damage crashes in 2000 compared to 1999, but the number of fatalities for this group rose 2.6%. The number of young (16 to 20) passenger fatalities in vehicles with young drivers did not increase but the number of all others killed in young driver involved crashes decreased by more than 3%.

Table 6						
Young Persons Killed and Injured in Motor Vehicle Traffic Crashes						
by Age Group, Role and Year						
2000 Early Assessment						
Age Group	Role					
	Occupants			Non-occupants		
	Year		Change	Year		Change
	1999	2000		1999	2000	
Killed						
Ages 0 - 4	555	542	-2.3%	178	190	6.7%
Ages 5 - 15	1,553	1,525	-1.8%	645	578	-10.4%
Ages 16 - 20	5,567	5,702	2.4%	350	344	-1.7%
Injured						
Ages 0 - 4	72,000	69,000	-5.6%	4,000	3,000	-16.4%
Ages 5 - 15	250,000	227,000	-9.0%	47,000	44,000	-6.1%
Ages 16 - 20	561,000	554,000	-1.1%	14,000	15,000	7.4%

Table 7			
Crashes Types and Persons Killed in Crashes Involving Young Drivers			
2000 Early Assessment			
	1999	2000	Change
Total Crashes			
Fatal	7,609	7,639	0.4%
Injury	588,000	572,000	-2.7%
Property Damage Only	1,149,000	1,110,000	-3.4%
Persons Killed			
Young Drivers (ages 16-20)	3,481	3,570	2.6%
Young Passengers w/ Young Drivers	1,379	1,376	-0.2%
All Others	4,048	3,919	-3.2%

Non-motorists

The number of pedestrians killed in 2000 dropped by 3.6%. Smaller decreases were seen for the number of pedalcyclist fatalities and for the number of pedestrians and pedalcyclists injured. The number of other non-motorists killed and injured rose by about 8% and 40% respectively, the latter estimate, however, is based on very small numbers. Other non-motorists include occupants of parked motor vehicles, occupants of non-motor vehicle transport devices such as animal drawn conveyances, skate board or sled riders, people in buildings, etc.

Table 8			
Non-motorists Killed and Injured by Year and Person Type			
	1999	2000	Change
Killed			
Pedestrians	4,906	4,727	-3.6%
Pedalcyclists	750	738	-1.6%
Others*	149	161	8.1%
Injured			
Pedestrians	85,000	84,000	-1.6%
Pedalcyclists	51,000	51,000	-1.0%
Others*	3,000	4,000	41.2%

Large Truck Crashes

Fatalities in crashes involving large trucks dropped from 5,362 in 1999 to 5,307 in 2000 representing a 1% reduction. Table 9 shows the largest reductions in fatalities taking place among truck occupants in multiple vehicle crashes (-4.3%) and among non-occupants (-3.5%). The number of injured truck occupants in multiple vehicle crashes fell even more with a reduction of over 14%. Non-occupant injuries, however, jumped up a total of almost 16%. There was little change in the number of fatalities or of those injured for truck occupants in single vehicle crashes.

Table 9			
Persons Killed and Injured in Large Truck Related Crashes by Type			
2000 Early Assessment			
	1999	2000	Change
Killed			
All Large Truck Related Fatalities	5,362	5,307	-1.0%
Truck Occupants	758	747	-1.5%
Single Vehicle	479	480	0.2%
Multiple Vehicle	279	267	-4.3%
Other Vehicle Occupants	4,170	4,141	-0.7%
Non-occupants	434	419	-3.5%
Injured			
All Large Truck Related Injured	142,000	145,000	2.4%
Truck Occupants	33,000	30,000	-7.7%
Single Vehicle	15,000	15,000	-0.2%
Multiple Vehicle	18,000	15,000	-14.2%
Other Vehicle Occupants	105,000	110,000	5.0%
Non-occupants	4,000	5,000	15.9%

Trends

The fatality rate as shown in Figure 1 reached its lowest level in 1999 with 1.5 deaths per 100 Million Vehicle Miles Traveled. The rate rose to 1.6 in the year 2000. The measure of exposure used, Vehicle Miles Traveled, declined in 2000 for the first time in recent years.

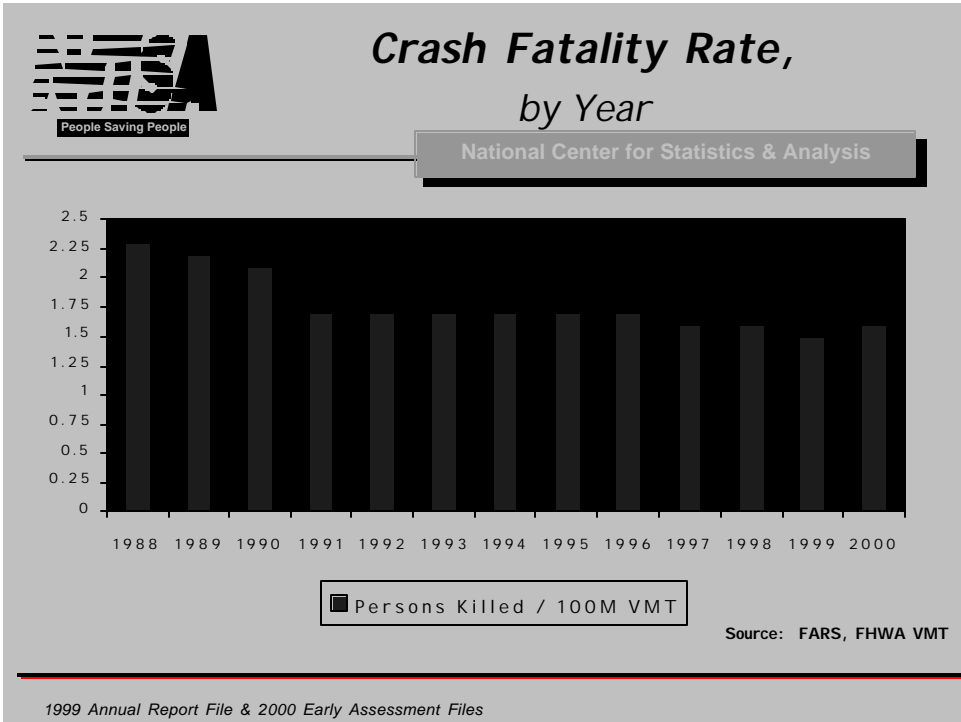


Figure 1

The injury rate per 100 Million Vehicle Miles Traveled decreased from 120 to 119 injured persons from 1999 to 2000. Figure 2 shows a marked decline from the peak in 1995 although it appears to be leveling off.

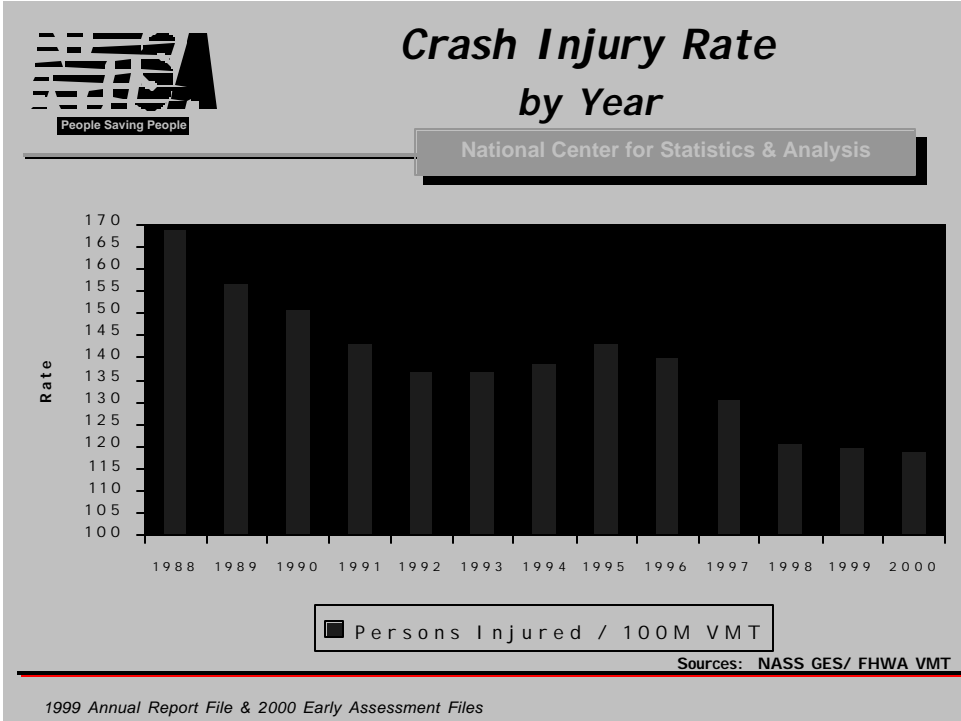


Figure 2

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