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1986 Traffic Fatalities Preliminary Reports

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16. Abstract

This report provides a number of preliminary estimate of traffic fatalities and fatal accidents for 1986. Trend data are presented for both the long and short term. Some summary statistics are provided at the State and Regional level.

The national estimates for 1986 are quite exstensive and cover the entire range of frequently used accident classifications. All estimates are compared to the corresponding values in 1985, 1983, and 1980.

The results are presented in both tabular and graphical form.

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Restraint and Helmet Usage

OVERVIEW OF MAJOR CHANGES, 1985 to 1986

The death toll on the nation's highways reached an estimated level of 46,000 fatalities in 1986. This total is about 5 percent higher than the 43,795 traffic fatalities reported in 1985. When compared to 1980, the annual traffic death toll has declined by 10 percent (46,000 vs. 51,091).

Total travel in the United States increased by the about the same percentage as the number of fatalities in 1986, thus retaining the fatality rate per 100 million vehicle miles of travel at the 2.47 level, the lowest rate on record.

Among drivers involved in fatal accidents, the proportion tested for blood alcohol concentration (BAC) is reported at 45 percent, with 90 percent of the test results known. Fatally injured drivers are almost four times as likely to be tested for BAC than the drivers that survive the accident. Surviving drivers in single-vehicle accidents are twice as likely to be tested than those in multi-vehicle accidents.

For drivers in fatal accidents whose blood alcohol concentration (BAC) was reported, those with zero BAC decreased 5 percent, while all other BAC categories increased by an average of 4 percent. This represents a reversal of the change observed in 1985.

The use of safety belts and other restraints, as reported by police, rose sharply in 1986. The usage rate for surviving drivers was reported at 38 percent; this compares favorably with the rates of 24 percent in 1984 and 5 percent in 1980. Of the drivers who died, 15 percent were restrained in 1986, compared to 9 percent in 1985 and 3 percent in 1980.

Overall driver restraint use in 1986 increased to 27 percent of the drivers in fatal accidents. In 1980, only 4 percent were restrained; in 1983 the proportion was up to 5 percent, and in 1985 it reached the 17 percent level. Safety belt use by all passengers increased to 21 percent, including 24 percent of the surviving passengers and 14 percent of those fatally injured.

Among children of 5 and under, 40 percent in 1986 were restrained, compared to 35 percent in 1985 and only 6 percent in 1980. Those who survived were using restraints at a 45 percent rate, while only 26 percent of the children who were killed in 1985 accidents were protected.

Statistically significant increases in the number of fatalities occurred in 19 States. Seven additional States showed increases which were sizeable but not significant. Alaska and the District of Columbia were the only jurisdictions showing significant decreases; ten additional States had non-significant decreases; the remaining ten States showed changes that were not appreciable in either direction.

Proportional changes varied widely among the States. The increase in Alabama, Delaware, Missouri, and Nebraska exceeded the 20 percent level. Thirteen other States had increases between 10 and 20 percent. Texas continued to show a decline, 18 percent since 1980 as compared to the 10 percent decline shown by the entire nation.

Among the ten regions of the National Highway Traffic Safety Administration (NHTSA), Regions 3, 4, and 7 experienced an increase around the 10 percent level. Regions 2, 8, and 9 showed increase of about 5 percent, while Regions 1, 5, and 10 showed no change. The only region that showed a decrease was Region 6 with a fatality count 2 percent lower than in 1985.

The number of single-vehicle fatal crashes increased by 10 percent, while the number of crashes involving a pedestrian was down 4 percent. Pedalcyclists, however, were involved in 3 percent more accidents.

There is no clear pattern in the traffic fatality increase during the 12 months of 1986. Although the average increase was 5 percent, individual months show changes varying from an increase of 9 percent in July to a decrease of 1 percent in November. The remaining months fall somewhere in between.

Accident fatalities increased about 7 percent on weekends and about 4 percent on weekdays in 1986, compared to 1985. By time of day, deaths increased by 8 percent from midnight to 3 a.m. and only 1 percent during noon to 3 p.m. The increase for the other hour groups varied between these two values.

The greatest change by driver age was an approximate 10 percent increase in fatal-accident involvements for teen-age drivers (15 through 19) and for those 65 years of age or older. The changes were similar for both male and female drivers.

Passenger fatalities increased by 21 percent for those between the ages of 15 and 19, compared to less than six percent for the remaining age groups. The increase was 9 percent for all ages combined.

Among nonoccupants -- pedestrians and pedalcyclists -- there was a 3 percent decrease in total fatalities. No change occurred among male nonoccupants while the reduction for females reached the 10 percent level. The reduction by age groups shows no clear pattern.

The number of vehicles involved in fatal accidents increased by 4 percent over 1985. The increase was all among passenger cars, light trucks, and vans. The number of occupant fatalities increased by 7 percent in 1986 and was all in passenger type vehicles. Motorcycle fatalities did not change appreciably in 1986. Five percent fewer occupants of large trucks died on the highways, and 3 percent fewer occupants of other vehicles were killed in collisions with large trucks.

INTRODUCTION

The purposes of this report are: (1) to produce timely preliminary estimates of national traffic fatalities for 1986; (2) to present both long and short-term traffic fatality trend data, and (3) to identify broad changes from previous years.

No attempt is made to interpret the changes found in this report or to identify the contributing causes. The 1986 annual FARS report will be based on more complete accident and related data, offering a better opportunity to evaluate them.

These traffic estimates are based on the 1986 file of the Fatal Accident Reporting System (FARS), which contains information on all fatal traffic accidents in the United States. FARS is sponsored and managed by the National Center for Statistics and Analysis (NCSA), an office of the National Highway Traffic Safety Administration.

All 1986 fatal traffic accidents on file as of March 1987 have been used in this analysis. These cases represent about 92 percent of the expected final total for the year.

The estimates in this report are an extrapolation of the data presently available in the FARS file. Extrapolation factors have been established for each month using the expected final monthly fatality counts and the corresponding counts in the FARS file. We are confident that the 1986 national estimate of 46,000 deaths will be very close to the final figure.

Based on our experience with previous preliminary estimates, we expect most large totals in this report to be within 1 percent of the final 1986 figures. The accuracy of smaller estimates depends on the magnitude of the estimate and the proportion of incomplete data in each specific classification.

Even where the data are complete, caution is required in the use of estimated changes in traffic fatalities. Deaths on the highway represent the result of relatively rare events and their annual number is subject to random variation. Although the effect of this inherent variability is small for large counts, it becomes more important as the numbers become smaller.

The random variation of fatality totals may be estimated by assuming that each total is a Poisson-distributed random variable having, as such, a standard deviation approximately equal to the square root of its value. For example, a total estimated at 100 fatalities has a standard deviation of about 10, or 10 percent of the total. A total of 10,000 has a standard deviation of about 100, or only 1 percent of the total.

Any two annual counts can be compared by a standard statistical test based on this assumed Poisson distribution. If such a test indicates the observed change to be "significant," we can be confident that the change is due to some real cause, and not simply to chance variation. If, on the other hand, the test indicates the change is "not significant," we can conclude that either a change has not occurred or it was not large enough to be detected by the test. In general, a change is considered significant if its value is equal to or greater than two standard deviations.

FATALITY TRENDS

National Trends

Figures 1 and 2 provide a concise overview of the major highway fatality trends for the last 26 years. These figures place the 1986 experience in historical perspective.

Figure 1 shows that the annual number of traffic deaths rose steadily from 1961 to 1966, showed smaller increases through 1973 and then dropped abruptly in 1974 with the fuel crisis and implementation of the 55-mph national maximum speed limit. Fatalities remained almost constant during 1975 and 1976, increased again over the next two years and again remained constant during 1979 and 1980.

The next decline, which began in 1981, brought the 1983 count to the lowest total in 20 years. The 17 percent decrease from 1980 to 1983 occurred in spite of increases in the numbers of drivers, vehicles and miles of travel.

The downward trend was interrupted in 1984, when fatalities were 4 percent higher than in 1983, followed by a 1 percent drop in 1985. The current estimate for 1986 shows a 5 percent increase over the previous year.

Figure 2 shows the fatality rate per vehicle mile of travel. This rate increased slightly from 1960 to 1966, declined significantly during the next decade, leveled off between 1976 and 1980, and declined sharply between 1980 and 1983. After a pause during 1984, the rate declined during the latter half of 1985 and remained at that level during 1986.

FIGURE 1

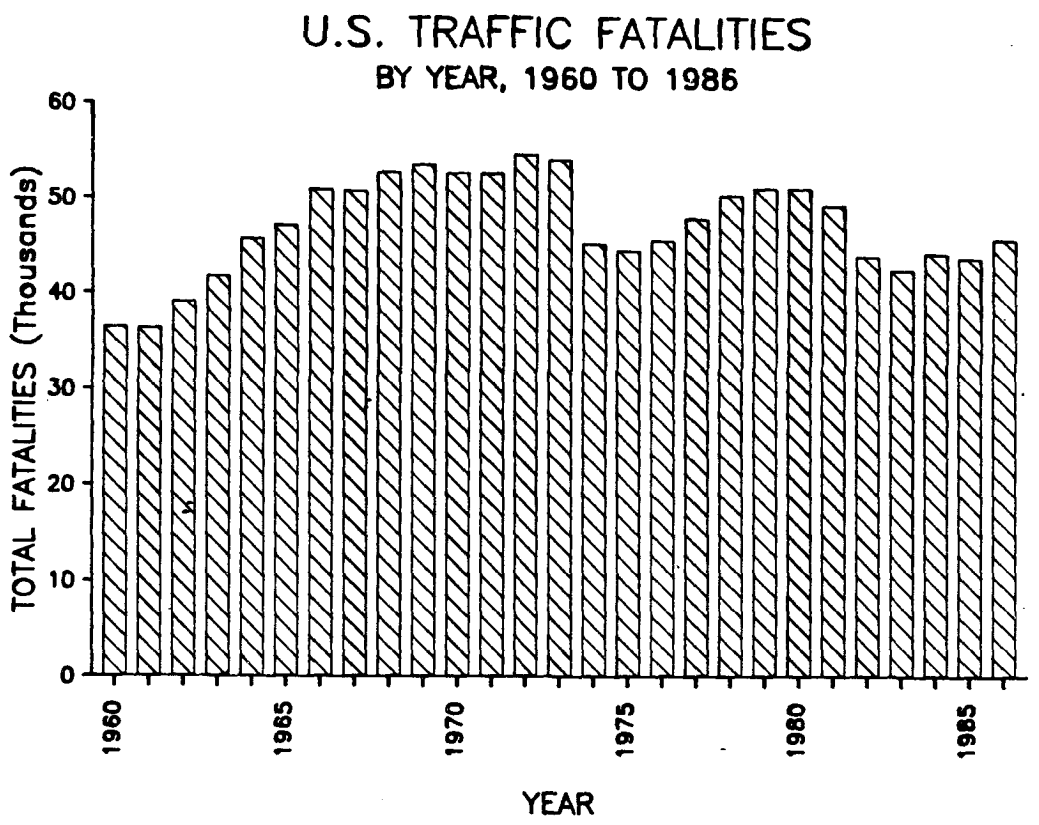
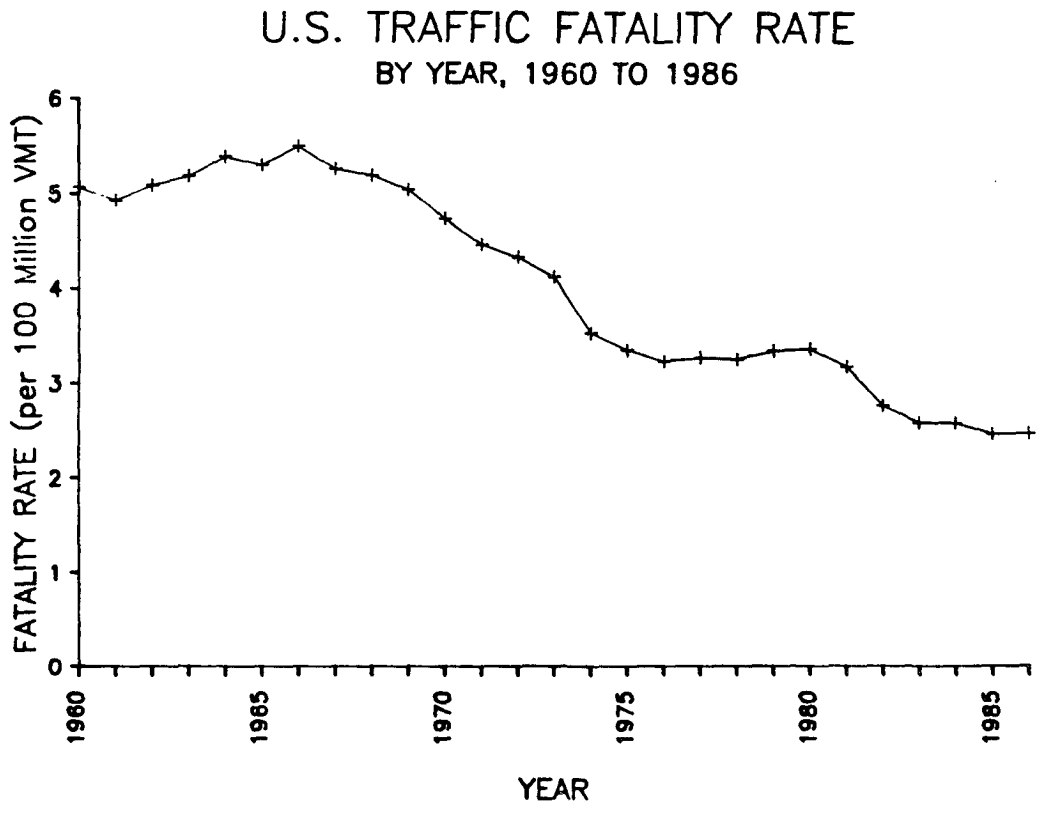


FIGURE 2



State and Regional Trends

State-by-State statistics on fatal accidents over the 1980-1985 period are shown in Tables 1 and 1A. Similarly, data covering the seven-year period for the 10 NHTSA Regions are presented in Table 2.

When interpreting changes in fatality statistics for individual States and NHTSA Regions, recall that the accuracy of a comparison depends on the sizes of the totals being compared. The procedure outlined in the introduction should help determine how much confidence to place in the results. For a small State the variability of the total may be so large as to put any change into question.

This procedure has been used to classify the fatality changes from 1985 to 1986 for each State, Region and the nation as a whole as "definite," "probable" or "no change." A definite change means greater than 95 percent probability that the observed increase or decrease is not due to chance. A change with a probability between 67 and 95 percent that it is not due to chance is classified as probable. All other values are classified as no change.

The 5 percent national increase was definite. The increases in the NHTSA Regions 2, 3, 4, 7, 8, and 9 were significant with Regions 3, 4, and 7 larger increases. In all other Regions the changes were quite small and of no statistical significance.

The results for the individual States follow.

Classification of Changes by State

DECREASE	PROBABLE DECREASE	NO CHANGE	PROBABLE INCREASE	INCREASE
ALASKA	HAWAII	CONNECTICUT	COLORADO	ALABAMA
DIST. OF COL.	IOWA	FLORIDA	ILLINOIS	ARIZONA
TEXAS	MINNESOTA	IDAHO	MICHIGAN	ARKANSAS
	NEVADA	KANSAS	NEW YORK	CALIFORNIA
	NEW HAMPSHIRE	LOUISIANA	NORTH DAKOTA	DELAWARE
	NEW MEXICO	MASSACHUSETTS	RHODE ISLAND	GEORGIA
	OHIO	MAIN	WYOMING	INDIANA
	OKLAHOMA	MONTANA		KENTUCKY
	WASHINGTON	SOUTH DAKOTA		MARYLAND
		UTAH		MISSISSIPPI
		VERMONT		MISSOURI
		WEST VIRGINIA		NEBRASKA
		WISCONSIN		NEW JERSEY
				NORTH CAROLINA
				OREGON
				PENNSYLVANIA
				SOUTH CAROLINA
				TENNESSEE
				VIRGINIA

TABLE 1

FATALITIES BY STATE

STATE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
ALABAMA	1,078	881	930	940	-1%	-5%	22%
ALASKA	97	127	150	88	70%	-15%	-24%
ARIZONA	981	893	675	947	-29%	32%	10%
ARKANSAS	601	535	557	588	-5%	-4%	12%
CALIFORNIA	5,259	4,961	4,573	5,496	-17%	8%	6%
COLORADO	603	578	646	709	-9%	-11%	4%
CONNECTICUT	455	448	438	575	-24%	2%	2%
DELAWARE	136	104	110	153	-28%	-5%	31%
DIST. OF COLUMBIA	44	60	66	41	61%	-9%	-27%
FLORIDA	2,871	2,830	2,686	2,825	-5%	5%	1%
GEORGIA	1,529	1,361	1,296	1,508	-14%	5%	12%
HAWAII	117	126	141	186	-24%	-11%	-7%
IDAHO	259	255	263	331	-21%	-3%	2%
ILLINOIS	1,591	1,535	1,526	1,975	-23%	1%	4%
INDIANA	1,036	974	1,016	1,166	-13%	-4%	6%
IOWA	440	474	514	626	-18%	-8%	-7%
KANSAS	500	486	411	595	-31%	18%	3%
KENTUCKY	805	712	778	820	-5%	-8%	13%
LOUISIANA	929	931	933	1,219	-23%	0%	0%
MAINE	212	206	224	265	-15%	-8%	3%
MARYLAND	790	727	656	756	-13%	11%	9%
MASSACHUSETTS	752	740	651	881	-26%	14%	2%
MICHIGAN	1,605	1,543	1,314	1,750	-25%	17%	4%
MINNESOTA	572	609	555	848	-35%	10%	-6%
MISSISSIPPI	763	662	715	695	3%	-7%	15%
MISSOURI	1,128	931	911	1,175	-22%	2%	21%
MONTANA	222	223	286	325	-12%	-22%	0%
NEBRASKA	290	237	255	396	-36%	-7%	22%
NEVADA	233	258	253	346	-27%	2%	-10%
NEW HAMPSHIRE	172	188	191	194	-2%	-2%	-9%
NEW JERSEY	1,040	959	932	1,120	-17%	3%	8%
NEW MEXICO	498	535	531	606	-12%	1%	-7%
NEW YORK	2,100	2,003	2,077	2,610	-20%	-4%	5%
NORTH CAROLINA	1,646	1,481	1,234	1,503	-18%	20%	11%
NORTH DAKOTA	100	90	116	151	-23%	-22%	11%
OHIO	1,587	1,640	1,582	2,033	-22%	4%	-3%
OKLAHOMA	711	739	848	959	-12%	-13%	-4%
OREGON	620	559	550	646	-15%	2%	11%
PENNSYLVANIA	1,894	1,771	1,721	2,089	-18%	3%	7%
RHODE ISLAND	124	109	100	129	-22%	9%	14%
SOUTH CAROLINA	1,059	952	844	852	-1%	13%	11%
SOUTH DAKOTA	134	130	175	228	-23%	-26%	3%
TENNESSEE	1,234	1,101	1,037	1,153	-10%	6%	12%
TEXAS	3,567	3,678	3,823	4,366	-12%	-4%	-3%
UTAH	312	303	283	334	-15%	7%	3%
VERMONT	109	115	94	137	-31%	22%	-5%
VIRGINIA	1,127	977	901	1,045	-14%	8%	15%
WASHINGTON	703	742	698	971	-28%	6%	-5%
WEST VIRGINIA	440	420	425	523	-19%	-1%	5%
WISCONSIN	757	744	725	972	-25%	3%	2%
WYOMING	168	152	173	245	-29%	-12%	11%
U.S. TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

TABLE 1A

FATAL ACCIDENTS BY STATE

STATE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
ALABAMA	959	776	806	835	-3%	-4%	24%
ALASKA	86	107	135	79	71%	-21%	-19%
ARIZONA	873	782	616	833	-26%	27%	12%
ARKANSAS	535	452	485	486	0%	-7%	18%
CALIFORNIA	4,680	4,448	4,089	4,930	-17%	9%	5%
COLORADO	537	525	591	625	-5%	-11%	2%
CONNECTICUT	405	421	404	520	-22%	4%	-4%
DELAWARE	121	94	98	135	-27%	-4%	29%
DIST. OF COLUMBIA	39	57	58	38	53%	-2%	-31%
FLORIDA	2,555	2,543	2,415	2,519	-4%	5%	0%
GEORGIA	1,361	1,223	1,157	1,348	-14%	6%	11%
HAWAII	104	118	133	167	-20%	-11%	-12%
IDAHO	230	218	231	287	-20%	-6%	6%
ILLINOIS	1,416	1,365	1,379	1,776	-22%	-1%	4%
INDIANA	922	880	876	1,029	-15%	0%	5%
IOWA	392	416	437	541	-19%	-5%	-6%
KANSAS	445	429	361	506	-29%	19%	4%
KENTUCKY	716	624	690	746	-8%	-10%	15%
LOUISIANA	827	824	836	1,080	-23%	-1%	0%
MAINE	189	189	198	236	-16%	-5%	0%
MARYLAND	703	655	607	682	-11%	8%	7%
MASSACHUSETTS	669	686	605	813	-26%	13%	-2%
MICHIGAN	1,428	1,386	1,192	1,561	-24%	16%	3%
MINNESOTA	509	537	498	742	-33%	8%	-5%
MISSISSIPPI	679	582	626	603	4%	-7%	17%
MISSOURI	1,004	827	810	1,025	-21%	2%	21%
MONTANA	198	194	253	276	-8%	-23%	2%
NEBRASKA	258	207	221	337	-34%	-6%	25%
NEVADA	207	226	220	302	-27%	3%	-8%
NEW HAMPSHIRE	153	177	166	175	-5%	7%	-14%
NEW JERSEY	925	880	866	1,022	-15%	2%	5%
NEW MEXICO	443	453	467	513	-9%	-3%	-2%
NEW YORK	1,869	1,849	1,918	2,374	-19%	-4%	1%
NORTH CAROLINA	1,465	1,331	1,083	1,327	-18%	23%	10%
NORTH DAKOTA	89	77	105	133	-21%	-27%	16%
OHIO	1,412	1,475	1,416	1,805	-22%	4%	-4%
OKLAHOMA	633	650	720	820	-12%	-10%	-3%
OREGON	552	510	485	585	-17%	5%	8%
PENNSYLVANIA	1,685	1,580	1,544	1,882	-18%	2%	7%
RHODE ISLAND	110	99	96	118	-19%	3%	11%
SOUTH CAROLINA	942	848	739	747	-1%	15%	11%
SOUTH DAKOTA	119	109	147	188	-22%	-26%	9%
TENNESSEE	1,098	997	919	1,007	-9%	8%	10%
TEXAS	3,175	3,267	3,328	3,814	-13%	-2%	-3%
UTAH	278	270	253	291	-13%	7%	3%
VERMONT	97	101	87	125	-30%	16%	-4%
VIRGINIA	1,003	895	803	938	-14%	11%	12%
WASHINGTON	626	643	628	847	-26%	2%	-3%
WEST VIRGINIA	392	368	379	464	-18%	-3%	6%
WISCONSIN	675	666	648	847	-23%	3%	1%
WYOMING	149	132	152	205	-26%	-13%	13%
U.S. TOTAL	40,935	39,168	37,976	45,284	-16%	3%	5%

TABLE 2

TRAFFIC FATALITIES BY NHTSA REGIONS

REGION	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
REGION 1	1,824	1,806	1,698	2,181	-22%	6%	1%
REGION 2	3,140	2,962	3,009	3,730	-19%	-2%	6%
REGION 3	4,431	4,059	3,879	4,607	-16%	5%	9%
REGION 4	10,985	9,980	9,520	10,296	-8%	5%	10%
REGION 5	7,148	7,045	6,718	8,744	-23%	5%	1%
REGION 6	6,306	6,418	6,692	7,738	-14%	-4%	-2%
REGION 7	2,358	2,128	2,091	2,792	-25%	2%	11%
REGION 8	1,539	1,476	1,679	1,992	-16%	-12%	4%
REGION 9	6,590	6,238	5,642	6,975	-19%	11%	6%
REGION 10	1,679	1,683	1,661	2,036	-18%	1%	0%
TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

FIGURE 3

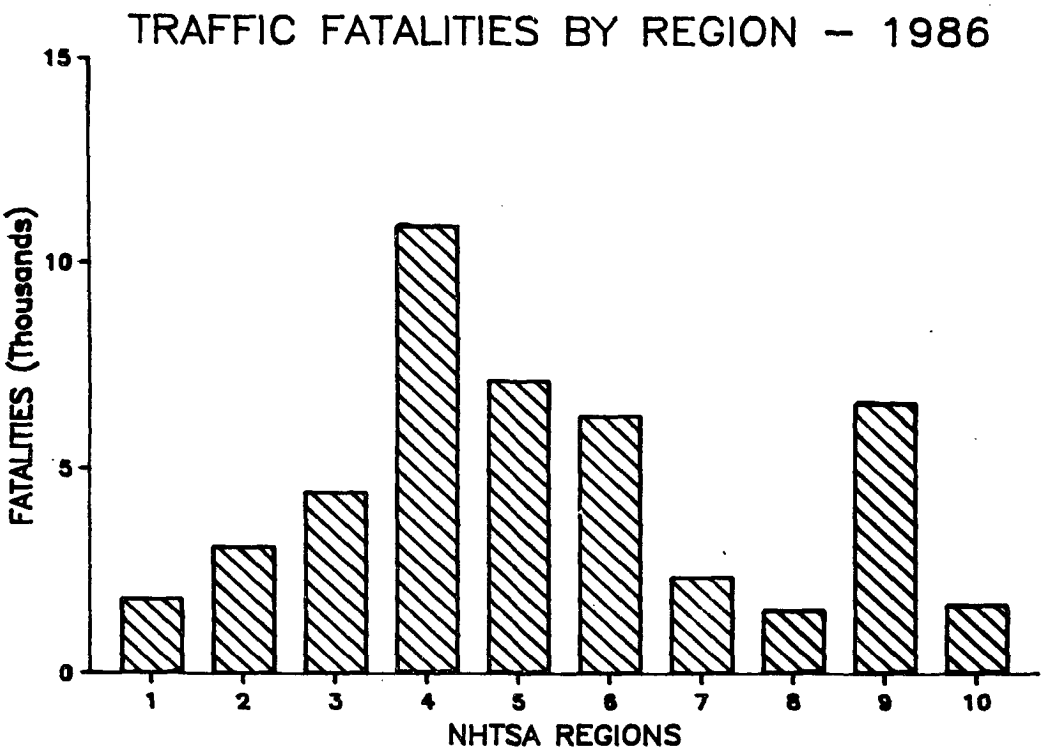
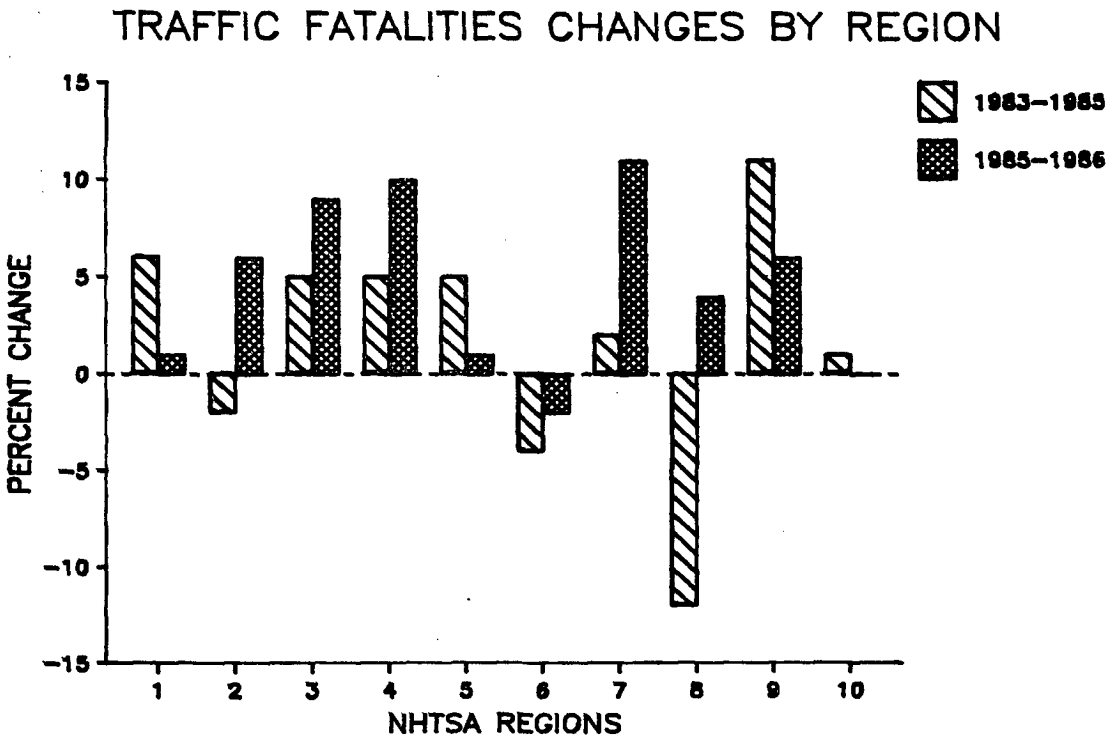


FIGURE 4



TRAFFIC FATALITIES in 1985

General Estimates

During 1986 an estimated 46,000 fatalities occurred on the nation's highways. This total is 5 percent higher than for 1985 and 3 percent above the total recorded for 1983. When taking travel mileage into consideration to evaluate the risk to the public, we find that 1986 remained at the safest level on record with a rate of 2.5 fatalities per 100 million vehicle miles of travel, a value half as large as that recorded for 1963.

As in previous years, male traffic fatalities exceeded female fatalities by a factor of about 2.5 to 1. The ratio of male to female fatalities is much higher for persons between the ages of 20 and 35; for these victims this ratio reaches 3.6, while it declines to 1.3 for victims 65 or older. (Table 3, Figure 5)

The age distribution of traffic fatalities is not uniform among the three major categories -- drivers, passengers and nonoccupants (mostly pedestrians and bicyclists). One way to highlight the difference is to analyze the distribution by category in each age group. (Table 4, Figure 6)

Overall, 58 percent of all victims are drivers; 25 percent are passengers, and 16 percent are nonoccupants (Table 4). These proportions vary considerably among the various age groups. As expected, in the 14-and-under group there are very few drivers and an almost even split between nonoccupants and passengers. For the remaining victims, the proportion in each category varies, but with recognizable patterns. The proportion of nonoccupant deaths rises steadily from 9 percent in the 15-to-24 age group to 24 percent for persons 65 or older.

The proportion of driver deaths is 53 percent for victims 15-to-19 years of age. It increases to about 70 percent for the 25-to-44 age group and decreases to 51 percent for the 65-and-older age group.

The pattern for passenger deaths is opposite to that described for drivers. The proportion of passenger deaths is 49 percent for the 14-and-under age group, decreases to 16 percent for ages 35 to 44 and rises to 25 percent for the oldest group.

The monthly distribution of fatalities by victim type shows that passengers, drivers, and nonoccupants have almost identical distributions, with a low value of 6 percent in February, a peak value of about 10 percent from June to August and smooth transitions in between. The number of driver and passenger fatalities during these three summer months is about 60 percent higher than in February. (Table 5)

By associating monthly fatalities with the corresponding travel estimates contained in Table 2A, we can determine the fatality rate for each month. This rate is the number of fatalities per 100 million vehicle miles of travel.

The resulting figures for 1985 show that the rate did not remain constant, but -- in typical seasonal fashion -- rose steadily from a low of 2.2 in February to 2.7 in June, remained at that level through November and then declined. The fatality rate by day of week and hour of day cannot be estimated, because national estimates of travel are not available at this level of detail.

The distribution of traffic fatalities by posted speed limit within urban and rural areas (Table 8) shows that 58 percent occurred in rural areas and that 53 percent of the fatalities occurred on roads with a posted speed limit of 55 mph. The latest travel estimates for the same categories were used to compute the fatality rates shown in Table 2A.

TABLE 2A

ESTIMATES* OF TRAVEL FOR 1986

a) 1985 Estimates of Vehicle Miles of Travel (VMT)(Millions) and Fatality Rate by Land Use and Posted Speed Limit

POSTED SPEED	LAND USE					
	RURAL		URBAN		TOTAL	
	TRAVEL	RATE	TRAVEL	RATE	TRAVEL	RATE
25 mph or Less	7,090	6.7	105,730	1.8	112,820	2.1
30-35 mph	24,660	7.9	349,234	1.9	373,894	2.3
40-50 mph	88,312	5.0	281,000	2.0	369,312	2.7
55 mph	650,551	2.9	354,030	1.3	1,004,581	2.3
TOTAL	770,613	3.5	1,089,994	1.8	1,860,607	2.5

b) 1986 Estimates, by Month, of Vehicle Miles of Travel (Millions) and Fatality Rate (per 100 million VMT)

MONTH	VMT	FATALITY RATE
January	132,622	2.4
February	124,417	2.2
March	150,955	2.3
April	153,073	2.3
May	163,368	2.6
June	165,847	2.6
July	173,362	2.6
August	176,748	2.7
September	157,719	2.5
October	162,120	2.5
November	149,412	2.5
December	150,966	2.4

* Based on Federal Highway Administration's latest estimates of VMT and its distribution by Land Use and Posted Speed.

In urban areas the 1986 traffic fatality rate was about 1.9 on all roads except high-speed expressways, where the rate was 1.3. In rural areas the fatality rate decreased as the speed limit increased. The overall fatality rate does not vary by much among the posted speed ranges, even though the rate is considerably higher in rural areas than in urban areas. The ratio of rural to urban rates decreases as the speed limit increases, from about 4 at the lower speed limits to a value of 2.2 at 55 mph.

TABLE 3

1986 FATALITIES BY AGE AND SEX OF VICTIM

AGE OF VICTIM	SEX OF VICTIM		
	MALE	FEMALE	TOTAL
14 YRS AND UNDER	1,848	1,135	2,983
(Percent)	62	38	100
15 TO 19 YEARS	4,931	1,969	6,900
(Percent)	71	29	100
20 TO 24 YEARS	6,217	1,743	7,960
(Percent)	78	22	100
25 TO 34 YEARS	7,884	2,205	10,089
(Percent)	78	22	100
35 TO 44 YEARS	3,992	1,432	5,424
(Percent)	74	26	100
45 TO 54 YEARS	2,305	939	3,244
(Percent)	71	29	100
55 TO 64 YEARS	2,004	1,115	3,119
(Percent)	64	36	100
65 YEARS OR OLDER	3,324	2,466	5,790
(Percent)	57	43	100
UNKNOWN AGE	336	156	492
(Percent)	68	32	100
TOTAL	32,840	13,160	46,000
(Percent)	71	29	100

TABLE 4

1986 FATALITIES BY AGE AND TYPE OF VICTIM

AGE OF VICTIM	TYPE OF VICTIM NONOCCUPANT	DRIVER	PASSENGER	TOTAL
14 YRS AND UNDER	1,391	146	1,447	2,983
(Percent)	47	5	49	100
15 TO 19 YEARS	643	3,636	2,621	6,900
(Percent)	9	53	38	100
20 TO 24 YEARS	713	5,289	1,958	7,960
(Percent)	9	66	25	100
25 TO 34 YEARS	1,205	7,057	1,828	10,089
(Percent)	12	70	18	100
35 TO 44 YEARS	803	3,752	869	5,424
(Percent)	15	69	16	100
45 TO 54 YEARS	633	2,039	572	3,244
(Percent)	19	63	18	100
55 TO 64 YEARS	582	1,873	663	3,119
(Percent)	19	60	21	100
65 YEARS OR OLDER	1,411	2,958	1,421	5,790
(Percent)	24	51	25	100
UNKNOWN AGE	181	70	241	492
(Percent)	37	14	49	100
TOTAL	7,560	26,820	11,620	46,000
(Percent)	16	58	25	100

FIGURE 5

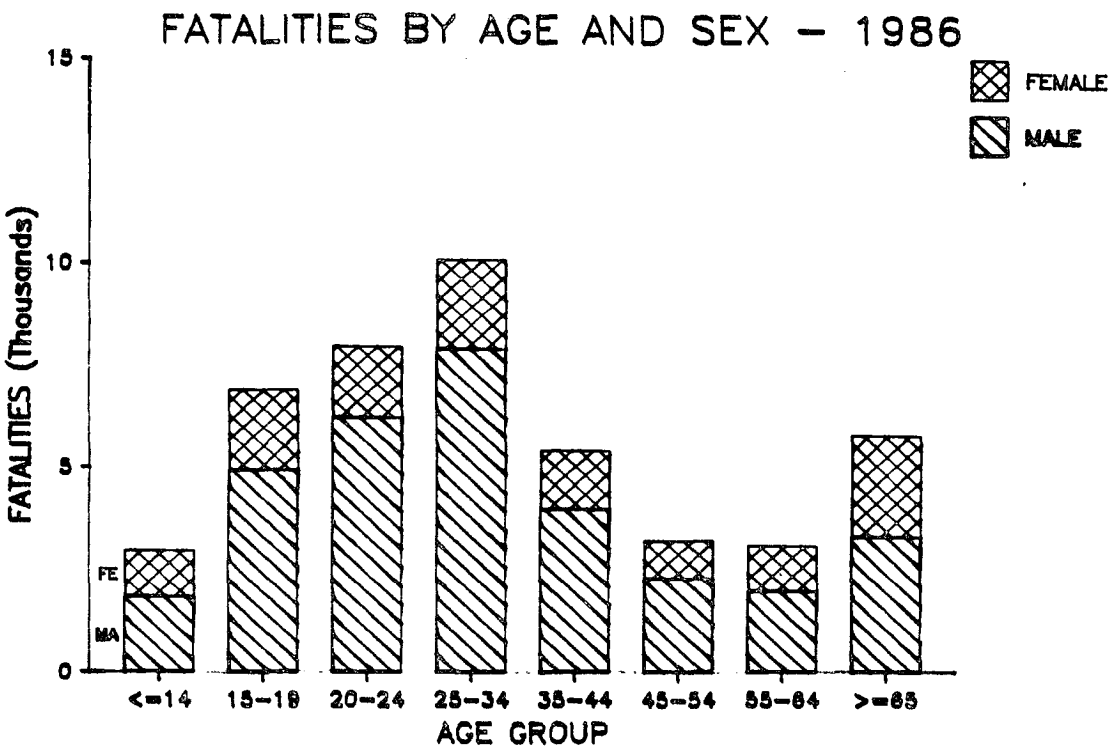


FIGURE 6

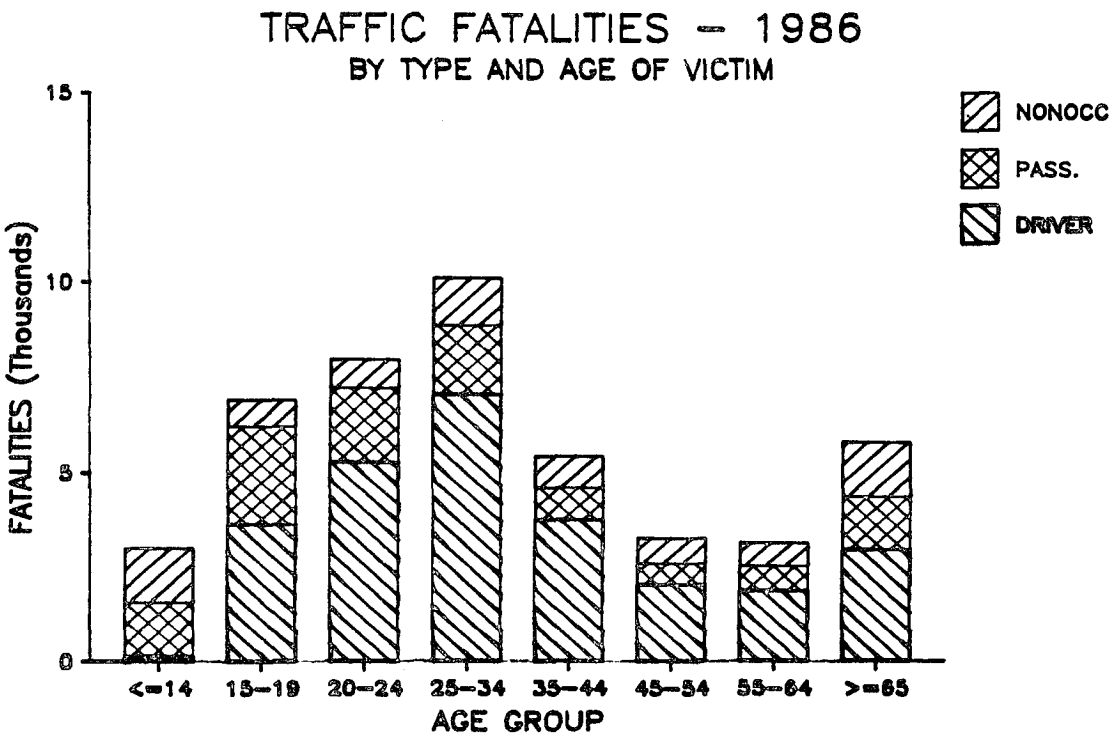


TABLE 5

1986 FATALITIES BY MONTH AND TYPE OF VICTIM

MONTH	TYPE OF VICTIM			
	NONOCCUPANT	DRIVER	PASSENGER	
JANUARY	648	1,763	722	3,132
(Row percent)	21	56	23	100
(Column percent)	9	7	6	7
FEBRUARY	482	1,542	660	2,684
(Row percent)	18	57	25	100
(Column percent)	6	6	6	6
MARCH	592	1,974	857	3,423
(Row percent)	17	58	25	100
(Column percent)	8	7	7	7
APRIL	577	2,114	827	3,519
(Row percent)	16	60	24	100
(Column percent)	8	8	7	8
MAY	683	2,431	1,057	4,171
(Row percent)	16	58	25	100
(Column percent)	9	9	9	9
JUNE	658	2,521	1,138	4,317
(Row percent)	15	58	26	100
(Column percent)	9	9	10	9
JULY	648	2,682	1,152	4,482
(Row percent)	14	60	26	100
(Column percent)	9	10	10	10
AUGUST	718	2,757	1,249	4,724
(Row percent)	15	58	26	100
(Column percent)	9	10	11	10
SEPTEMBER	688	2,285	1,011	3,984
(Row percent)	17	57	25	100
(Column percent)	9	9	9	9
OCTOBER	753	2,345	1,011	4,109
(Row percent)	18	57	25	100
(Column percent)	10	9	9	9
NOVEMBER	587	2,210	967	3,764
(Row percent)	16	59	26	100
(Column percent)	8	8	8	8
DECEMBER	527	2,195	969	3,691
(Row percent)	14	59	26	100
(Column percent)	7	8	8	8
TOTAL	7,560	26,820	11,620	46,000
(Row percent)	16	58	25	100
(Column percent)	100	100	100	100

TABLE 6

1986 FATALITIES BY TIME AND MONTH

TIME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SPT	OCT	NOV	DEC	TOTAL
MIDNIGHT TO 3 AM	436	372	482	544	690	724	785	882	645	615	622	503	7,301
3 AM TO 6 AM	208	150	266	245	323	320	378	373	286	314	296	208	3,367
6 AM TO 9 AM	327	244	231	224	318	280	315	348	312	302	304	380	3,585
9 AM TO 12 NOON	281	254	277	296	312	340	380	344	298	318	275	302	3,677
12 NOON TO 3 PM	340	279	383	383	460	533	461	529	418	411	416	414	5,027
3 PM TO 6 PM	523	440	555	560	630	685	672	680	630	666	586	742	7,369
6 PM TO 9 PM	563	521	648	640	680	596	632	710	677	729	637	595	7,628
9 PM TO 12 MIDNIGHT	434	412	555	603	724	807	815	806	670	714	591	509	7,641
UNKNOWN TIME	20	12	26	24	34	32	44	52	48	38	36	38	405
TOTAL	3,132	2,684	3,423	3,519	4,171	4,317	4,482	4,724	3,984	4,109	3,764	3,691	46,000

TABLE 7

1986 FATALITIES BY TIME AND DAY

TIME	SUN	MON	TUE	WED	THU	FRI	SAT	TOTAL
MIDNIGHT TO 3 AM	1,854	594	567	628	655	865	2,139	7,301
3 AM TO 6 AM	848	275	267	317	295	417	947	3,367
6 AM TO 9 AM	374	540	534	493	559	554	531	3,585
9 AM TO 12 NOON	446	507	538	490	476	565	654	3,677
12 NOON TO 3 PM	745	725	693	642	700	756	765	5,027
3 PM TO 6 PM	1,088	1,026	954	946	988	1,168	1,199	7,369
6 PM TO 9 PM	1,240	946	826	914	937	1,333	1,431	7,628
9 PM TO 12 MIDNIGHT	836	786	793	863	977	1,744	1,643	7,641
UNKNOWN TIME	102	35	40	50	37	54	86	405
TOTAL	7,533	5,434	5,213	5,344	5,624	7,457	9,395	46,000

TABLE 8

1986 FATALITIES BY POSTED SPEED LIMIT AND LAND USE

POSTED SPEED LIMIT	LAND USE			
	RURAL	URBAN	UNKNOWN	TOTAL
LESS THAN 26 MPH	477	1,853	5	2,335
26 TO 35 MPH	1,938	6,644	10	8,592
36 TO 45 MPH	3,154	4,510	15	7,678
46 TO 54 MPH	1,260	1,120	20	2,400
55 MPH	19,093	4,479	20	23,592
UNKNOW LIMIT	673	708	20	1,401
TOTAL	26,596	19,314	90	46,000

FIGURE 7

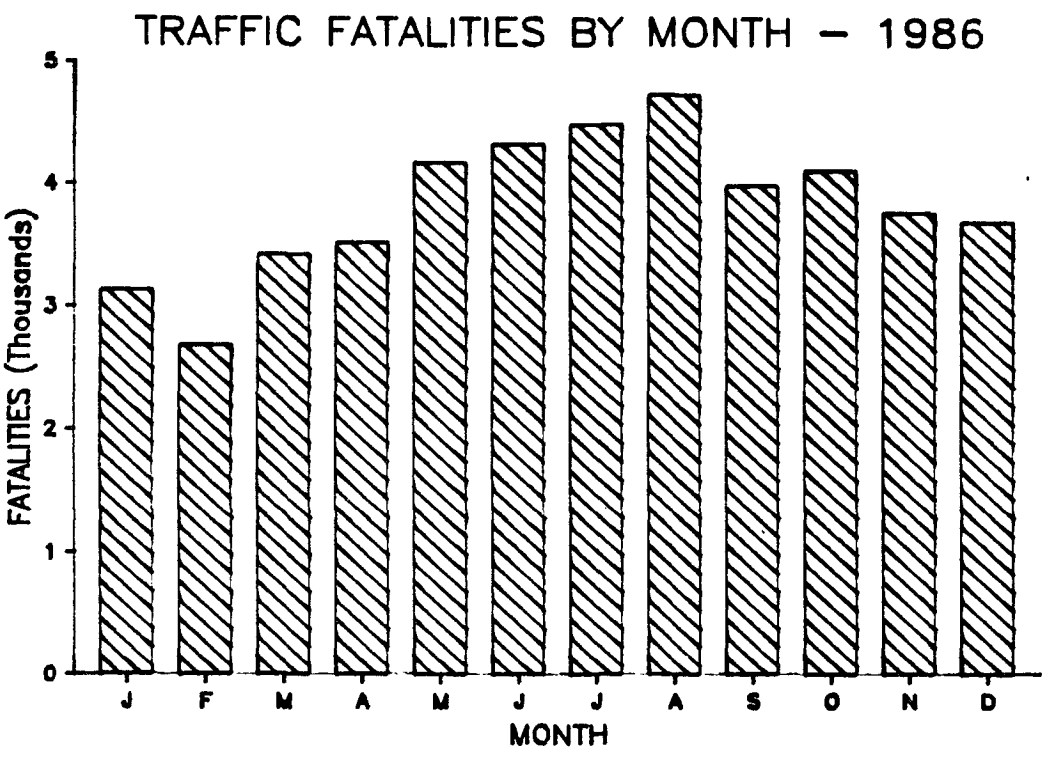


FIGURE 8

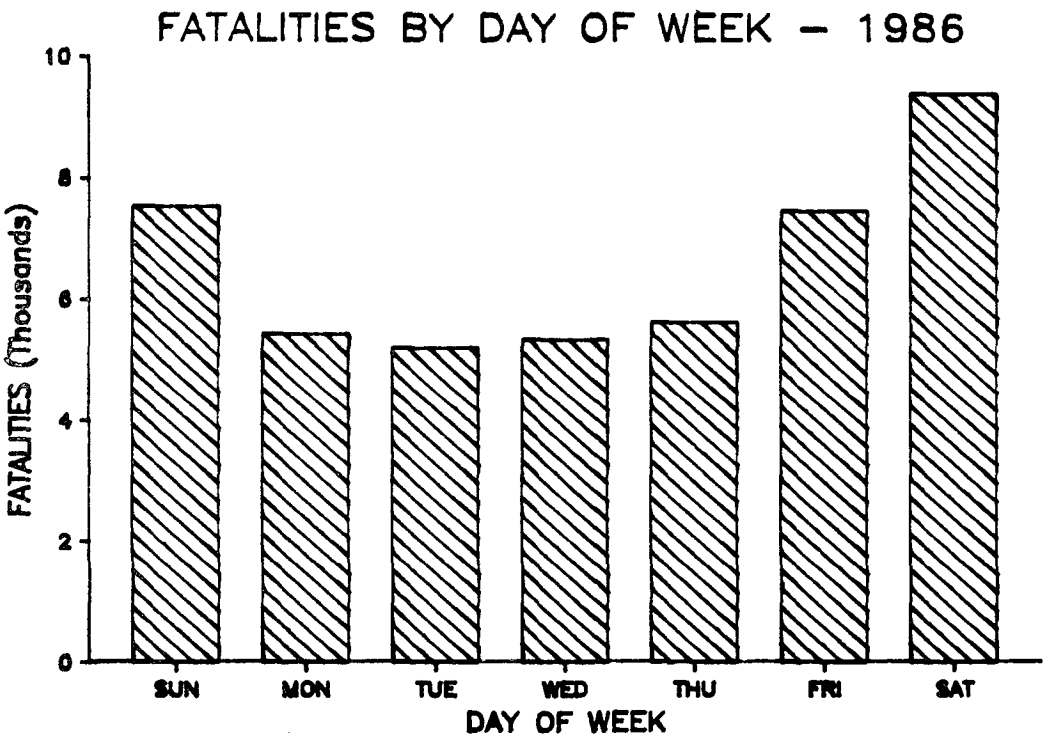


FIGURE 9

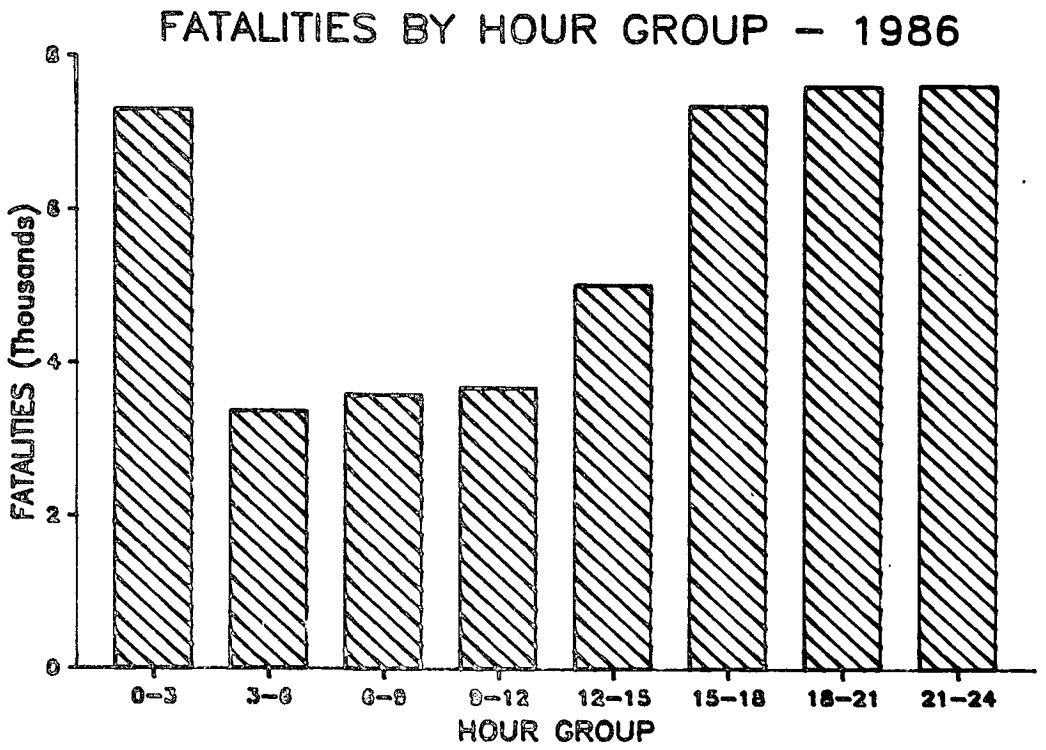
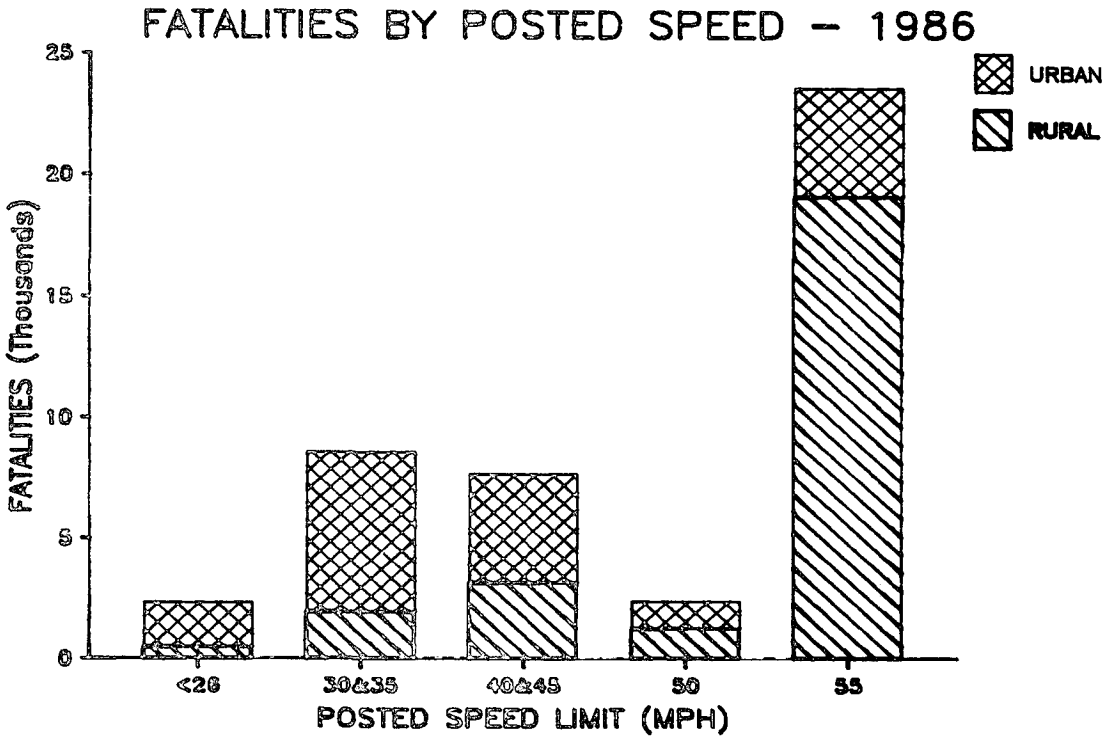


FIGURE 10



SELECTED COMPARISONS

Procedure

The purpose of this section is to compare selected statistics for 1986 to those in 1985. To provide a broader view of the latest trends, the tables include comparisons with 1983 and 1980 statistics. These figures are especially useful because 1980 marks the beginning of the decline in traffic fatalities from 51,091 in 1980 to 42,589 in 1983. The comparisons range from the general (such as accident characteristics) to the specific (such as blood alcohol concentration (BAC) of drivers and restraint use by vehicle occupants).

Although final fatality counts are available through 1985, the figures for 1986 are still preliminary. The 1986 FARS file used for this early assessment (March 1986), does not account for all the fatal accidents that occurred during the year, and not all the data are complete for many of the accidents already on file. Hence a significant number of values for certain variables are unknown.

Adjustments have been made to account for missing data. Past experience with this procedure suggests that for large totals the estimates will not differ from the final counts by more than 1 percent. As stated in the introduction, some unknown data from a limited number of States have been classified to reflect the characteristics of the known data within each State.

Besides any errors in the 1986 estimates caused by these adjustments for missing and incomplete data, we must add the probable error due to the random variation inherent in every count. This range of variability, unique for each total, must be taken into account in analyzing year-to-year differences before concluding that real changes have occurred.

As described in the introduction, a practical solution is to assume that fatality counts are Poisson random variables and to accept as meaningful changes only those in which the new total differs from the old by an amount greater than twice the square root of the old total.

This section is mostly descriptive, with little effort at interpretation. It contains a large set of preliminary statistics for 1986, compares them to the totals for 1985, 1983 and 1980 and points out differences as they become evident.

Accidents and Fatalities

The estimated number of 46,000 traffic fatalities for 1986 is about 5 percent over the total for 1985. Of the total, 7,560 were pedestrians or pedalcyclists ("nonoccupants"); 26,820 were drivers, and 11,620 were passengers. Nonoccupant fatalities decreased by 3 percent, while vehicle occupant fatalities increased by 7 percent. Among vehicle-occupant fatalities, the increase was 11 percent in single-vehicle accidents, and only 3 percent in multi-vehicle accidents. (Tables 4, 10, 33 and Figure 11)

The fatality increase occurred during most months of the year. With the exception of April and November, which showed very minor decreases, all months had increases which averaged to 6 percent. Larger increases were found during the summer months. (Tables 11 and 12 and Figure 12)

By days of the week, the 1986 fatality increase was 7 percent for Saturdays, Sundays, and Mondays. The increase for the remaining days of the week averaged to about 3 percent. Thursday was the only day showing no change from the previous year. (Tables 13 and 14 and Figure 13)

The changes in fatalities by hour of day show over a 6 percent increase between 3 p.m. and 3 a.m. During the remaining hours the number of fatalities increased by an average of 2 percent. The lowest increase was 1 percent between the hours of 9 a.m. and 3 p.m. The significance of the 8 percent increase found between midnight and 3 a.m. is emphasized by the fact that the same period showed the greatest declines from 1983 to 1985 and from 1980 to 1983. During these hours alcohol is most often found in the blood of victims and drivers. (Tables 15 and 16 and Figure 14)

The pattern by highway type is not very clear. Deaths increased by about 7 percent on county roads and remained almost the same on the remaining systems. The large number of "unknowns" in this classification makes it difficult to interpret these results. (Tables 17 and 18 and Figure 15)

Highways with a posted speed limit of 55 mph showed the highest increase in 1986. The change over the previous year varied from a 5 percent reduction at the lowest range to an 8 percent increase at 55 mph. (Tables 21 and 22 and Figure 17)

The distribution between rural and urban fatalities showed that the changes were similar for the two systems. (Tables 19 and 20 and Figure 16)

TABLE 9

FATAL ACCIDENTS CLASSIFIED BY TYPE

ACCIDENT TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
PEDESTRIAN	5,809	6,075	6,179	7,243	-15%	-2%	-4%
PEDALCYCLIST	878	853	813	928	-12%	5%	3%
SINGLE VEHICLE	17,478	15,933	16,056	19,981	-20%	-1%	10%
ANGLE CRASH	7,083	6,766	6,091	6,949	-12%	11%	5%
HEAD-ON-CRASH	6,015	5,996	5,461	6,449	-15%	10%	0%
REAR END CRASH	1,841	1,935	1,903	2,100	-9%	2%	-5%
SIDESWIPE	732	635	632	722	-12%	0%	15%
OTHER TYPE	1,079	962	823	890	-8%	17%	12%
UNKNOWN TYPE	20	13	18	22	-18%	-28%	54%
TOTAL	40,935	39,168	37,976	45,284	-16%	3%	5%

TABLE 10

TRAFFIC FATALITIES CLASSIFIED BY TYPE OF ACCIDENT

ACCIDENT TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
PEDESTRIAN	5,886	6,183	6,280	7,383	-15%	-2%	-5%
PEDALCYCLIST	894	867	820	944	-13%	6%	3%
SINGLE VEHICLE	19,239	17,351	17,498	21,865	-20%	-1%	11%
ANGLE CRASH	8,095	7,791	6,996	8,089	-14%	11%	4%
HEAD-ON-CRASH	7,719	7,551	7,110	8,538	-17%	6%	2%
REAR END CRASH	2,094	2,223	2,192	2,408	-9%	1%	-6%
SIDESWIPE	829	722	713	828	-14%	1%	15%
OTHER TYPE	1,220	1,092	961	1,011	-5%	14%	12%
UNKNOWN TYPE	25	15	19	25	-24%	-21%	67%
TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

TABLE 11
FATAL ACCIDENTS CLASSIFIED BY MONTH

MONTH	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
JANUARY	2,799	2,635	2,570	3,048	-16%	3%	6%
FEBRUARY	2,408	2,376	2,382	2,905	-18%	0%	1%
MARCH	3,065	2,894	2,721	3,221	-16%	6%	6%
APRIL	3,165	3,160	2,892	3,341	-13%	9%	0%
MAY	3,702	3,508	3,246	3,965	-18%	8%	6%
JUNE	3,838	3,734	3,290	4,324	-24%	13%	3%
JULY	3,983	3,670	3,713	4,330	-14%	-1%	9%
AUGUST	4,229	3,882	3,694	4,739	-22%	5%	9%
SEPTEMBER	3,557	3,446	3,604	4,008	-10%	-4%	3%
OCTOBER	3,657	3,442	3,548	3,892	-9%	-3%	6%
NOVEMBER	3,336	3,372	3,149	3,729	-16%	7%	-1%
DECEMBER	3,196	3,049	3,167	3,782	-16%	-4%	5%
TOTAL	40,935	39,168	37,976	45,284	-16%	3%	5%

TABLE 12
TRAFFIC FATALITIES CLASSIFIED BY MONTH

MONTH	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
JANUARY	3,132	2,911	2,875	3,432	-16%	1%	8%
FEBRUARY	2,684	2,590	2,695	3,271	-18%	-4%	4%
MARCH	3,423	3,211	3,079	3,645	-16%	4%	7%
APRIL	3,519	3,525	3,257	3,731	-13%	8%	0%
MAY	4,171	3,925	3,669	4,482	-18%	7%	6%
JUNE	4,317	4,220	3,703	4,935	-25%	14%	2%
JULY	4,482	4,107	4,146	4,848	-14%	-1%	9%
AUGUST	4,724	4,372	4,155	5,401	-23%	5%	8%
SEPTEMBER	3,984	3,840	3,987	4,498	-11%	-4%	4%
OCTOBER	4,109	3,884	3,970	4,350	-9%	-2%	6%
NOVEMBER	3,764	3,805	3,552	4,257	-17%	7%	-1%
DECEMBER	3,691	3,405	3,501	4,241	-17%	-3%	8%
TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

FIGURE 11

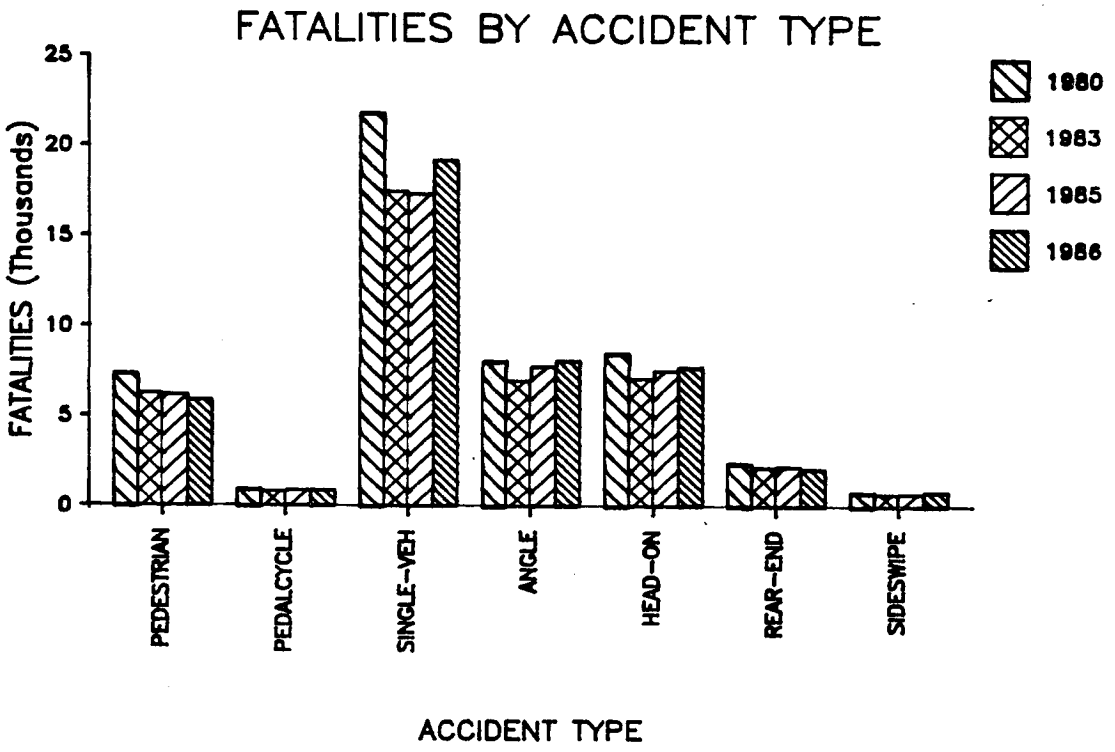


FIGURE 12

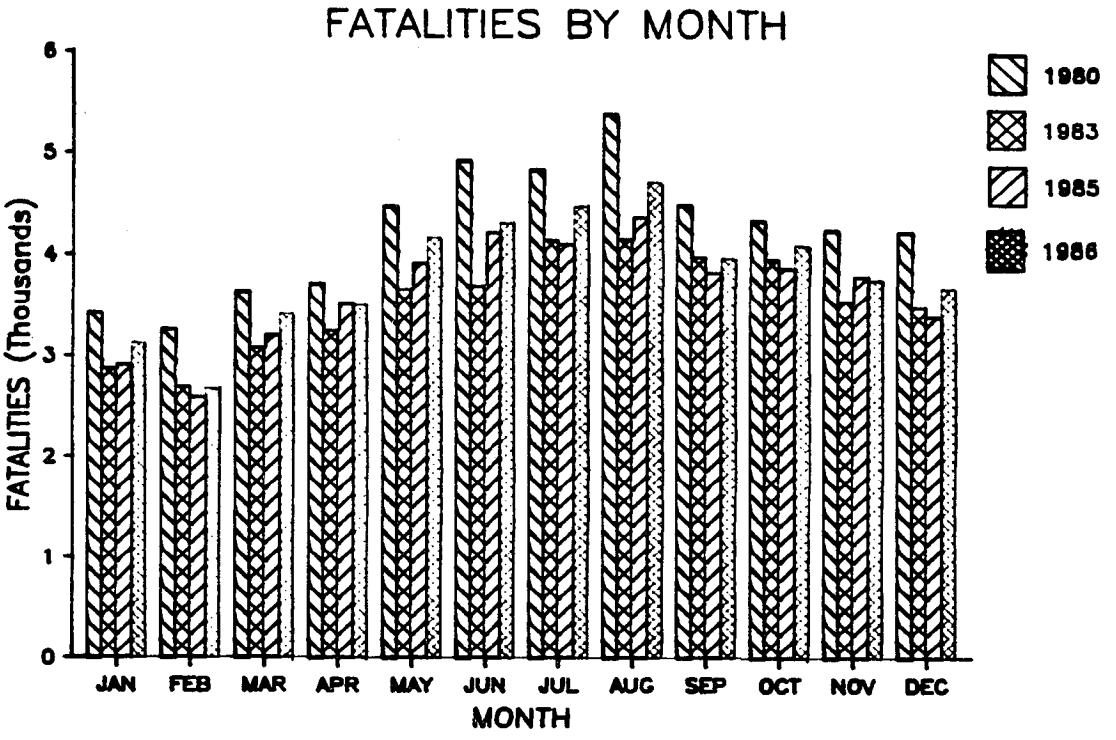


TABLE 13

FATAL ACCIDENTS CLASSIFIED BY DAY OF WEEK

DAY OF WEEK	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
SUNDAY	6,592	6,176	5,941	7,443	-20%	4%	7%
MONDAY	4,871	4,608	4,205	4,898	-14%	10%	6%
TUESDAY	4,680	4,558	4,351	4,915	-11%	5%	3%
WEDNESDAY	4,821	4,647	4,464	5,257	-15%	4%	4%
THURSDAY	5,097	5,081	4,888	5,647	-13%	4%	0%
FRIDAY	6,647	6,392	6,280	7,462	-16%	2%	4%
SATURDAY	8,227	7,706	7,847	9,662	-19%	-2%	7%
TOTAL	40,935	39,168	37,976	45,284	-16%	3%	5%

TABLE 14

TRAFFIC FATALITIES CLASSIFIED BY DAY OF WEEK

DAY OF WEEK	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
SUNDAY	7,533	7,053	6,815	8,555	-20%	3%	7%
MONDAY	5,434	5,086	4,657	5,498	-15%	9%	7%
TUESDAY	5,213	5,030	4,762	5,432	-12%	6%	4%
WEDNESDAY	5,344	5,105	4,957	5,848	-15%	3%	5%
THURSDAY	5,624	5,617	5,415	6,304	-14%	4%	0%
FRIDAY	7,457	7,154	6,975	8,415	-17%	3%	4%
SATURDAY	9,395	8,750	9,008	11,039	-18%	-3%	7%
TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

TABLE 15

FATAL ACCIDENTS CLASSIFIED BY TIME

HOUR GROUP	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
12.1 AM TO 3 AM	6,537	6,051	6,717	8,776	-23%	-10%	8%
3.1 AM TO 6 AM	3,020	2,938	2,796	3,530	-21%	5%	3%
6.1 AM TO 9 AM	3,201	3,071	2,755	3,003	-8%	11%	4%
9.1 AM TO 12 NOON	3,306	3,241	2,965	3,087	-4%	9%	2%
12.1 PM TO 3 PM	4,455	4,420	3,940	4,374	-10%	12%	1%
'3.1 PM TO 6 PM	6,516	6,211	5,780	6,554	-12%	7%	5%
6.1 PM TO 9 PM	6,762	6,472	6,363	7,452	-15%	2%	4%
9.1 PM TO MDNGHT	6,787	6,475	6,419	8,263	-22%	1%	5%
UNKNOWN TIME	351	289	241	245	-2%	20%	22%
TOTAL	40,935	39,168	37,976	45,284	-16%	3%	5%

TABLE 16

TRAFFIC FATALITIES CLASSIFIED BY TIME

HOUR GROUP	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
12.1 AM TO 3 AM	7,301	6,761	7,535	9,958	-24%	-10%	8%
3.1 AM TO 6 AM	3,367	3,272	3,161	3,961	-20%	4%	3%
6.1 AM TO 9 AM	3,585	3,410	3,044	3,344	-9%	12%	5%
9.1 AM TO 12 NOON	3,677	3,637	3,355	3,420	-2%	8%	1%
12.1 PM TO 3 PM	5,027	4,998	4,409	4,938	-11%	13%	1%
'3.1 PM TO 6 PM	7,369	6,891	6,487	7,385	-12%	6%	7%
6.1 PM TO 9 PM	7,628	7,187	7,139	8,425	-15%	1%	6%
9.1 PM TO MIDNIGHT	7,641	7,317	7,194	9,404	-24%	2%	4%
UNKNOWN TIME	405	322	265	256	4%	22%	26%
TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

FIGURE 13

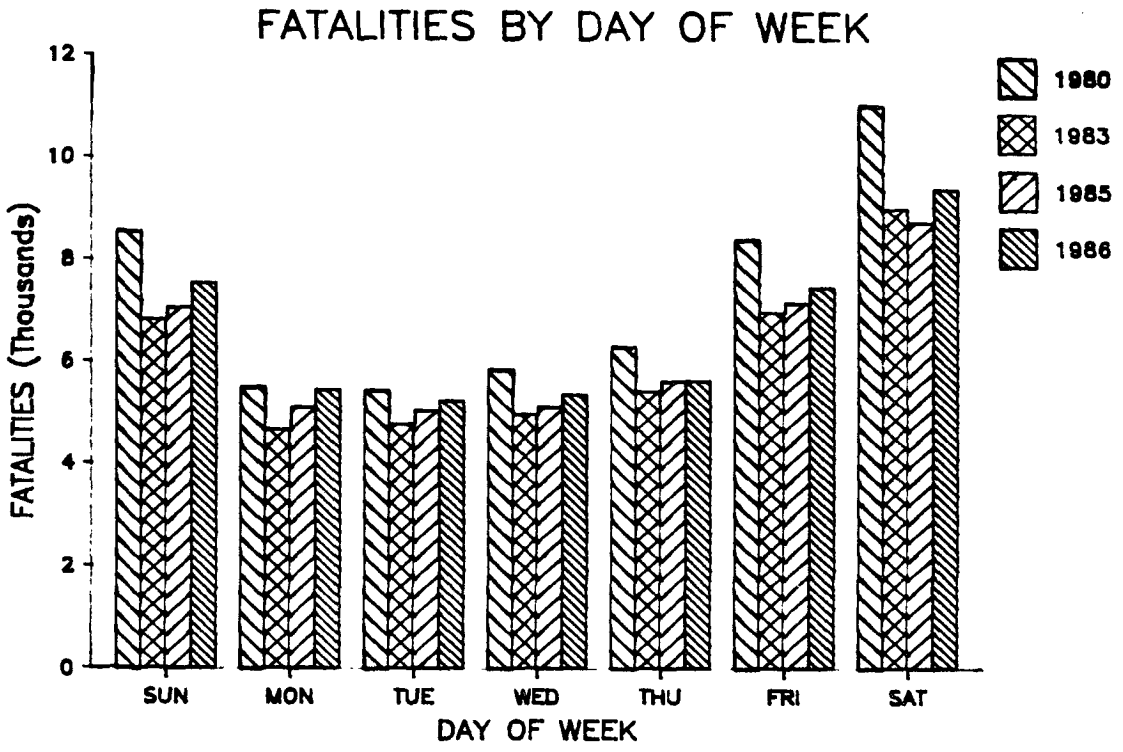


FIGURE 14

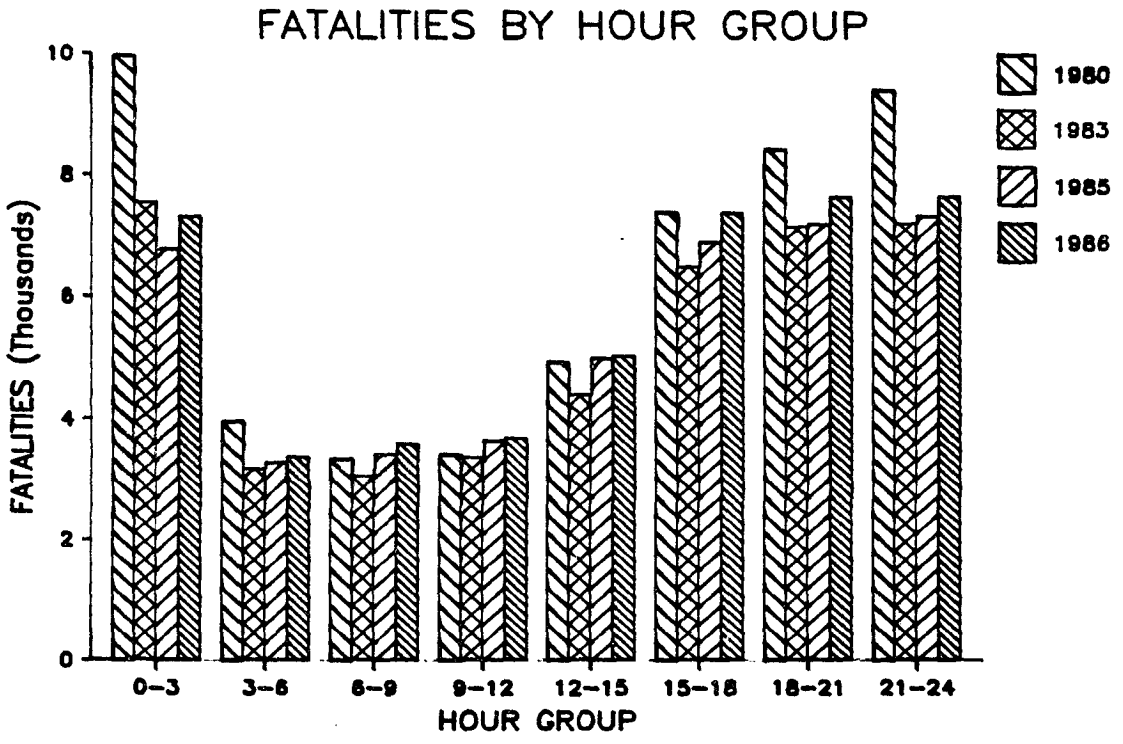


TABLE 17

FATAL ACCIDENTS CLASSIFIED BY HIGHWAY TYPE

HIGHWAY TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
INTERSTATE	3,717	3,739	3,580	3,868	-7%	4%	-1%
OTHER U S ROUTES	6,732	6,708	6,205	7,130	-13%	8%	0%
STATE ROUTES	12,275	12,095	11,798	14,657	-20%	3%	1%
COUNTY ROADS	7,344	6,873	6,866	8,393	-18%	0%	7%
LOCAL STREETS	9,421	9,574	9,398	11,120	-15%	2%	-2%
UNKNOWN TYPE	1,445	179	129	116	11%	39%	707%
TOTAL	40,935	39,168	37,976	45,284	-16%	3%	5%

TABLE 18

TRAFFIC FATALITIES CLASSIFIED BY HIGHWAY TYPE

HIGHWAY TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
INTERSTATE	4,299	4,238	4,077	4,429	-8%	4%	1%
OTHER U S ROUTES	7,914	7,794	7,216	8,429	-14%	8%	2%
STATE ROUTES	13,890	13,698	13,494	16,820	-20%	2%	1%
COUNTY ROADS	8,171	7,605	7,593	9,321	-19%	0%	7%
LOCAL STREETS	10,149	10,270	10,055	11,970	-16%	2%	-1%
UNKNOWN TYPE	1,577	190	154	122	26%	23%	730%
TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

TABLE 19

FATAL ACCIDENTS CLASSIFIED BY LAND USE

LAND USE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
URBAN	17,874	17,279	16,693	19,785	-16%	4%	3%
RURAL	22,976	21,852	21,218	25,105	-15%	3%	5%
UNKNOWN	85	37	65	394	-84%	-43%	130%
TOTAL	40,935	39,168	37,976	45,284	-16%	3%	5%

TABLE 20

TRAFFIC FATALITIES CLASSIFIED BY LAND USE

LAND USE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
URBAN	19,314	18,580	18,027	21,560	-16%	3%	4%
RURAL	26,596	25,176	24,486	29,114	-16%	3%	6%
UNKNOWN	90	39	76	417	-82%	-49%	131%
TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

FIGURE 15

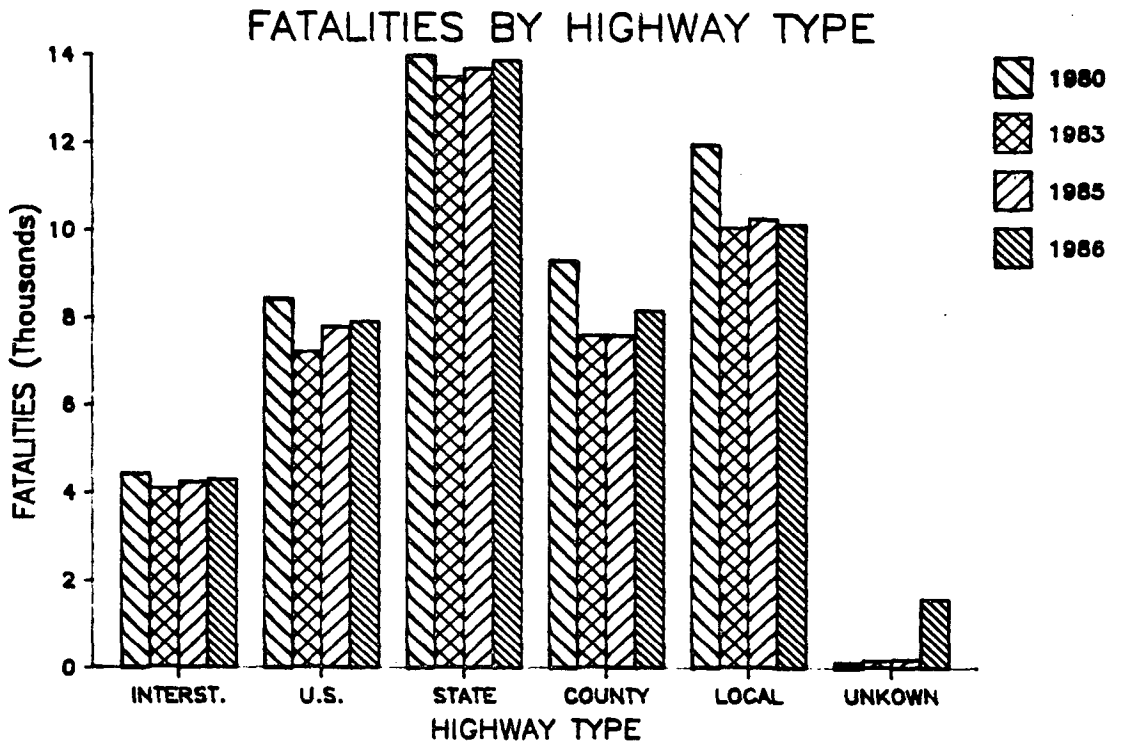


FIGURE 16

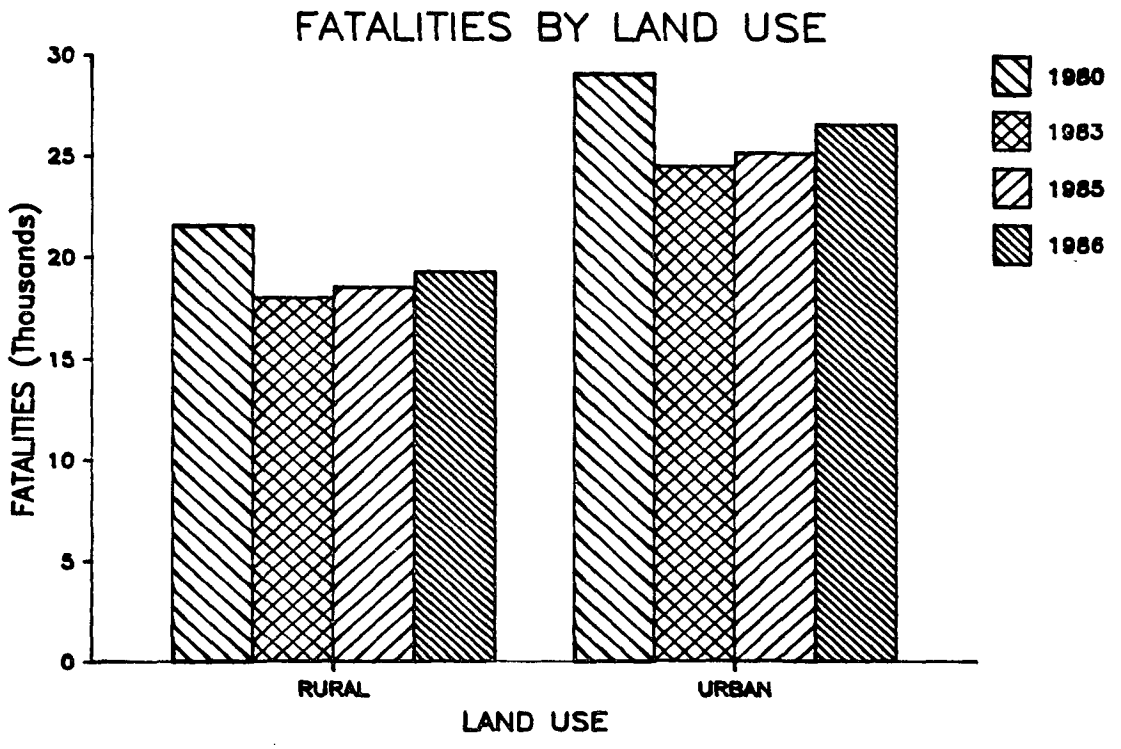


TABLE 21

FATAL ACCIDENTS CLASSIFIED BY POSTED SPEED LIMIT

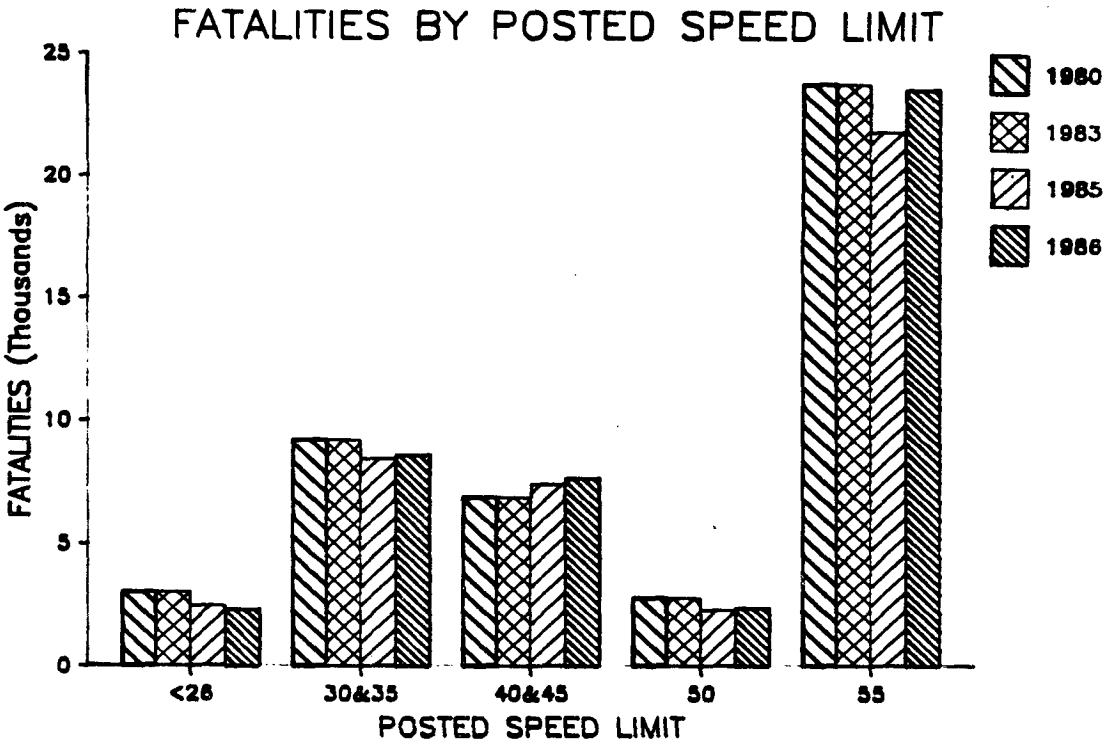
POSTED SPEED LIMIT	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
LESS THAN 26 MPH	2,237	2,371	2,294	2,865	-20%	3%	-6%
26 TO 35 MPH	7,986	7,883	7,493	8,527	-12%	5%	1%
36 TO 45 MPH	7,008	6,805	6,129	6,256	-2%	11%	3%
46 TO 54 MPH	2,137	2,066	2,043	2,431	-16%	1%	3%
55 MPH	20,287	18,861	18,519	20,352	-9%	2%	8%
UNKNOWN LIMIT	1,279	1,182	1,493	4,853	-69%	-21%	8%
TOTAL	40,935	39,168	37,971	45,284	-16%	3%	5%

TABLE 22

TRAFFIC FATALITIES CLASSIFIED BY POSTED SPEED LIMIT

POSTED SPEED LIMIT	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
LESS THAN 26 MPH	2,335	2,466	2,416	3,035	-20%	2%	-5%
26 TO 35 MPH	8,592	8,450	8,022	9,209	-13%	5%	2%
36 TO 45 MPH	7,679	7,425	6,685	6,895	-3%	11%	3%
46 TO 54 MPH	2,400	2,313	2,278	2,796	-19%	2%	4%
55 MPH	23,592	21,853	21,441	23,799	-10%	2%	8%
UNKNOWN LIMIT	1,402	1,288	1,747	5,357	-67%	-26%	9%
TOTAL	46,000	43,795	42,589	51,091	-17%	3%	5%

FIGURE 17


FATALITIES BY POSTED SPEED LIMIT
FATALITIES (Thousands)
25
20
15
10
5
0
<26
30&35
40&45
50
55
POSTED SPEED LIMIT
1980
1983
1985
1986

Drivers

The number of drivers of each sex involved in fatal accidents (Tables 23, 24 and 25) increased by 4 percent in 1986. The greatest contrast was between youths aged 15-to-19, who were involved in 10 percent more fatal accidents, and drivers aged 45-to-64, who were in 3 percent fewer. Elderly drivers, 65 and over, had 9 percent more accidents.

The teen-age group's increase was higher for males, who were in 11 percent more fatal accidents. Teen-age women showed an increase of about 7 percent.

Driver fatalities also increased by 6 percent for both males and females. The increases among the various age groups were very similar for both sexes. The increase was 11 percent for teenage and elderly drivers. The increase was not as high (9 percent) for drivers 25-to-34 years of age. The only difference between the sexes occurred in the 20-to-24 age group, where females had the only appreciable increase, and the 35-to-44 age group, where the opposite occurred with only males showing a large increase. (Tables 26, 27 and 28 and Figures 18-23)

TABLE 23

AGE OF DRIVERS IN FATAL ACCIDENTS

AGE OF DRIVER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	206	206	203	240	-15%	1%	0%
15 TO 19 YEARS	8,142	7,424	7,263	10,085	-28%	2%	10%
20 TO 24 YEARS	11,332	11,274	10,716	13,537	-21%	5%	1%
25 TO 34 YEARS	16,083	15,246	14,470	16,503	-12%	5%	5%
35 TO 44 YEARS	9,195	8,887	8,068	8,366	-4%	10%	3%
45 TO 54 YEARS	5,037	5,148	4,992	5,912	-16%	3%	-2%
55 TO 64 YEARS	3,993	4,107	3,862	4,339	-11%	6%	-3%
65 YRS OR OLDER	4,856	4,472	4,026	3,813	6%	11%	9%
UNKNOWN AGE	1,625	1,469	1,506	1,270	19%	-2%	11%
TOTAL	60,470	58,233	55,106	64,065	-14%	6%	4%

TABLE 24

AGE OF MALE DRIVERS IN FATAL ACCIDENTS

AGE OF DRIVER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	171	170	163	213	-23%	4%	0%
15 TO 19 YEARS	6,271	5,672	5,640	8,209	-31%	1%	11%
20 TO 24 YEARS	9,136	9,107	8,709	11,388	-24%	5%	0%
25 TO 34 YEARS	12,959	12,352	11,859	13,734	-14%	4%	5%
35 TO 44 YEARS	7,229	6,920	6,374	6,740	-5%	9%	4%
45 TO 54 YEARS	3,948	4,061	3,978	4,706	-15%	2%	-3%
55 TO 64 YEARS	3,050	3,123	2,946	3,419	-14%	6%	-2%
65 YRS OR OLDER	3,497	3,243	2,988	2,938	2%	9%	8%
UNKNOWN AGE	1,299	1,181	1,218	1039	17%	-3%	10%
TOTAL	47,560	45,829	43,875	52,386	-16%	4%	4%

TABLE 25

AGE OF FEMALE DRIVERS IN FATAL ACCIDENTS

AGE OF DRIVER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	35	36	40	27	48%	-10%	-2%
15 TO 19 YEARS	1,871	1,752	1,623	1,876	-13%	8%	7%
20 TO 24 YEARS	2,197	2,167	2,007	2,149	-7%	8%	1%
25 TO 34 YEARS	3,125	2,894	2,611	2,769	-6%	11%	8%
35 TO 44 YEARS	1,966	1,967	1,694	1,626	4%	16%	0%
45 TO 54 YEARS	1,088	1,087	1,014	1,206	-16%	7%	0%
55 TO 64 YEARS	943	984	916	920	0%	7%	-4%
65 YRS OR OLDER	1,359	1,229	1,038	875	19%	18%	11%
UNKNOWN AGE	326	288	288	231	25%	[illegible]%	1 %
TOTAL	12,910	12,404	11,231	11,679	-4%	1 %	- %

TABLE 26

AGE OF FATALLY INJURED DRIVERS

AGE OF DRIVER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	146	147	133	170	-22%	11%	-1%
15 TO 19 YEARS	3,636	3,278	3,212	4,490	-28%	2%	11%
20 TO 24 YEARS	5,289	5,192	4,913	6,232	-21%	6%	2%
25 TO 34 YEARS	7,057	6,457	6,331	7,367	-14%	2%	9%
35 TO 44 YEARS	3,752	3,554	3,258	3,482	-6%	9%	6%
45 TO 54 YEARS	2,039	2,107	2,063	2,609	-21%	2%	-3%
55 TO 64 YEARS	1,873	1,892	1,793	2,104	-15%	6%	-1%
65 YRS OR OLDER	2,958	2,668	2,406	2,323	4%	11%	11%
UNKNOWN AGE	70	29	29	39	-26%	0%	141%
TOTAL	26,820	25,324	24,138	28,816	-16%	5%	6%

TABLE 27

AGE OF FATALLY INJURED MALE DRIVERS

AGE OF DRIVER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	126	125	113	160	-29%	11%	0%
15 TO 19 YEARS	2,842	2,554	2,580	3,738	-31%	-1%	11%
20 TO 24 YEARS	4,298	4,273	4,062	5,327	-24%	5%	1%
25 TO 34 YEARS	5,790	5,304	5,249	6,245	-16%	1%	9%
35 TO 44 YEARS	2,912	2,723	2,577	2,796	-8%	6%	7%
45 TO 54 YEARS	1,562	1,608	1,597	2,038	-22%	1%	-3%
55 TO 64 YEARS	1,371	1,385	1,317	1,641	-20%	5%	-1%
65 YRS OR OLDER	2,119	1,916	1,803	1,809	0%	6%	11%
UNKNOWN AGE	70	27	26	33	-21%	4%	160%
TOTAL	21,090	19,915	19,324	23,787	-19%	3%	6%

TABLE 28

AGE OF FATALLY INJURED FEMALE DRIVERS

AGE OF DRIVER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	20	22	20	10	100%	10%	-7%
15 TO 19 YEARS	794	724	632	752	-16%	15%	10%
20 TO 24 YEARS	991	919	851	905	-6%	8%	8%
25 TO 34 YEARS	1,267	1,153	1,082	1,122	-4%	7%	10%
35 TO 44 YEARS	840	831	681	686	-1%	22%	1%
45 TO 54 YEARS	477	499	466	571	-18%	7%	-4%
55 TO 64 YEARS	502	507	476	463	3%	7%	-1%
65 YRS OR OLDER	839	752	603	514	17%	25%	12%
UNKNOWN AGE	(0)	2	3	6	-50%	-33%	-115%
TOTAL	5,730	5,409	4,814	5,029	-4%	12%	6%

FIGURE 18

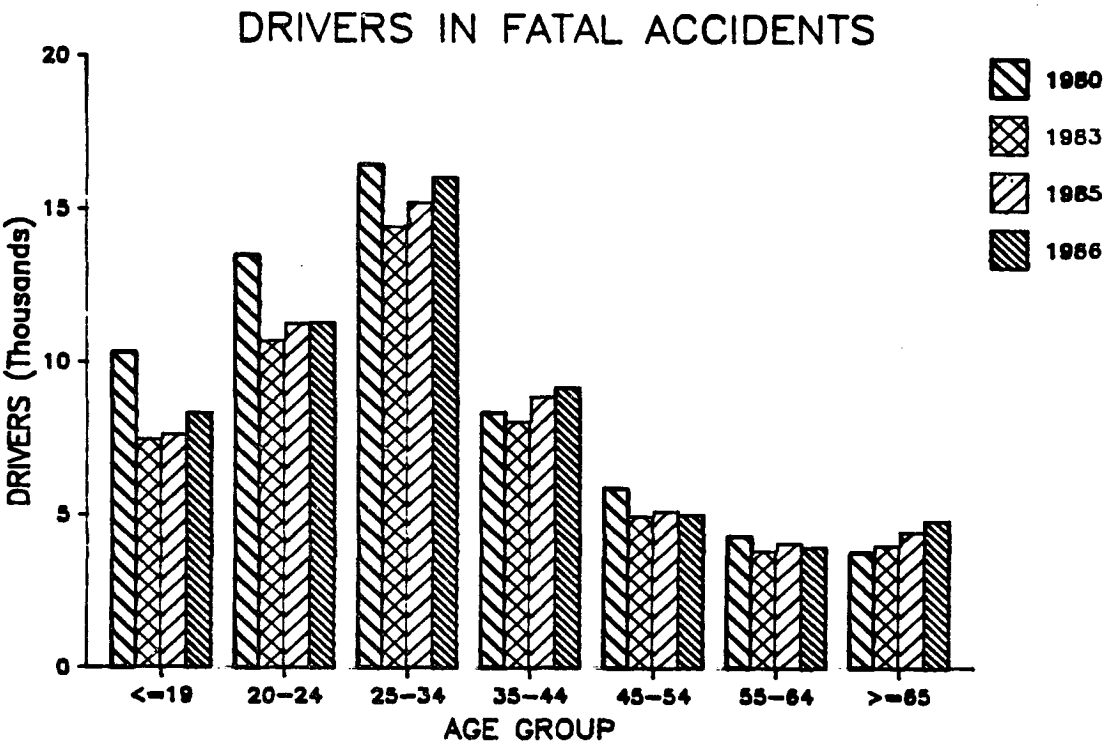


FIGURE 19

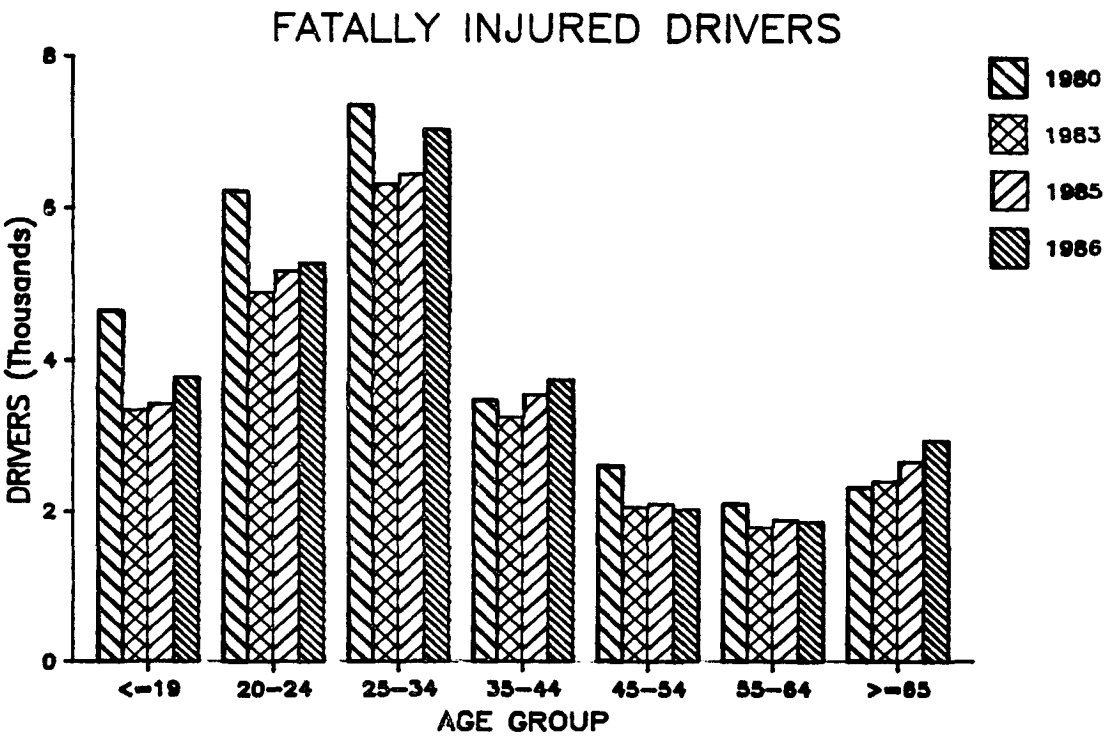


FIGURE 20

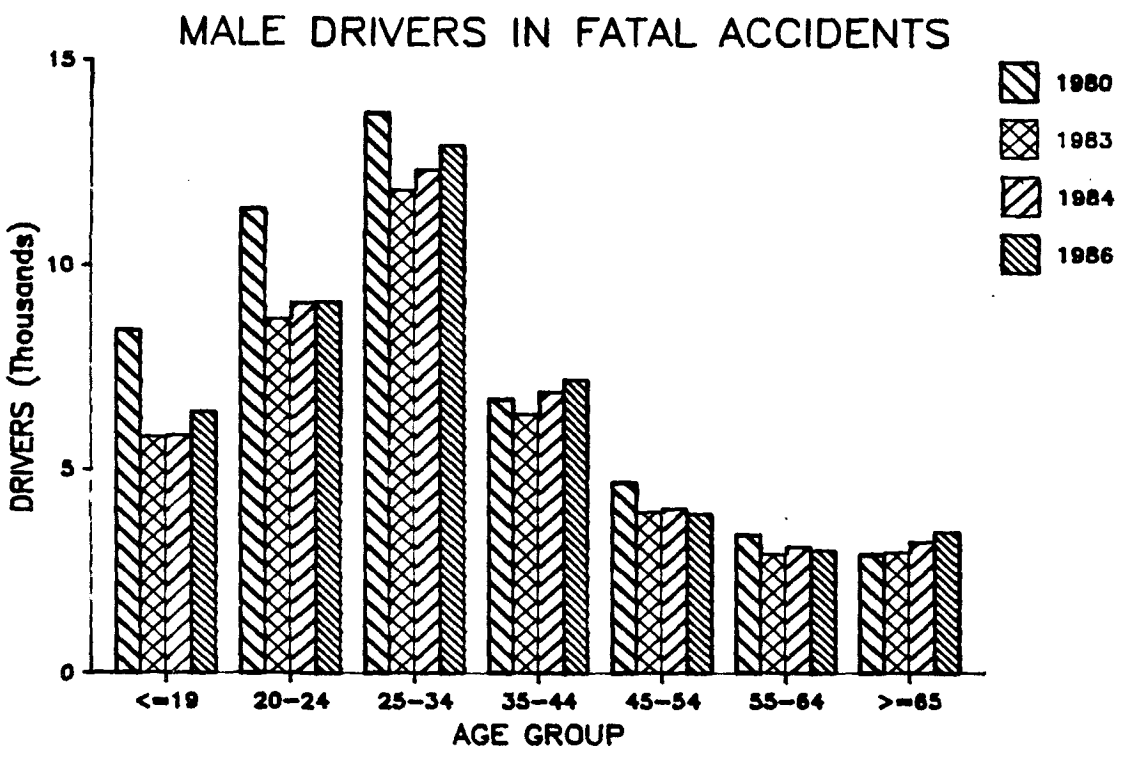


FIGURE 21

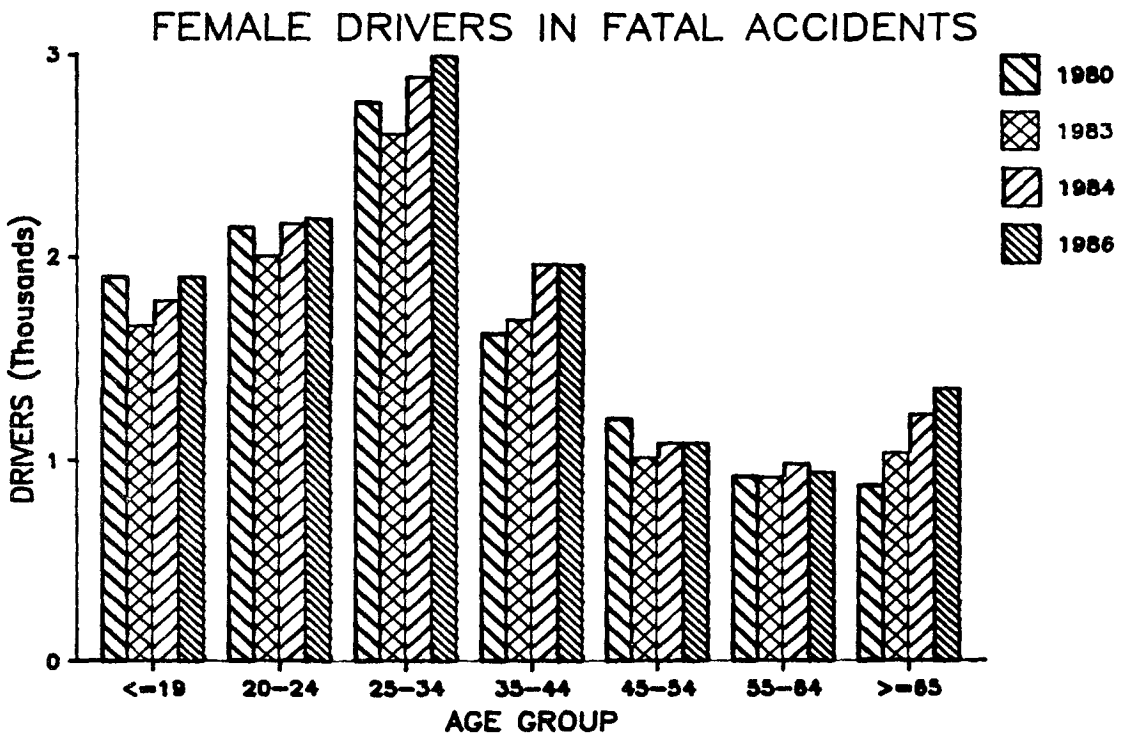


FIGURE 22

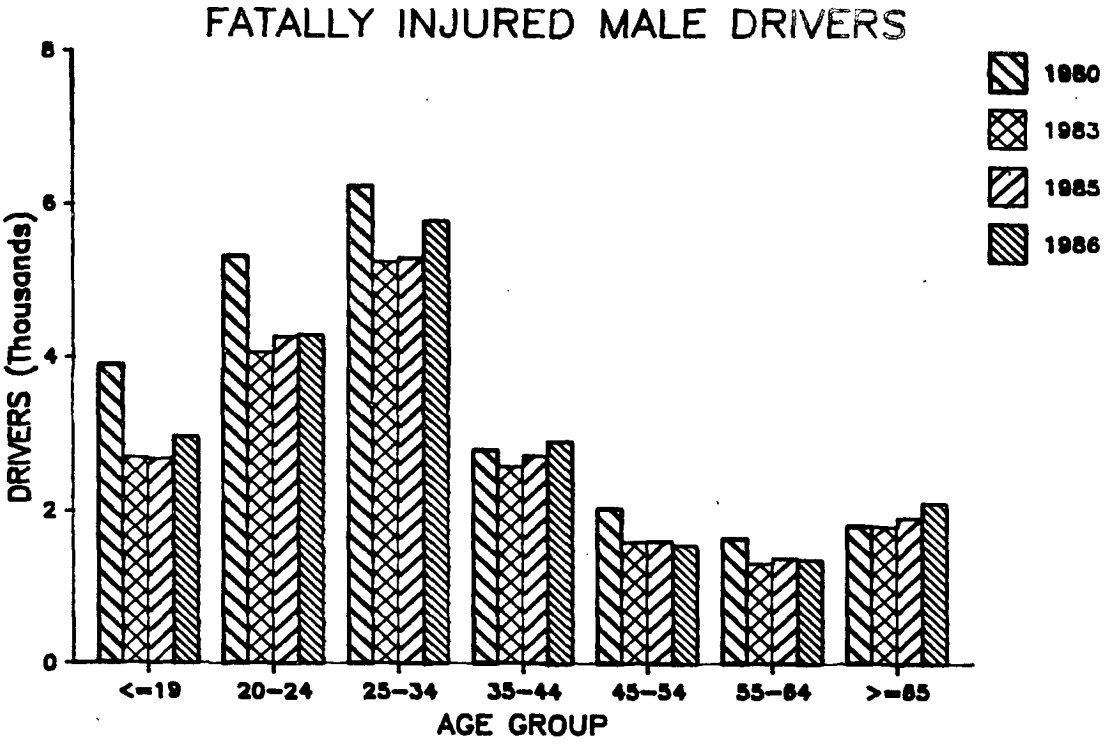
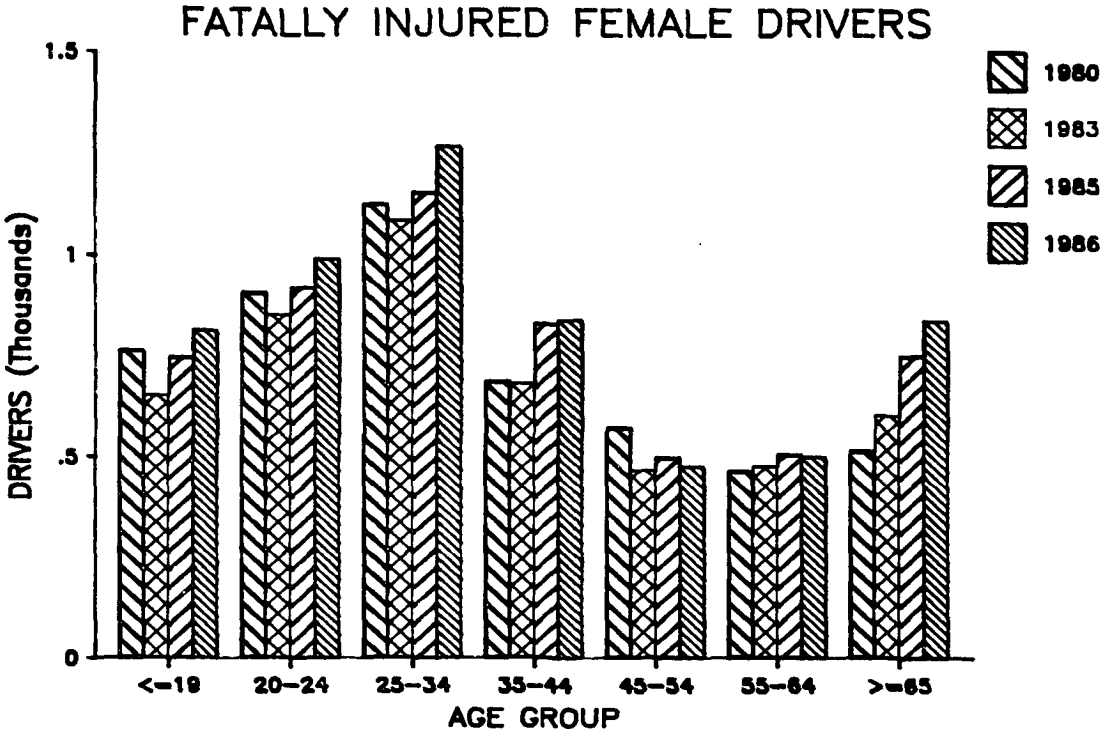


FIGURE 23



Passengers

The number of passenger deaths increased considerably during 1986, about 9 percent overall. As for drivers, the greatest change was in the 15-19 age bracket, with a very significant 21 percent increase. Among children of 14 and under, there was a 4 percent increase in fatalities. Victims aged 25-to-34 and those 55-to-64 increased by about 9 percent. The remaining age groups experienced increases varying from 2 to 6 percent. (Tables 29 and 30 and Figures 24 and 25)

TABLE 29

AGE OF PASSENGERS OF MOTOR VEHICLES

AGE OF PASSENGER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	7,334	6,984	6,415	6,557	-2%	9%	5%
15 TO 19 YEARS	8,909	7,900	8,099	10,618	-24%	-2%	13%
20 TO 24 YEARS	6,316	6,043	6,165	7,420	-17%	-2%	5%
25 TO 34 YEARS	5,930	5,658	5,329	5,863	-9%	6%	5%
35 TO 44 YEARS	2,839	2,721	2,532	2,488	2%	7%	4%
45 TO 54 YEARS	1,716	1,689	1,706	1,806	-6%	-1%	2%
55 TO 64 YEARS	1,615	1,516	1,561	1,659	-6%	-3%	7%
65 YRS OR OLDER	2,699	2,542	2,312	2,242	3%	10%	6%
UNKNOWN AGE	2,674	2,524	1,930	1,205	60%	31%	6%
TOTAL	40,032	37,577	36,049	39,858	-10%	4%	7%

TABLE 30

AGE OF PASSENGER FATALITIES

AGE OF PASSENGER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	1,446	1,387	1,298	1,532	-15%	7%	4%
15 TO 19 YEARS	2,621	2,173	2,322	3,395	-32%	-6%	21%
20 TO 24 YEARS	1,958	1,848	1,979	2,472	-20%	-7%	6%
25 TO 34 YEARS	1,828	1,670	1,653	1,922	-14%	1%	9%
35 TO 44 YEARS	869	838	801	867	-8%	5%	4%
45 TO 54 YEARS	572	561	573	692	-17%	-2%	2%
55 TO 64 YEARS	663	611	622	688	-10%	-2%	8%
65 YRS OR OLDER	1,421	1,385	1,245	1,241	0%	11%	3%
UNKNOWN AGE	241	225	212	302	-30%	6%	7%
TOTAL	11,620	10,698	10,705	13,111	-18%	0%	9%

FIGURE 24

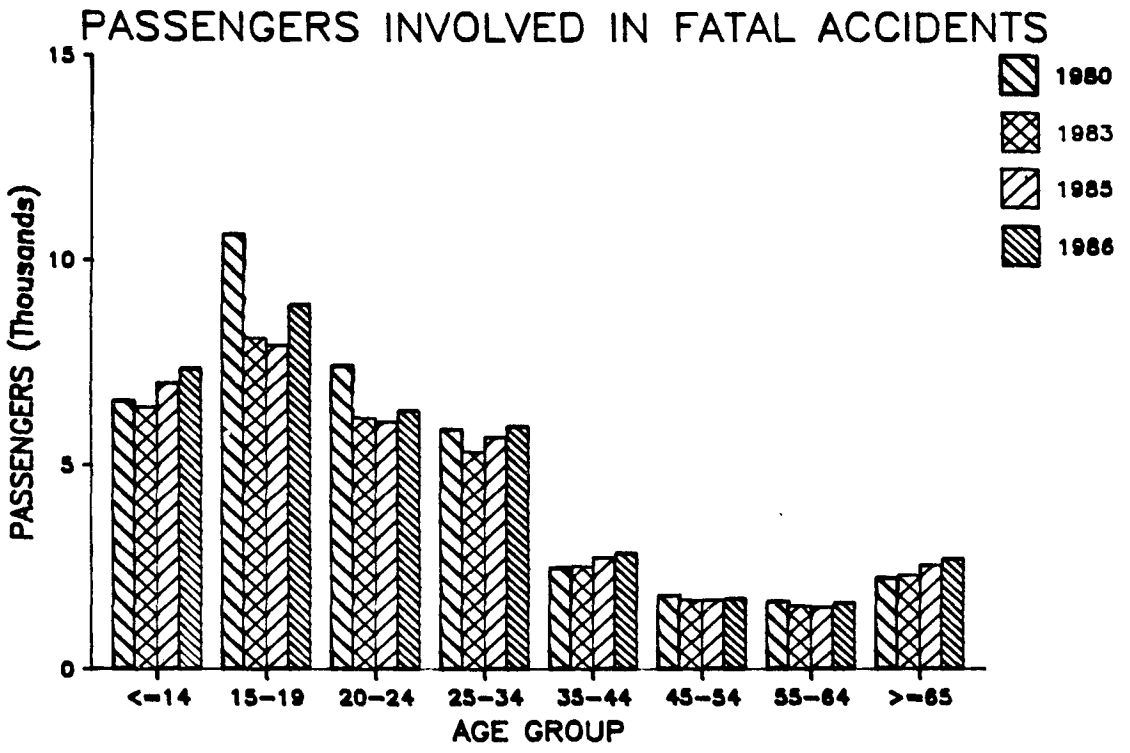


FIGURE 25

Nonoccupants

An estimated 7,560 nonoccupants died in traffic accidents in 1986. About seven-eighths were pedestrians and the remainder pedalcyclists. Total nonoccupant fatalities were down 3 percent from 1985, the same decline as in the prior year.

Males as a group showed no change, while female nonoccupant fatalities decreased by 10 percent. Among males there was either no change or small increases in all age groups under 55, counteracted by the decreases found in the higher age groups. For females large reductions are found in five age groups ranging from the very young to the oldest group. The remaining age groups showed either small changes or increases. (Tables 31 through 35 and Figure 26)

TABLE 31

AGE OF NONOCCUPANTS IN FATAL ACCIDENTS

AGE OF NONOCCUPANT	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	1,565	1,563	1,651	2,059	-20%	-5%	0%
15 TO 19 YEARS	768	720	847	1,096	-23%	-15%	7%
20 TO 24 YEARS	848	848	946	1,106	-14%	-10%	0%
25 TO 34 YEARS	1,400	1,290	1,335	1,381	-3%	-3%	8%
35 TO 44 YEARS	908	935	805	832	-3%	16%	-3%
45 TO 54 YEARS	702	657	678	847	-20%	-3%	7%
55 TO 64 YEARS	627	786	736	851	-14%	7%	-20%
65 YRS OR OLDER	1,465	1,549	1,481	1,823	-19%	5%	-5%
UNKNOWN AGE	221	206	164	245	-33%	26%	7%
TOTAL	8,503	8,554	8,643	10,240	-16%	-1%	-1%

TABLE 32

AGE OF DRIVERS IN NONOCCUPANT FATALITIES

AGE OF DRIVER	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	10	4	7	11	-36%	-43%	151%
15 TO 19 YEARS	833	830	812	1,153	-30%	2%	0%
20 TO 24 YEARS	1,290	1,406	1,377	1,728	-20%	2%	-8%
25 TO 34 YEARS	1,958	2,016	1,937	2,293	-16%	4%	-3%
35 TO 44 YEARS	1,140	1,163	1,149	1,158	-1%	1%	-2%
45 TO 54 YEARS	658	640	708	857	-17%	-10%	3%
55 TO 64 YEARS	422	453	487	521	-7%	-7%	-7%
65 YRS OR OLDER	392	383	361	366	-1%	6%	2%
UNKNOWN AGE	858	878	908	1,077	-16%	-3%	-2%
TOTAL	7,560	7,773	7,746	9,164	-15%	0%	-3%

TABLE 33

AGE OF NONOCCUPANT FATALITIES

AGE OF NONOCCUPANT	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	1,391	1,447	1,486	1,852	-20%	-3%	-4%
15 TO 19 YEARS	643	626	703	940	-25%	-11%	3%
20 TO 24 YEARS	713	728	805	930	-13%	-10%	-2%
25 TO 34 YEARS	1,205	1,130	1,172	1,187	-1%	-4%	7%
35 TO 44 YEARS	803	832	719	723	-1%	16%	-3%
45 TO 54 YEARS	633	603	626	772	-19%	-4%	5%
55 TO 64 YEARS	582	740	690	802	-14%	7%	-21%
65 YRS OR OLDER	1,411	1,502	1,426	1,777	-20%	5%	-6%
UNKNOWN AGE	181	165	119	181	-34%	39%	10%
TOTAL	7,560	7,773	7,746	9,164	-15%	0%	-3%

TABLE 34

AGE OF NONOCCUPANT MALE FATALITIES

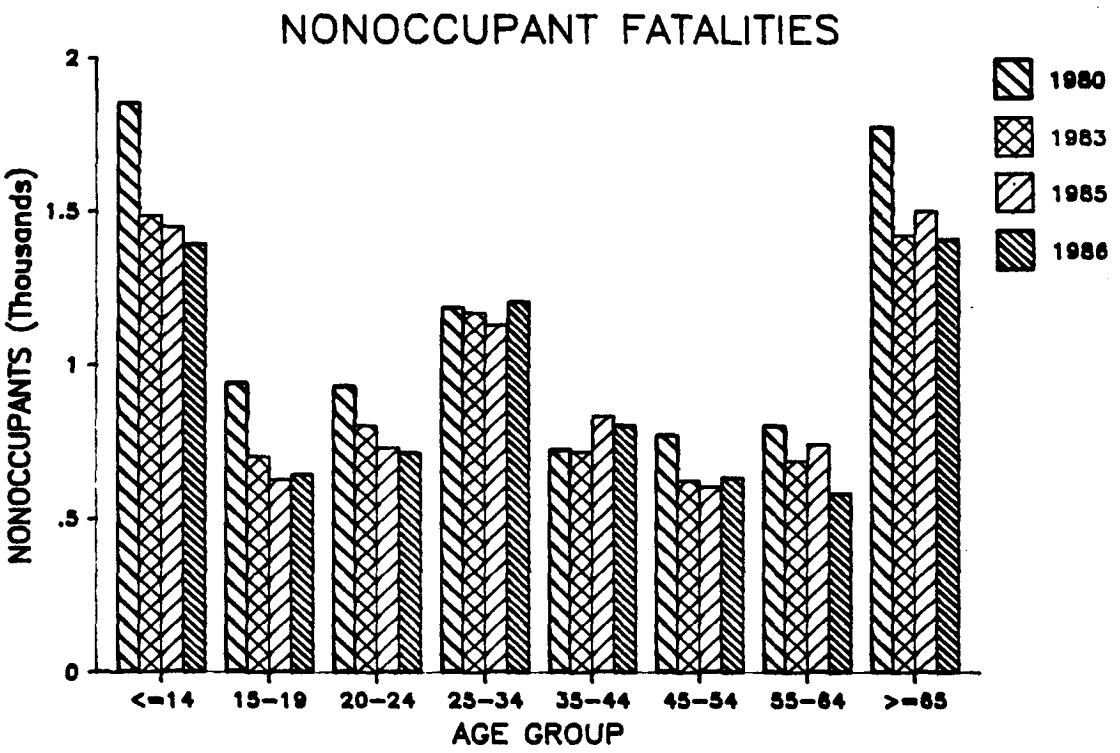
AGE OF NONOCCUPANT	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	984	965	1,034	1,247	-17%	-7%	2%
15 TO 19 YEARS	467	469	525	700	-25%	-11%	0%
20 TO 24 YEARS	587	577	649	730	-11%	-11%	2%
25 TO 34 YEARS	959	877	892	915	-3%	-2%	9%
35 TO 44 YEARS	622	620	533	538	-1%	16%	0%
45 TO 54 YEARS	477	450	478	584	-18%	-6%	6%
55 TO 64 YEARS	417	526	491	549	-11%	7%	-21%
65 YRS OR OLDER	833	862	844	1,096	-23%	2%	-3%
UNKNOWN AGE	141	124	95	128	-26%	31%	13%
TOTAL	5,487	5,470	5,541	6,487	-15%	-1%	0%

TABLE 35

AGE OF NONOCCUPANT FEMALE FATALITIES

AGE OF NONOCCUPANT	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
14 YEARS & UNDER	407	482	452	605	-25%	7%	-16%
15 TO 19 YEARS	176	157	178	240	-26%	-12%	12%
20 TO 24 YEARS	125	151	156	200	-22%	-3%	-17%
25 TO 34 YEARS	246	253	280	272	3%	-10%	-3%
35 TO 44 YEARS	181	212	186	185	1%	14%	-15%
45 TO 54 YEARS	156	153	148	188	-21%	3%	2%
55 TO 64 YEARS	166	214	199	253	-21%	8%	-23%
65 YRS OR OLDER	577	640	582	681	-15%	10%	-10%
UNKNOWN AGE	40	41	24	53	-55%	71%	-2%
TOTAL	2,073	2,303	2,205	2,677	-18%	4%	-10%

FIGURE 26


NONOCCUPANT FATALITIES
NONOCCUPANTS (Thousands)
2
1.5
1
.5
0
<=14
15-19
20-24
25-34
35-44
45-54
55-64
>=65
AGE GROUP
1980
1983
1985
1986

Reported Alcohol Testing

The reporting of alcohol data in FARS is not complete. Overall, 45 percent of the drivers involved were tested for BAC, with 89 percent of the results known. This means that the BAC was known for only 40 percent of all drivers involved in fatal accidents.

Besides revealing that only two-fifths of the drivers involved in fatal accidents had known BAC levels, the data show clear patterns in the selection of drivers being tested. The most obvious, shown in Table 41, are that:

- Drivers who are fatally injured are much more likely to be tested than survivors, and

- Surviving drivers in single-vehicle accidents are twice as likely to be tested as those in multi-vehicle accidents.

These disparities in testing cause serious bias in the alcohol data and point up the importance of having all drivers involved in fatal accidents tested for BAC.

Despite the statistical gaps, the reported data offer encouragement to those concerned about traffic safety. In 1985, the number of drivers whose blood alcohol level was reported increased by several percentage points compared with the 1980 figures, and 1986 shows a continuing trend toward increased testing.

FIGURE 27

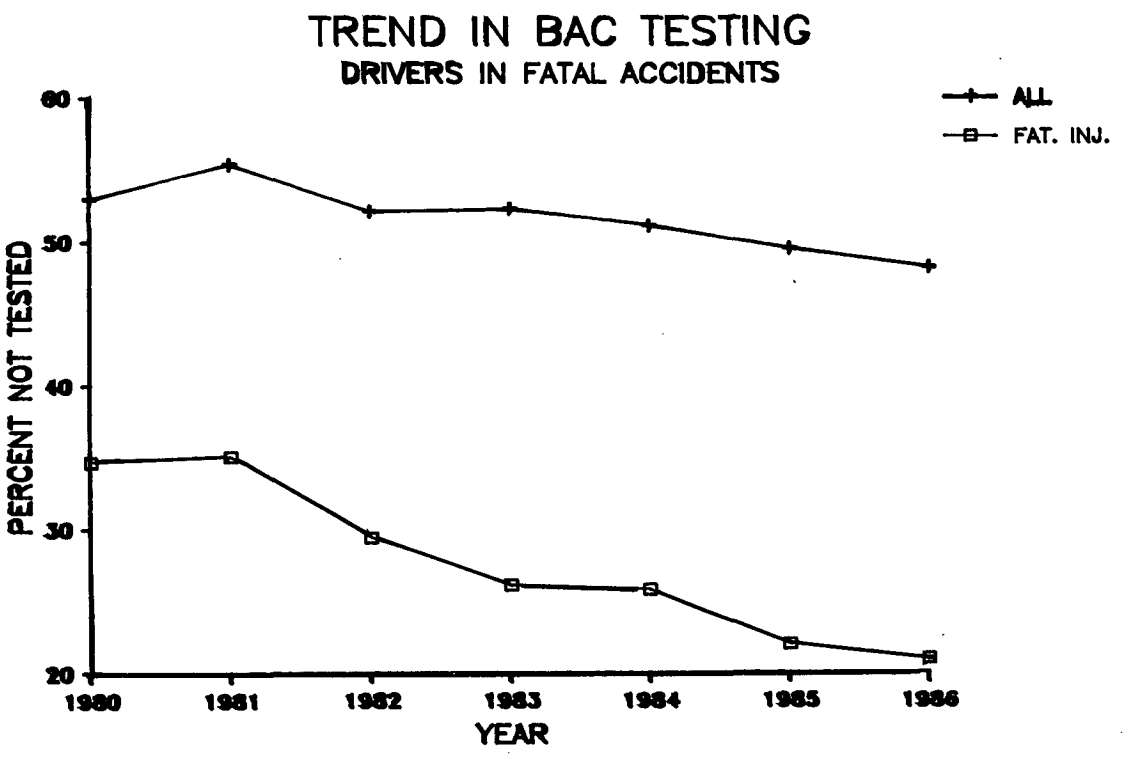

TREND IN BAC TESTING
DRIVERS IN FATAL ACCIDENTS
ALL
FAT. INJ.
PERCENT NOT TESTED
60
50
40
30
20
1980
1981
1982
1983
1984
1985
1986
YEAR

TABLE 36

REPORTED B.A.C. TESTING FOR DRIVERS IN FATAL ACCIDENTS

B.A.C. LEVEL	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
ZERO	10,675	11,179	7,516	5,783	30%	49%	-5%
.01 TO .05	1,485	1,409	1,113	1,258	-12%	27%	5%
.06 TO .09	1,465	1,330	1,123	1,260	-11%	18%	10%
.10 TO .15	3,301	3,175	2,815	3,103	-9%	13%	4%
.16 TO .20	3,100	3,054	2,798	2,944	-5%	9%	2%
OVER .20	3,777	3,640	3,424	3,778	-9%	6%	4%
TEST REFUSED	171	181	220	309	-29%	-18%	-6%
NO TEST GIVEN	29,176	28,818	28,834	33,962	-15%	0%	1%
UNKNOWN RESULTS	3,266	3,760	4,234	5,009	-15%	-11%	-13%
UNKNOWN	4,053	1,687	3,029	6,659	-55%	-44%	140%
TOTAL	60,470	58,233	55,106	64,065	-14%	6%	4%

TABLE 37

REPORTED B.A.C. TESTING FOR FATALLY INJURED DRIVERS

B.A.C. LEVEL	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
ZERO	7,574	7,683	5,616	4,427	27%	37%	-1%
.01 TO .05	954	923	707	806	-12%	31%	3%
.06 TO .09	869	824	698	791	-12%	18%	5%
.10 TO .15	2,165	2,108	1,840	2,029	-9%	15%	3%
.16 TO .20	2,260	2,208	2,046	2,202	-7%	8%	2%
OVER .20	3,144	3,028	2,844	3,158	-10%	6%	4%
NO TEST GIVEN	5,610	5,561	6,777	10,012	-32%	-18%	1%
UNKNOWN RESULTS	1,974	2,373	2,506	3,178	-21%	-5%	-17%
UNKNOWN	2,270	616	1,104	2,213	-50%	-44%	269%
TOTAL	26,820	25,324	24,138	28,816	-16%	5%	6%

TABLE 38

REPORTED B.A.C. TESTING FOR FATALLY INJURED NONOCCUPANTS

B.A.C. LEVEL	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
ZERO	1,978	2,160	1,623	1,415	15%	33%	-8%
.01 TO .05	181	200	165	176	-6%	21%	-10%
.06 TO .09	151	149	125	133	-6%	19%	1%
.10 TO .15	341	335	259	286	-9%	29%	2%
.16 TO .20	336	370	317	312	2%	17%	-9%
OVER .20	768	867	760	701	8%	14%	-11%
NO TEST GIVEN	2,635	2,705	3,396	4,684	-27%	-20%	-3%
UNKNOWN RESULTS	758	573	625	649	-4%	-8%	32%
UNKNOWN	412	414	476	808	-41%	-13%	0%
TOTAL	7,560	7,773	7,746	9,164	-15%	0%	-3%

TABLE 39

REPORTED BAC TEST RESULTS FOR FATALLY INJURED PERSONS - 1986

	PERSON BAC									
PERSON TYPE	ZERO	.01-.05	.06-.09	.10-.15	.16-.20	G.T. .20	UNKNOWN RESULTS	NO TEST GIVEN	UNKNOWN	TOTAL
NONOCCUPANT	1,978	181	151	341	336	768	758	2,635	412	7,560
(PERCENT)	26	2	2	5	4	10	10	35	5	100
DRIVER	7,574	954	869	2,165	2,260	3,144	1,974	5,610	2,270	26,820
(PERCENT)	28	4	3	8	8	12	7	21	8	100
PASSENGER	2,255	452	352	542	372	497	176	5,815	1,160	11,620
(PERCENT)	19	4	3	5	3	4	2	50	10	100
TOTAL	11,806	1,587	1,371	3,048	2,968	4,409	2,908	14,061	3,842	46,000
(PERCENT)	26	3	3	7	6	10	6	31	8	100

TABLE 40

REPORTED DRIVER BAC TEST RESULTS BY TYPE OF VICTIM - 1986

	DRIVER BAC										
TYPE OF VICTIM	ZERO	.01-.05	.06-.09	.10-.15	.16-.20	G.T. .20	UNKNOWN RESULTS	NO TEST GIVEN	TEST REFUSED	UNKNOWN	TOTAL
NONOCCUPANT	688	105	105	186	151	115	221	5,517	35	437	7,560
(PERCENT)	9	1	1	2	2	2	3	73	0	6	100
DRIVER	7,574	954	869	2,165	2,260	3,144	1,974	5,610	0	2,270	26,820
(PERCENT)	28	4	3	8	8	12	7	21		8	100
PASSENGER	1,888	382	427	894	643	537	788	5,117	70	874	11,620
(PERCENT)	16	3	4	8	6	5	7	44	1	8	100
TOTAL	10,150	1,441	1,401	3,244	3,053	3,797	2,983	16,244	105	3,581	46,000
(PERCENT)	22	3	3	7	7	8	6	35	0	8	100

TABLE 41

BAC TESTING PATTERNS FOR DIFFERENT GROUPS OF DRIVERS

DRIVER GROUP	TESTING PATTERN, 1986 (Percent) KNOWN RESULTS	UNKNOWN RESULTS	UNKNOWN IF TESTED	NOT TESTED	TOTAL PERCENT	TOTAL NUMBER OF DRIVERS
DRIVERS IN COLLISION WITH NONOCCUPANTS	18%	3%	6%	73%	100%	6,677
DRIVERS IN OTHER S.V. ACCIDENTS						
Fatally Injured	66%	8%	8%	18%	100%	13,239
Surviving	40%	8%	10%	43%	100%	4,218
All	60%	8%	9%	24%	100%	17,458
DRIVERS IN MULTI VEHICLE ACCIDENTS						
Fatally Injured	61%	7%	9%	24%	100%	13,521
Surviving	18%	5%	3%	74%	100%	22,675
All	34%	6%	5%	55%	100%	36,113
DEAD DRIVERS	63%	7%	8%	21%	100%	26,820
SURVIVING DRIVERS	21%	4%	5%	70%	100%	33,650
ALL DRIVERS	40%	5%	7%	48%	100%	60,470

FIGURE 28

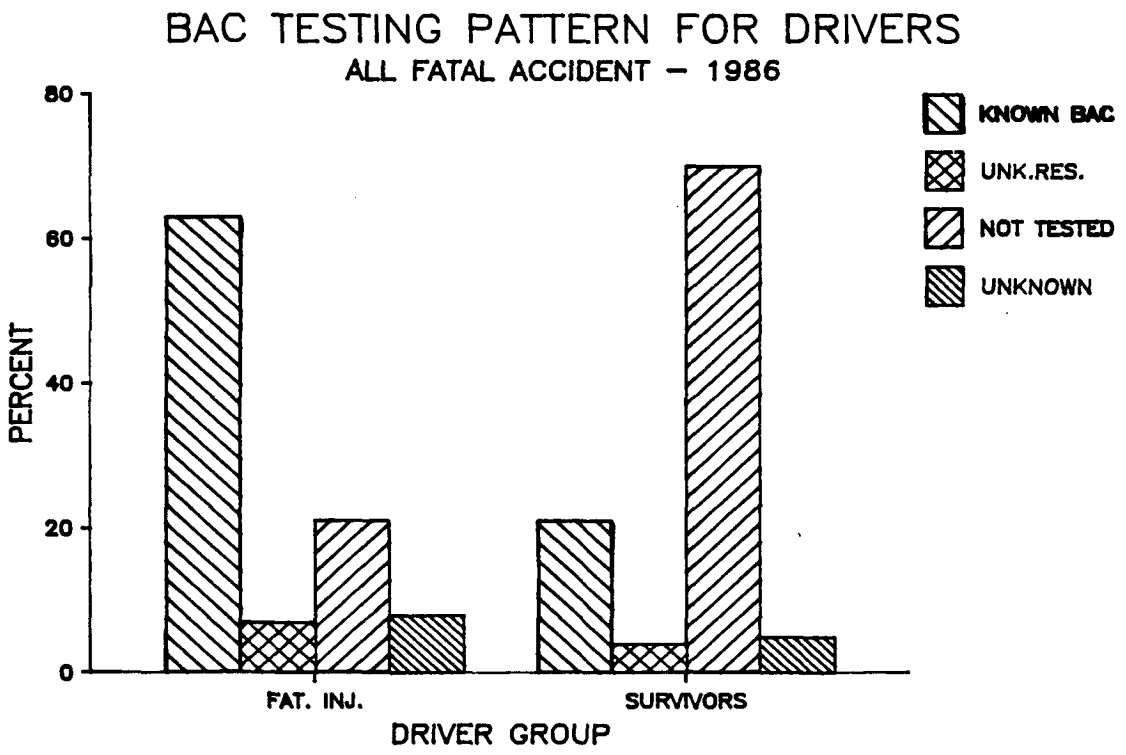


FIGURE 29

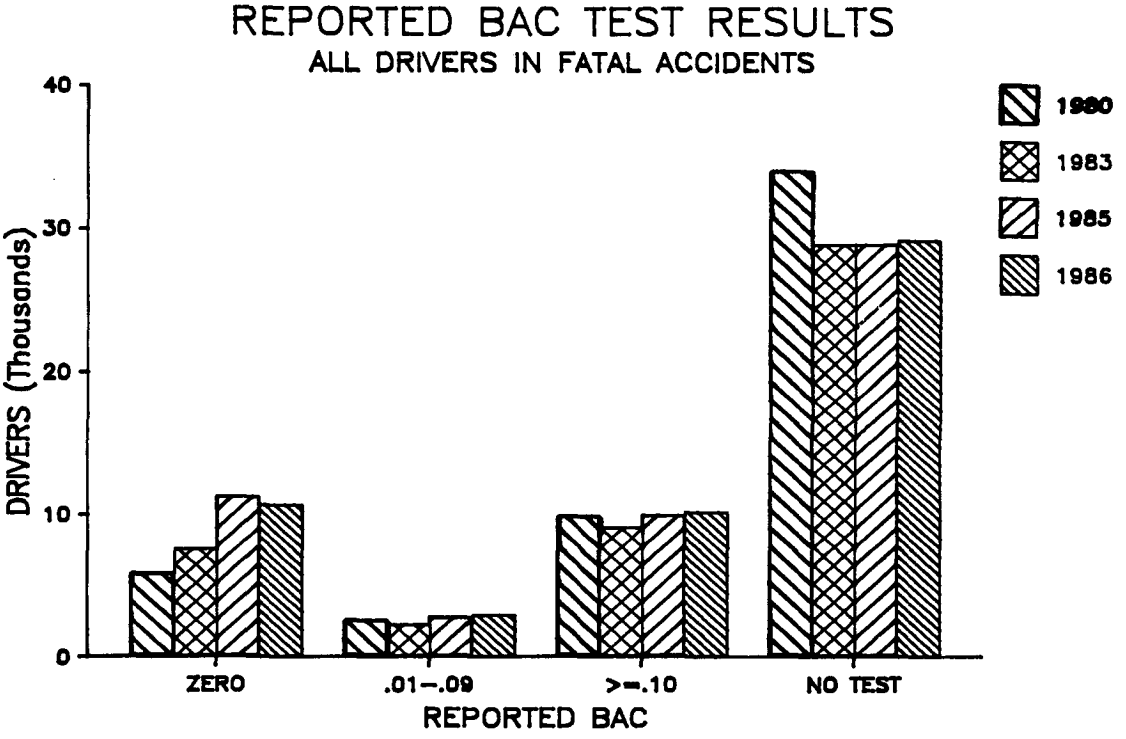


FIGURE 30

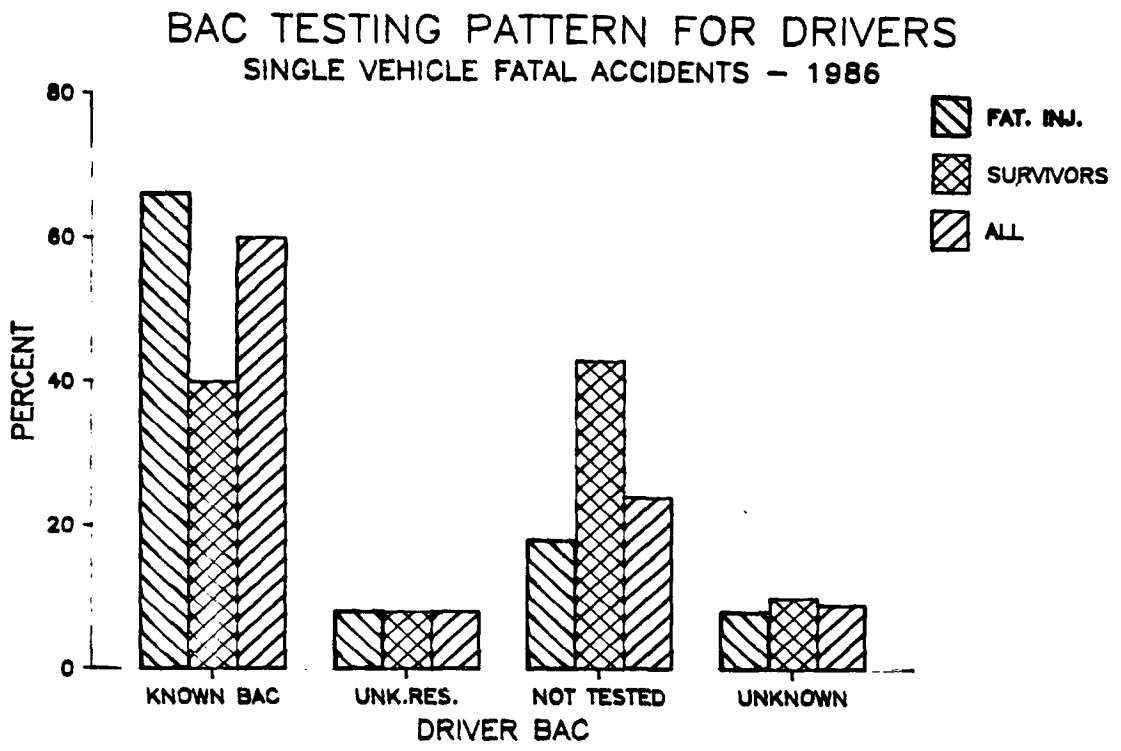


FIGURE 31

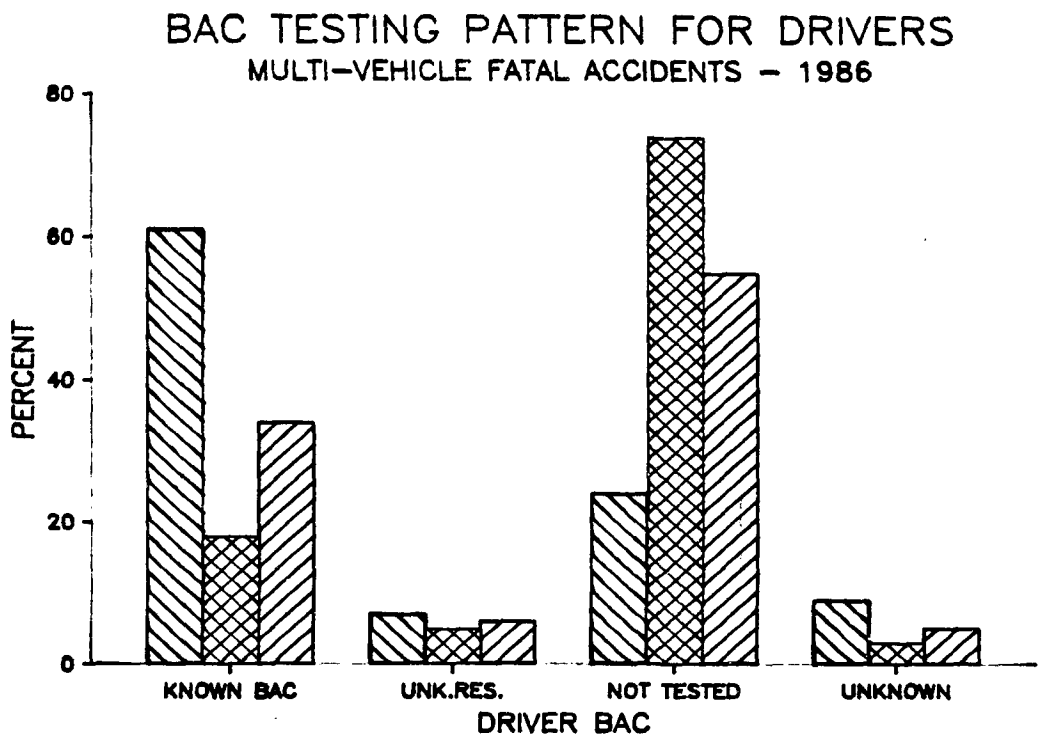


FIGURE 32

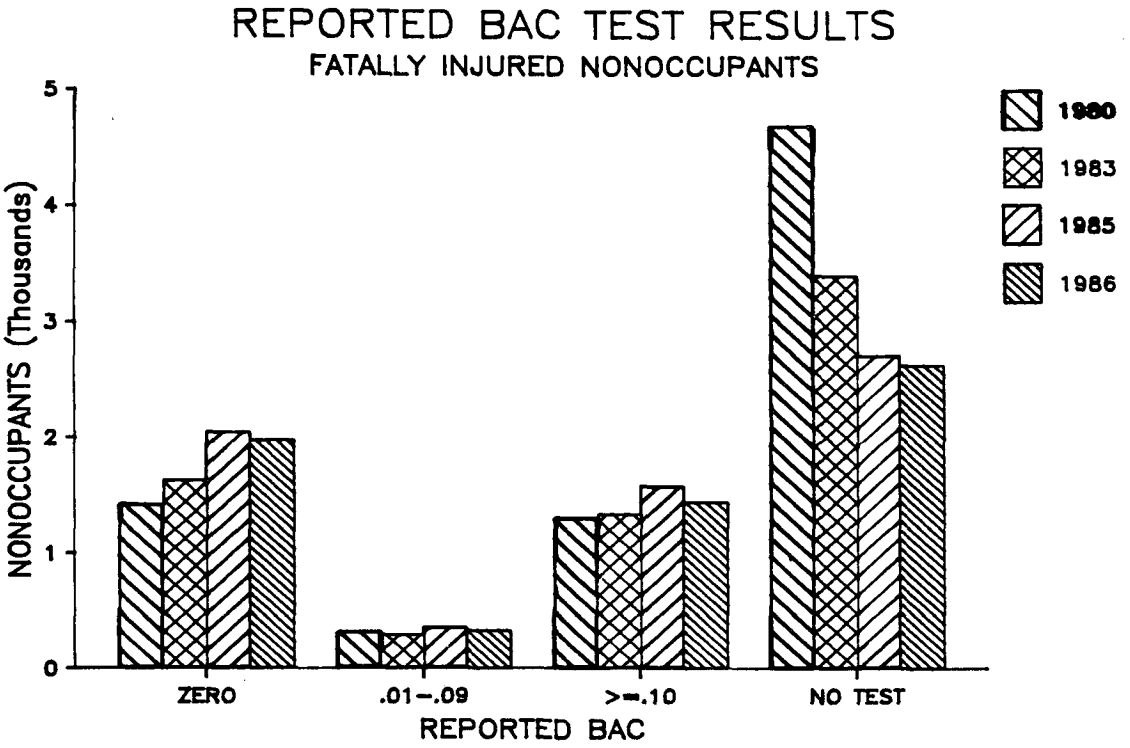
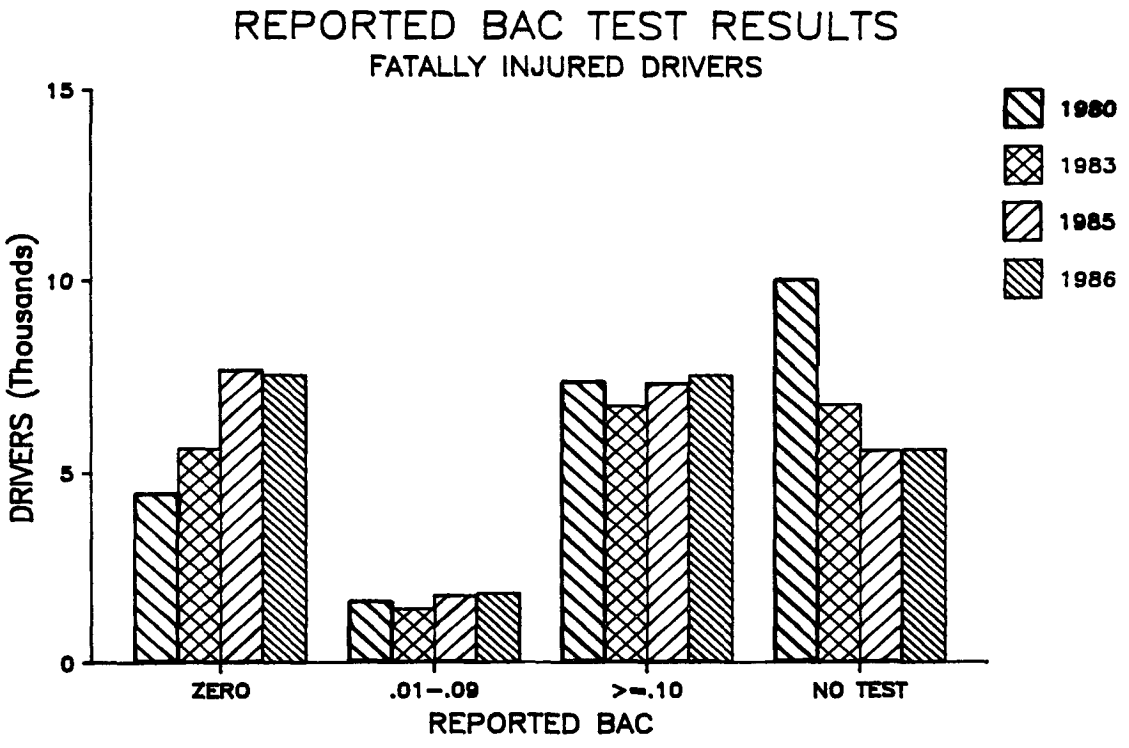


FIGURE 33



Vehicles

In 1986, an estimated 60,470 vehicles were involved in fatal traffic accidents. These included 4 percent more passenger cars and 5 percent more trucks than in 1985. The number of motorcycles involved decreased by 2 percent. The total was 4 percent higher for all vehicles combined.

Accidents involving full-size cars decreased by 8 percent, while those involving intermediates were almost unchanged. Compacts and smaller cars continued to play an increasing role, up more than 9 percent over last year. (Table 42 and Figures 34 and 35)

Pickup trucks and vans were involved in 8 percent more fatal accidents, while the number of heavy trucks involved decreased by 2 percent.

The number of motorcycle fatalities is almost unchanged since 1984. The estimated total of 4,530 accounts for about 12 percent of all motor vehicle occupant fatalities. (Table 43 and Figure 36)

During 1986, an estimated 4,845 persons -- an decrease of 3 percent from the previous year -- were killed in accidents involving heavy trucks (26,000 pounds or more). About 773 were occupants of the trucks, down 5 percent from 1985; 452 were nonoccupants, and 3,620 were occupants of other vehicles -- 3 percent less than in 1985. The number of fatalities in heavy trucks involved in single-vehicle accidents decreased 4 percent. (Tables 47 and 48 and Figures 44 and 45)

Vehicle Occupant Fatalities in Types
Of Multiple-Vehicle Crashes, 1986

	Angle	Head-on	Rear-end	Sideswipe	Total
All Accidents	8.095	7,719	2,094	829	18,737
Accidents involving Heavy Trucks	1,503	1,167	761	230	3,661
Percent of Total	(19%)	(15%)	(36%)	(28%)	(20%)

The table above shows that collisions with heavy trucks account for about 20 percent of all multiple-vehicle fatalities. This proportion varies from a low of 15 percent in head-on crashes to a high of 36 percent in rear-end crashes.

TABLE 42

NUMBER OF VEHICLES IN FATAL ACCIDENTS BY TYPE

VEHICLE TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
PASSENGER CARS							
MINI-COMPACTS	5,955	5,662	5,628	5,091	11%	1%	5%
SUB-COMPACTS	6,416	5,593	4,350	3,647	19%	29%	15%
COMPACTS	10,199	9,448	8,293	8,560	-3%	14%	8%
INTERMEDIATES	7,103	7,019	7,739	10,126	-24%	-9%	1%
FULL SIZE CARS	2,739	2,974	3,921	6,287	-38%	-24%	-8%
UNKNOWN SIZE	3,231	3,569	3,367	5,309	-37%	6%	-9%
SUBTOTAL	35,643	34,265	33,298	39,020	-15%	3%	4%
MOTORCYCLES	4,520	4,612	4,302	5,194	-17%	7%	-2%
TRUCKS							
LIGHT TRUCKS	13,108	12,131	10,937	12,607	-13%	11%	8%
HEAVY TRUCKS	4,395	4,462	4,182	4,284	-2%	7%	-2%
OTHER TRUCKS	978	1,019	876	1,168	-25%	16%	-4%
SUBTOTAL	18,481	17,612	15,995	18,059	-11%	10%	5%
BUSES	261	337	307	330	-7%	10%	-23%
OTHER TYPE	411	476	426	425	0%	12%	-14%
UNKNOWN TYPE	1,154	931	778	1,037	-25%	20%	24%
TOTAL	60,470	58,233	55,106	64,065	-14%	6%	4%

FIGURE 34

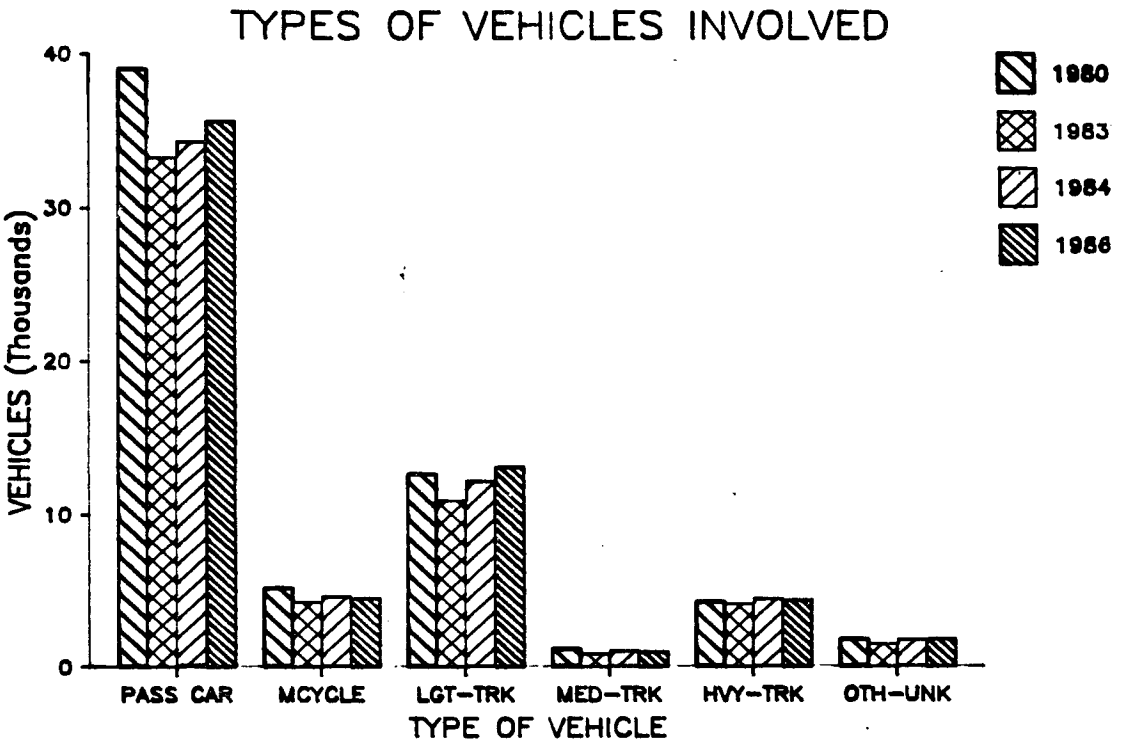


FIGURE 35

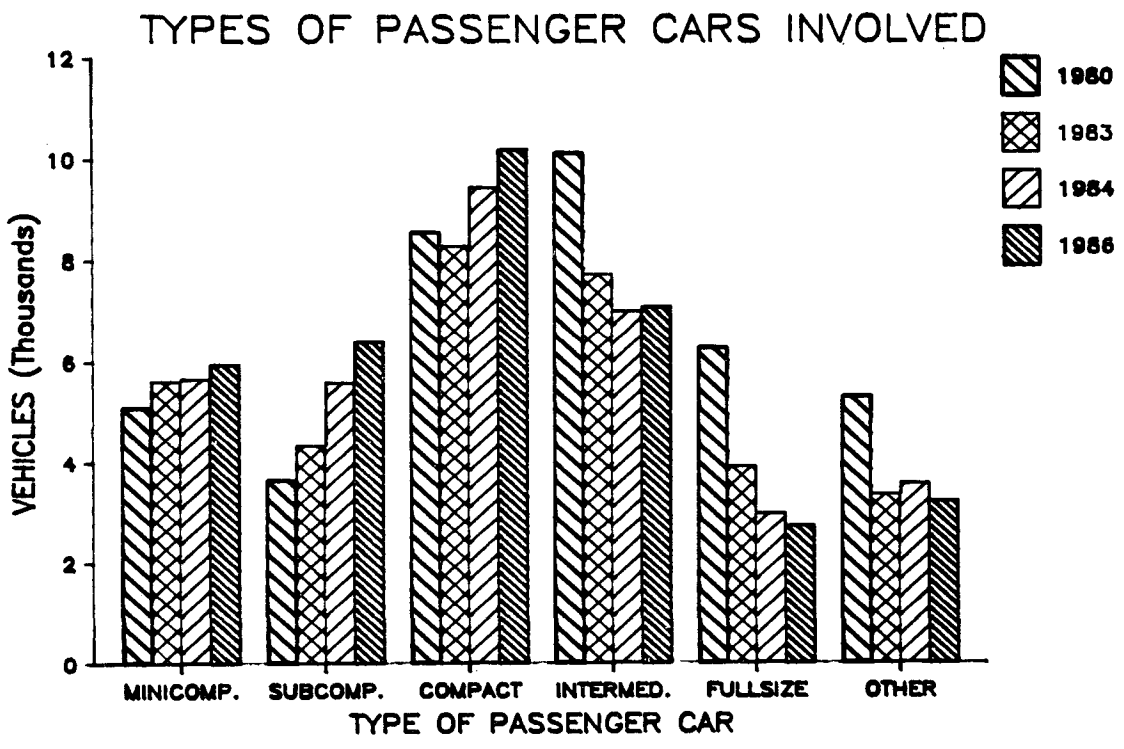


TABLE 43

OCCUPANT FATALITIES BY VEHICLE TYPE

VEHICLE TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
PASSENGER CARS							
MINI-COMPACTS	4,897	4,657	4,725	4,492	5%	-1%	5%
SUB-COMPACTS	5,022	4,356	3,437	3,032	13%	27%	15%
COMPACTS	7,312	6,521	5,869	6,292	-7%	11%	12%
INTERMEDIATES	4,148	3,881	4,622	6,260	-26%	-16%	7%
FULL SIZE CARS	1,431	1,471	2,090	3,454	-39%	-30%	-3%
UNKNOWN SIZE	2,079	2,309	2,236	3,919	-43%	3%	-10%
SUBTOTAL	24,890	23,195	22,979	27,449	-16%	1%	7%
MOTORCYCLES	4,530	4,570	4,265	5,144	-17%	7%	-1%
TRUCKS							
LIGHT TRUCKS	7,383	6,622	6,164	7,460	-17%	7%	11%
HEAVY TRUCKS	773	815	807	976	-17%	1%	-5%
OTHER TRUCKS	216	230	213	312	-32%	8%	-6%
SUBTOTAL	8,372	7,667	7,184	8,748	-18%	7%	9%
BUSES	40	57	53	46	15%	8%	-30%
OTHER TYPE	251	335	267	257	4%	25%	-25%
UNKNOWN TYPE	357	198	95	283	-66%	108%	80%
TOTAL	38,440	36,022	34,843	41,927	-17%	3%	7%

FIGURE 36

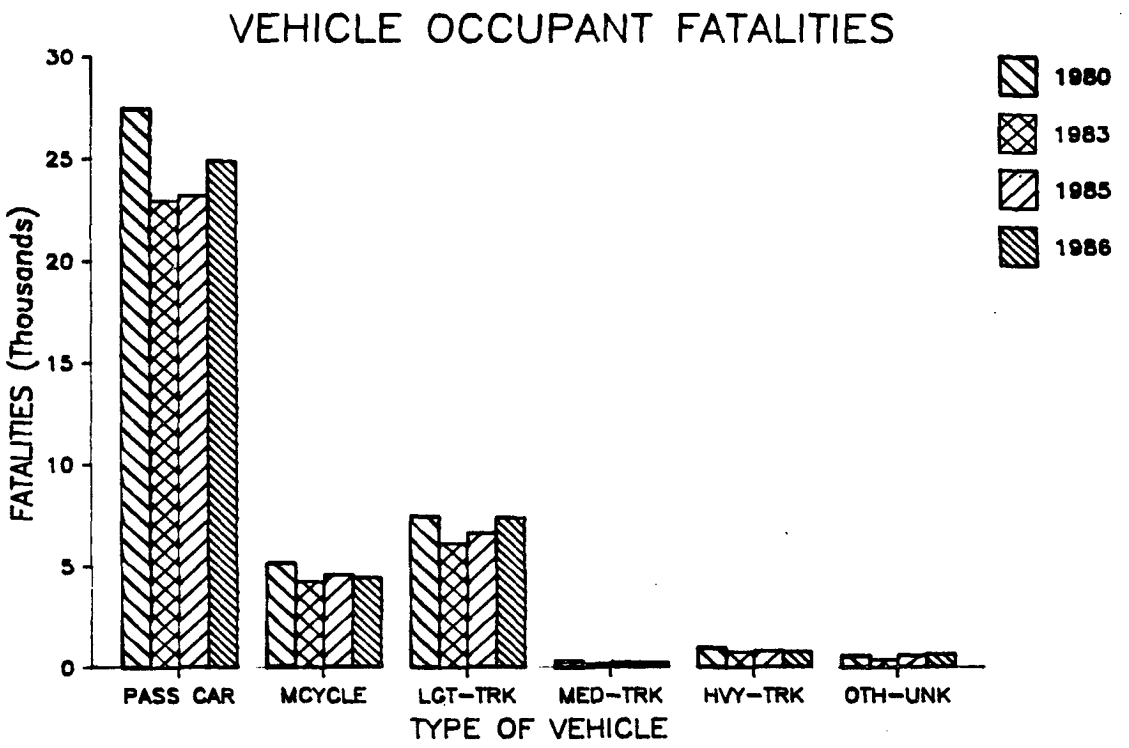


FIGURE 37

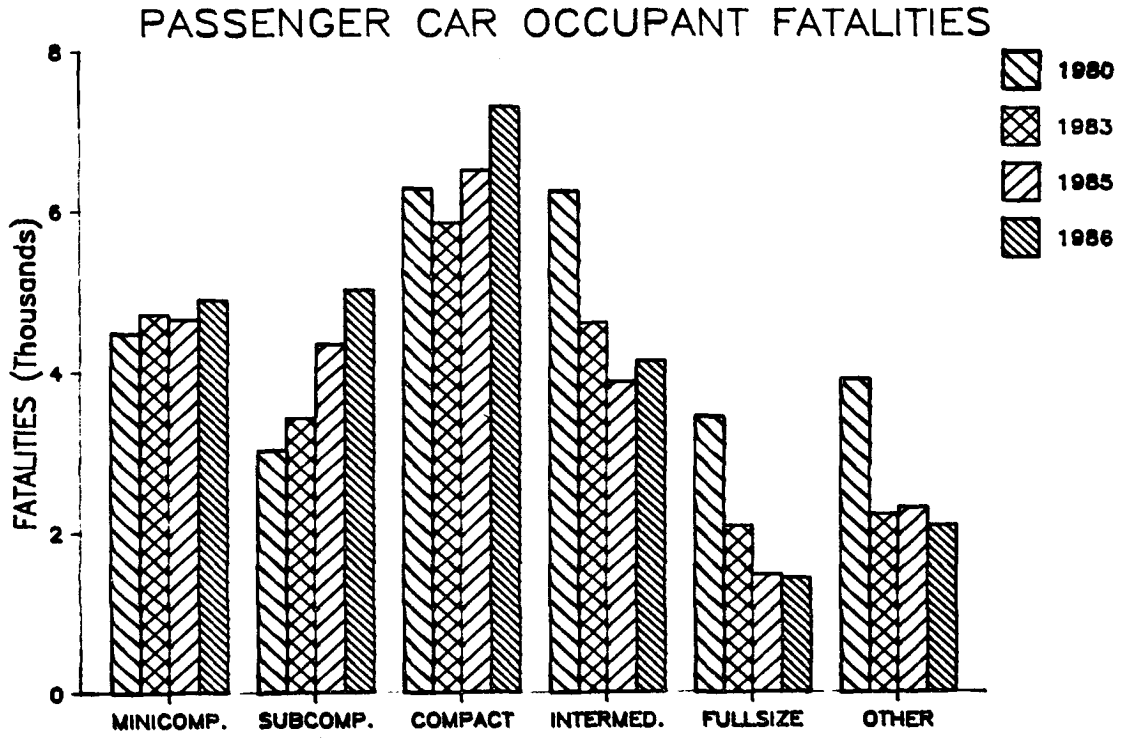


TABLE 44

DRIVER FATALITIES BY VEHICLE TYPE

VEHICLE TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
PASSENGER CARS							
MINI-COMPACTS	3,445	3,284	3,252	3,075	6%	1%	5%
SUB-COMPACTS	3,315	2,910	2,333	2,055	14%	25%	14%
COMPACTS	4,781	4,297	3,820	4,088	-7%	12%	11%
INTERMEDIATES	2,682	2,527	2,967	4,039	-27%	-15%	6%
FULL SIZE CARS	949	972	1,310	2,154	-39%	-26%	-2%
UNKNOWN SIZE	1,356	1,534	1,502	2,551	-41%	2%	-12%
SUBTOTAL	16,529	15,524	15,184	17,962	-15%	2%	6%
MOTORCYCLES	3,993	4,027	3,729	4,474	-17%	8%	-1%
TRUCKS							
LIGHT TRUCKS	5,058	4,530	4,144	4,979	-17%	9%	12%
HEAVY TRUCKS	653	688	670	806	-17%	3%	-5%
OTHER TRUCKS	156	158	142	225	-37%	11%	-1%
SUBTOTAL	5,866	5,376	4,956	6,010	-18%	8%	9%
BUSES	5	10	4	4	0%	150%	-50%
OTHER TYPE	181	256	203	181	12%	26%	-29%
UNKNOWN TYPE	246	131	62	185	-66%	111%	88%
TOTAL	26,820	25,324	24,138	28,816	-16%	5%	6%

FIGURE 38

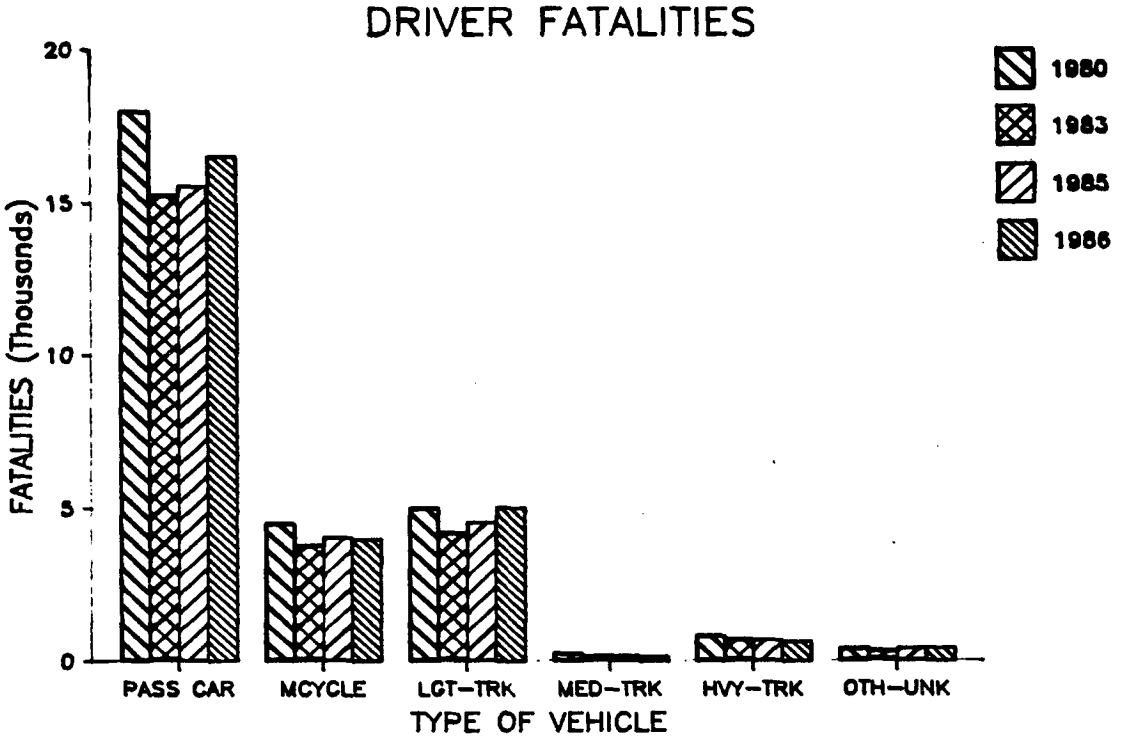


FIGURE 39

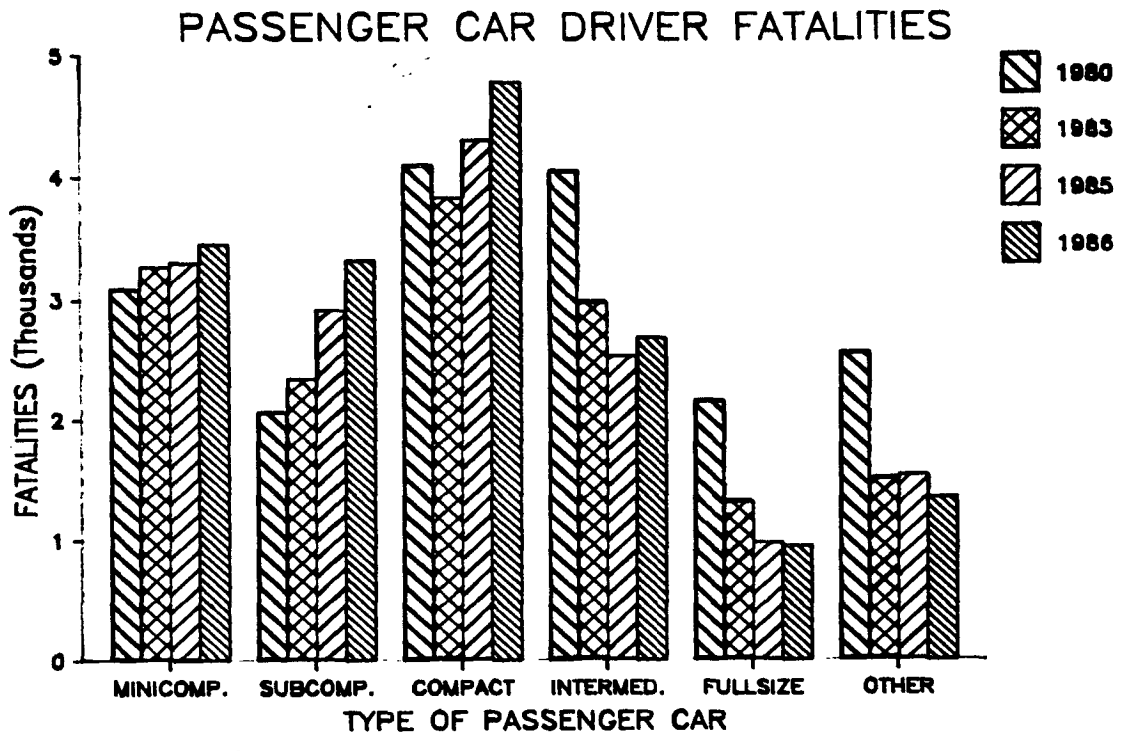


TABLE 45

PASSENGER FATALITIES BY VEHICLE TYPE

VEHICLE TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
PASSENGER CARS							
MINI-COMPACTS	1,451	1,373	1,473	1,417	4%	-7%	6%
SUB-COMPACTS	1,707	1,446	1,104	977	13%	31%	18%
COMPACTS	2,531	2,224	2,049	2,204	-7%	9%	14%
INTERMEDIATES	1,466	1,354	1,655	2,221	-25%	-18%	8%
FULL SIZE CARS	482	499	780	1,300	-40%	-36%	-3%
UNKNOWN SIZE	723	775	734	1,368	-46%	6%	-7%
SUBTOTAL	8,361	7,671	7,795	9,487	-18%	-2%	9%
MOTORCYCLES	537	543	536	670	-20%	1%	-1%
TRUCKS							
LIGHT TRUCKS	2,325	2,092	2,020	2,481	-19%	4%	11%
HEAVY TRUCKS	120	127	137	170	-19%	-7%	-5%
OTHER TRUCKS	60	72	71	87	-18%	1%	-16%
SUBTOTAL	2,506	2,291	2,228	2,738	-19%	3%	9%
BUSES	35	47	49	42	17%	-4%	-25%
OTHER TYPE	70	79	64	76	-16%	23%	-11%
UNKNOWN TYPE	110	67	33	98	-66%	103%	65%
TOTAL	11,620	10,698	10,705	13,111	-18%	0%	9%

FIGURE 40

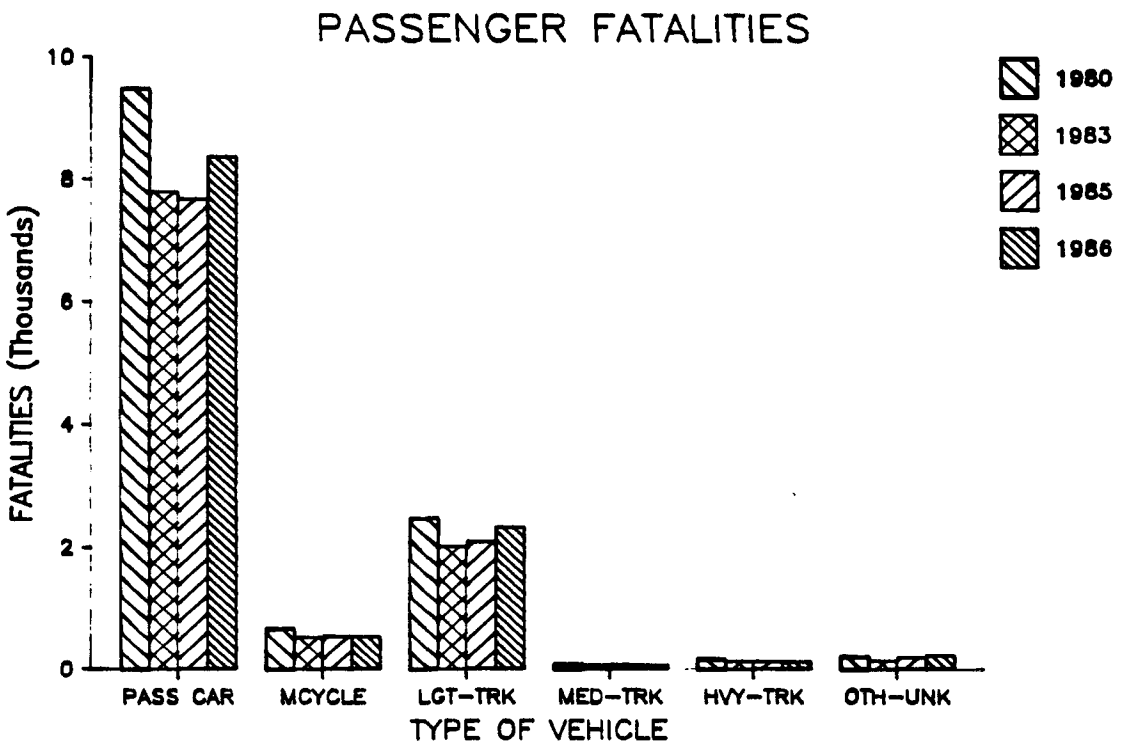


FIGURE 41

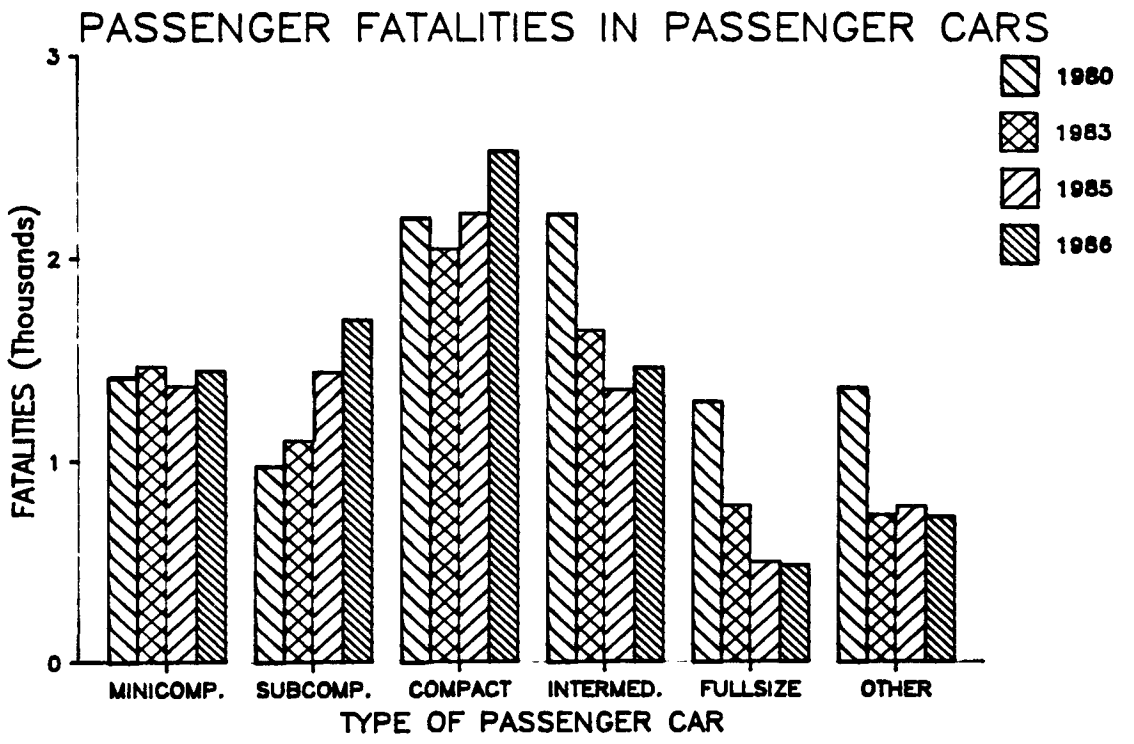


TABLE 46

NONOCCUPANT FATALITIES BY VEHICLE TYPE

VEHICLE TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
PASSENGER CARS							
MINI-COMPACTS	617	610	624	513	22%	-2%	1%
SUB-COMPACTS	658	630	490	413	19%	29%	4%
COMPACTS	1,190	1,236	1,129	1,118	1%	9%	-4%
INTERMEDIATES	1,109	1,088	1,310	1,674	-22%	-17%	2%
FULL SIZE CARS	447	515	714	1,108	-36%	-28%	-13%
UNKNOWN SIZE	552	583	536	703	-24%	9%	-5%
SUBTOTAL	4,573	4,662	4,803	5,529	-13%	-3%	-2%
MOTORCYCLES	80	96	82	125	-34%	17%	-16%
TRUCKS							
LIGHT TRUCKS	1,677	1,756	1,541	1,765	-13%	14%	-5%
HEAVY TRUCKS	422	438	461	449	3%	-5%	-4%
OTHER TRUCKS	146	121	119	169	-30%	2%	20%
SUBTOTAL	2,244	2,315	2,121	2,383	-11%	9%	-3%
BUSES	100	111	121	147	-18%	-8%	-10%
OTHER TYPE	25	20	36	33	9%	-44%	25%
UNKNOWN TYPE	537	569	583	947	-38%	-2%	-6%
TOTAL	7,560	7,773	7,746	9,164	-15%	0%	-3%

FIGURE 42

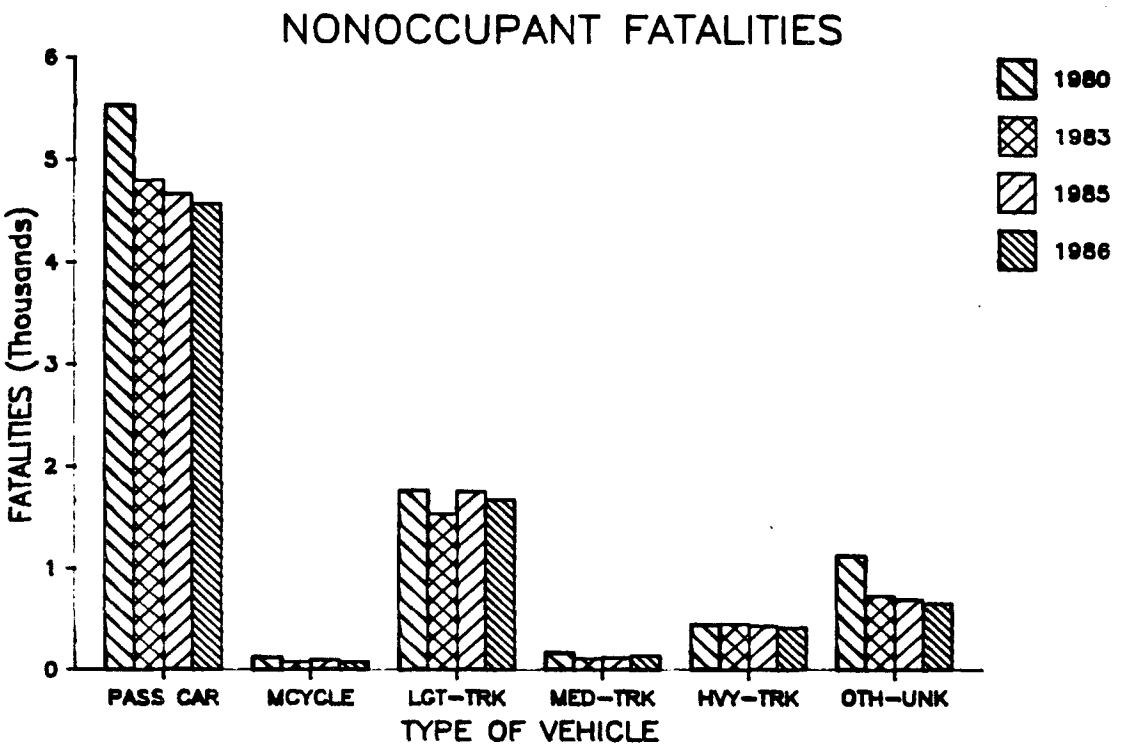


FIGURE 43

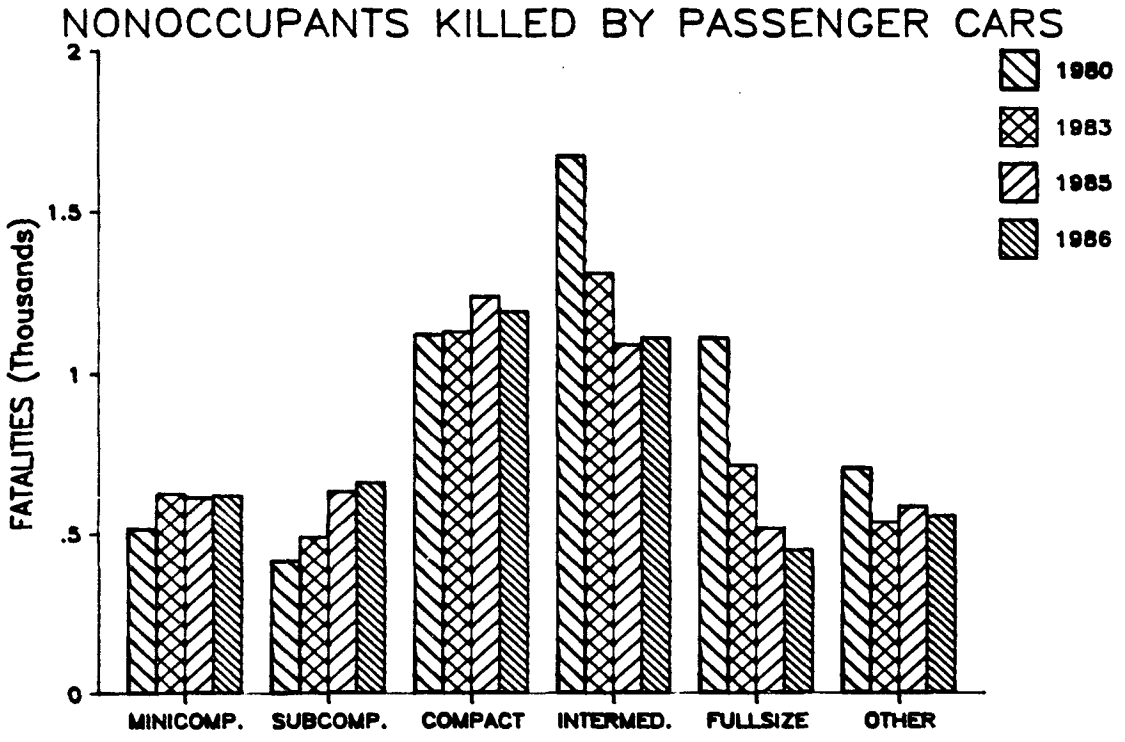


TABLE 47

FATALITIES IN ACCIDENTS INVOLVING HEAVY TRUCKS
BY VICTIM TYPE AND ACCIDENT TYPE

VICTIM TYPE/ ACCIDENT TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NONOCCUPANTS							
COLLISION WITH NONOCCUPANTS	452	453	476	466	2%	-5%	0%
TRUCK OCCUPANTS							
SINGLE VEHICLE	510	533	545	671	-19%	-2%	-4%
MULTI VEHICLE	264	282	252	305	-17%	12%	-7%
SUBTOTAL	773	815	797	976	-18%	2%	-5%
OCCUPANTS OF OTHER VEHICLES	3,620	3,747	3,452	3,379	2%	9%	-3%
TOTAL	4,845	5,015	4,725	4,821	-2%	6%	-3%

TABLE 48

OCCUPANT FATALITIES IN ACCIDENTS INVOLVING HEAVY TRUCKS
IN MULTI VEHICLE ACCIDENTS - BY VEHICLE TYPE

VEHICLE TYPE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
PASSENGER CARS							
MINI-COMPACTS	450	447	417	265	57%	7%	1%
SUB-COMPACTS	439	419	296	236	25%	42%	5%
COMPACTS	796	794	707	518	36%	12%	0%
INTERMEDIATES	536	558	562	636	-12%	-1%	-4%
FULL SIZE CARS	199	212	298	372	-20%	-29%	-6%
UNKNOWN SIZE	179	225	207	313	-34%	9%	-20%
SUBTOTAL	2,600	2,655	2,487	2,340	6%	7%	-2%
MOTORCYCLES	169	190	153	208	-26%	24%	-11%
TRUCKS							
LIGHT TRUCKS	764	793	727	737	-1%	9%	-4%
HEAVY TRUCKS	264	282	262	305	-14%	8%	-6%
OTHER TRUCKS	40	41	19	53	-64%	116%	-2%
SUBTOTAL	1,068	1,116	1,008	1,095	-8%	11%	-4%
BUSES	5	23	26	5	420%	-12%	-78%
OTHER & UNK TYPE	40	45	40	36	11%	13%	-11%
TOTAL	3,882	4,029	3,714	3,684	1%	8%	-4%

FIGURE 44

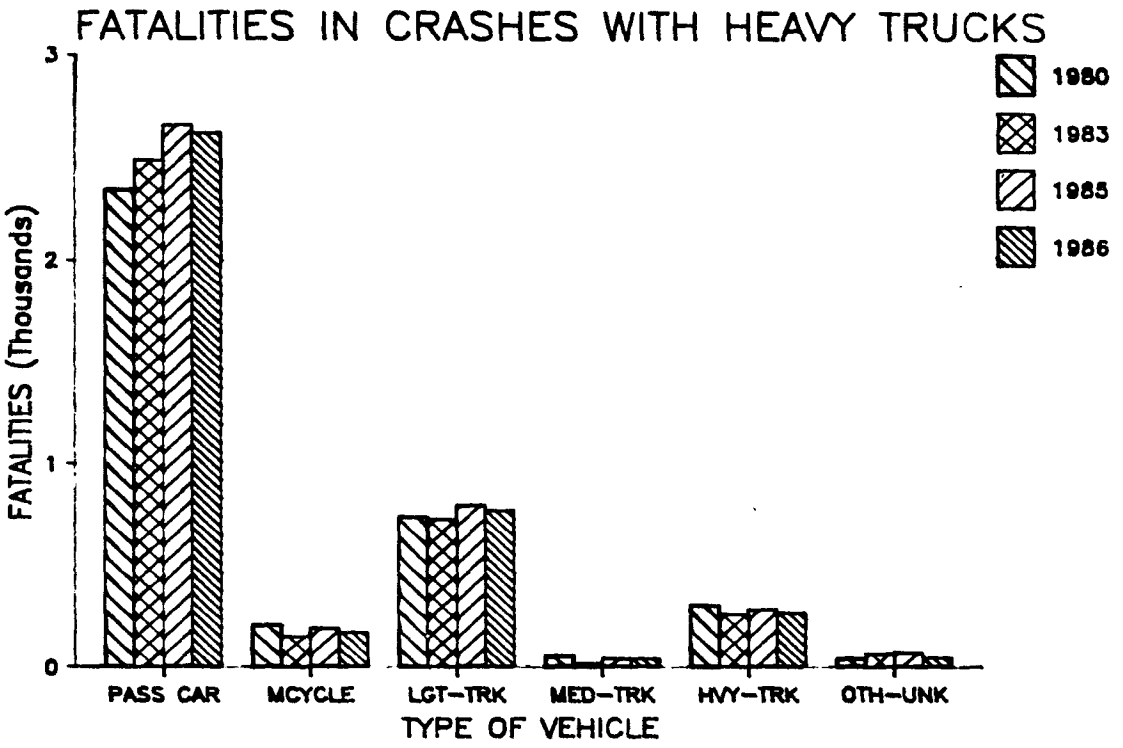
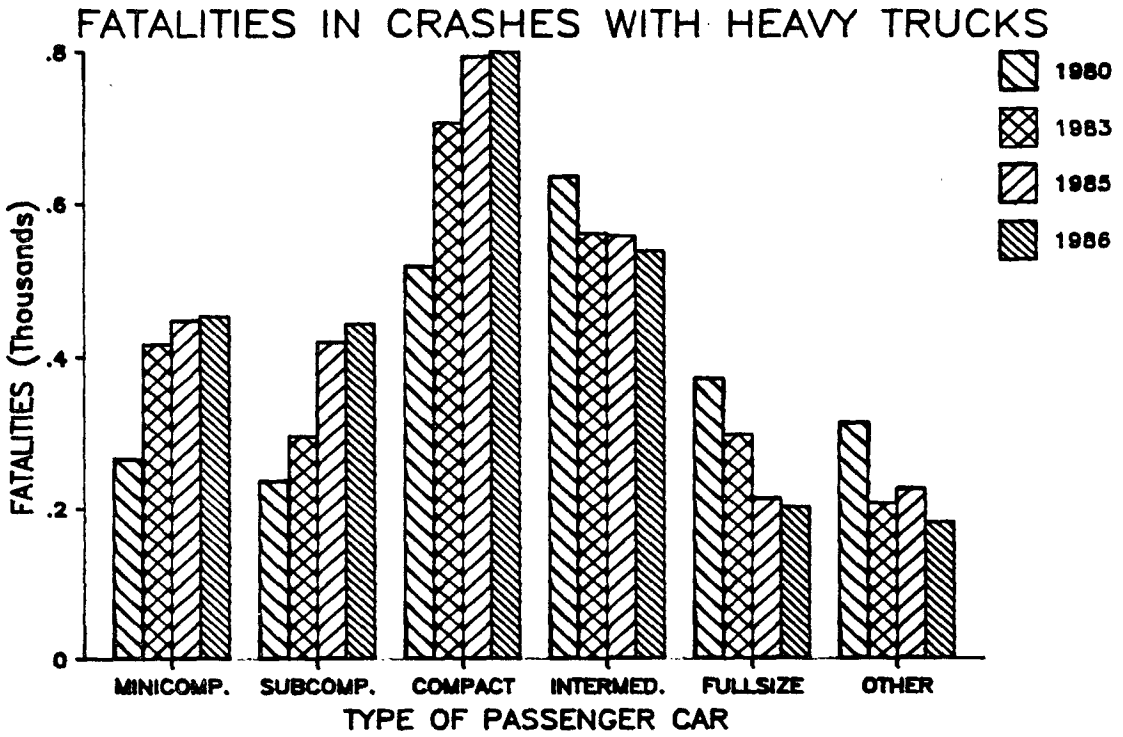


FIGURE 45



Restraint and Helmet Usage

While the reported number of passenger vehicle occupants in fatal accidents who used seat belts or other restraints has been rising since 1980, the increase was much more rapid between 1984 and 1986. In 1986, 27 percent of all passenger vehicle occupants in fatal accidents were reported to have been restrained, compared to only 8 percent in 1984.

An increased number of State laws requiring the use of restraints and more widespread campaigns to persuade travelers to belt up undoubtedly have much to do with this trend. It should be noted, however, that in about 20 percent of the cases we do not know whether the occupants were belted. This leaves a possibility that the figures on restraint use may be somewhat biased.

Of the passenger vehicle drivers who were killed, 2,669 or 12 percent were belted, while almost three times as many of the survivors -- 7,916, or 30 percent -- were restrained. In this report, passenger vehicles include passenger cars, pickups and vans. (Tables 49, 50 and 51 and Figure 46)

There were 5,221 belted passengers who survived, about four times as many as the belted passengers who were killed (1,336). (The respective restraint rates were 24 percent and 14 percent.) The usage rate among survivors rose from 9 to 24 percent since 1984, while that among the fatally injured passengers rose from 6 to 14 percent. (Tables 52, 53 and 54 and Figure 47; Tables 55, 56 and 57 and Figure 48)

The restraint usage rate for children under 5 years of age rose to 40 percent from 28 percent in 1984. Surviving children, like adults, were more likely to be restrained -- 45 percent, as compared to 26 percent for those who were fatally injured.

Helmet usage has remained stable since 1980 at about 44 percent for motorcycle drivers and about 35 percent for passengers. The usage rate was essentially the same for both fatally injured and all riders. (Tables 58, 59 and 60 and Figure 49)

RESTRAINT USAGE FOR ALL OCCUPANTS OF PASSENGER VEHICLES

TABLE 49

RESTRAINT USAGE FOR DRIVERS OF PASSENGER VEHICLES

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	28,685	29,453	32,190	37,838	-15%	-9%	-3%
USED	10,585	6,125	1,829	1,480	24%	235%	73%
UNKNOWN IF USED	9,105	10,522	9,891	11,915	-17%	6%	-13%
TOTAL	48,375	46,100	43,910	51,233	-14%	5%	5%
USAGE RATE *	27	17	5	4	43%	220%	57%

TABLE 50

RESTRAINT USAGE FOR PASSENGERS OF VEHICLES

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	24,150	23,356	24,894	28,604	-13%	-6%	3%
USED	6,557	4,157	1,377	722	91%	202%	58%
UNKNOWN IF USED	5,954	6,522	6,500	7,241	-10%	0%	-9%
TOTAL	36,660	34,035	32,771	36,567	-10%	4%	8%
USAGE RATE *	21	15	5	2	113%	188%	41%

TABLE 51

RESTRAINT USAGE FOR PASSENGERS LESS THAN 5 YEARS OLD

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	1,370	1,555	1,550	1,640	-5%	0%	-12%
USED							
BELTS	376	345	103	47	119%	235%	9%
CHILD RESTRAINT	547	503	313	63	397%	61%	9%
UNKNOWN IF USED	287	294	359	378	-5%	-18%	-2%
TOTAL	2,580	2,697	2,325	2,128	9%	16%	-4%
USAGE RATE *	40	35	21	6	237%	67%	14%

* USAGE RATE IS THE PERCENT USED OF TOTAL KNOWN USAGE

RESTRAINT USAGE FOR FATALLY INJURED OCCUPANTS OF PASSENGER VEHICLES

TABLE 52

RESTRAINT USAGE FOR DRIVERS OF PASSENGER VEHICLES

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	15,582	14,815	15,207	17,922	-15%	-3%	5%
USED	2,669	1,543	509	467	9%	203%	73%
UNKNOWN IF USED	3,285	3,696	3,612	4,552	-21%	2%	-11%
TOTAL	21,535	20,054	19,328	22,941	-16%	4%	7%
USAGE RATE *	15	9	3	3	28%	191%	55%

TABLE 53

RESTRAINT USAGE FOR PASSENGERS OF VEHICLES

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	7,934	7,249	7,841	9,540	-18%	-8%	9%
USED	1,336	849	315	204	54%	170%	57%
UNKNOWN IF USED	1,410	1,666	1,659	2,225	-25%	0%	-15%
TOTAL	10,680	9,764	9,815	11,969	-18%	-1%	9%
USAGE RATE *	14	10	4	2	84%	171%	37%

TABLE 54

RESTRAINT USAGE FOR PASSENGERS LESS THAN 5 YEARS OLD

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	420	435	474	538	-12%	-8%	-4%
USED							
BELTS	60	51	20	16	25%	155%	18%
CHILD RESTRAINT	85	88	58	17	241%	52%	-3%
UNKNOWN IF USED	55	56	50	99	-49%	12%	-1%
TOTAL	620	630	602	670	-10%	5%	-2%
USAGE RATE *	26	24	14	6	144%	71%	6%

* USAGE RATE IS THE PERCENT USED OF TOTAL KNOWN USAGE

RESTRAINT USAGE FOR SURVIVING OCCUPANTS OF PASSENGER VEHICLES

TABLE 55

RESTRAINT USAGE FOR DRIVERS OF PASSENGER VEHICLES

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	13,104	14,638	16,983	19,916	-15%	-14%	-10%
USED	7,916	4,582	1,320	1,013	30%	247%	73%
UNKNOWN IF USED	5,820	6,826	6,279	7,363	-15%	9%	-15%
TOTAL	26,840	26,046	24,582	28,292	-13%	6%	3%
USAGE RATE *	38	24	7	5	49%	231%	58%

TABLE 56

RESTRAINT USAGE FOR PASSENGERS OF VEHICLES

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	16,216	16,107	17,053	19,064	-11%	-6%	1%
USED	5,221	3,308	1,062	518	105%	211%	58%
UNKNOWN IF USED	4,544	4,856	4,841	5,016	-3%	0%	-6%
TOTAL	25,980	24,271	22,956	24,598	-7%	6%	7%
USAGE RATE *	24	17	6	3	122%	191%	43%

TABLE 57

RESTRAINT USAGE FOR PASSENGERS LESS THAN 5 YEARS OLD

RESTRAINT USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	950	1,120	1,076	1,102	-2%	4%	-15%
USED							
BELTS	316	294	83	31	168%	254%	7%
CHILD RESTRAINT	462	415	255	46	454%	63%	11%
UNKNOWN IF USED	232	238	309	279	11%	-23%	-3%
TOTAL	1,960	2,067	1,723	1,458	18%	20%	-5%
USAGE RATE *	45	39	24	7	266%	62%	16%

* USAGE RATE IS THE PERCENT USED OF TOTAL KNOWN USAGE

HELMET USAGE FOR ALL RIDERS OF MOTORCYCLES

TABLE 58

HELMET USAGE FOR DRIVERS OF MOTORCYCLES

HELMET USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	2,082	2,127	1,967	2,304	-15%	8%	-2%
USED	1,650	1,577	1,511	1,707	-11%	4%	5%
UNKNOWN IF USED	788	908	824	1,183	-30%	10%	-13%
TOTAL	4,520	4,612	4,302	5,194	-17%	7%	-2%
USAGE RATE *	44	43	43	43	2%	-2%	4%

TABLE 59

HELMET USAGE FOR PASSENGERS OF MOTORCYCLES

HEMET USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	507	514	508	603	-16%	1%	-1%
USED	276	282	302	337	-10%	-7%	-2%
UNKNOWN IF USED	203	222	217	321	-32%	2%	-9%
TOTAL	985	1,018	1,027	1,261	-19%	-1%	-3%
USAGE RATE *	35	35	37	36	4%	-5%	0%

* USAGE RATE IS THE PERCENT USED OF TOTAL KNOWN USAGE

HELMET USAGE FOR FATALLY INJURED RIDERS OF MOTORCYCLES

TABLE 60

HELMET USAGE FOR DRIVERS OF MOTORCYCLES

HELMET USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	1,828	1,858	1,733	2,012	-14%	7%	-2%
USED	1,487	1,382	1,318	1,498	-12%	5%	8%
UNKNOWN IF USED	678	787	678	964	-30%	16%	-14%
TOTAL	3,993	4,027	3,729	4,474	-17%	8%	-1%
USAGE RATE *	45	43	43	43	1%	-1%	5%

TABLE 61

HELMET USAGE FOR PASSENGERS OF MOTORCYCLES

HEMET USAGE	1986	1985	1983	1980	% CHANGE 80 TO 83	% CHANGE 83 TO 85	% CHANGE 85 TO 86
NOT USED	296	282	265	337	-21%	6%	5%
USED	141	153	148	175	-15%	3%	-8%
UNKNOWN IF USED	100	107	123	158	-22%	-13%	-6%
TOTAL	537	542	536	670	-20%	1%	-1%
USAGE RATE *	32	35	36	34	5%	-2%	-8%

* USAGE RATE IS THE PERCENT USED OF TOTAL KNOWN USAGE

FIGURE 46

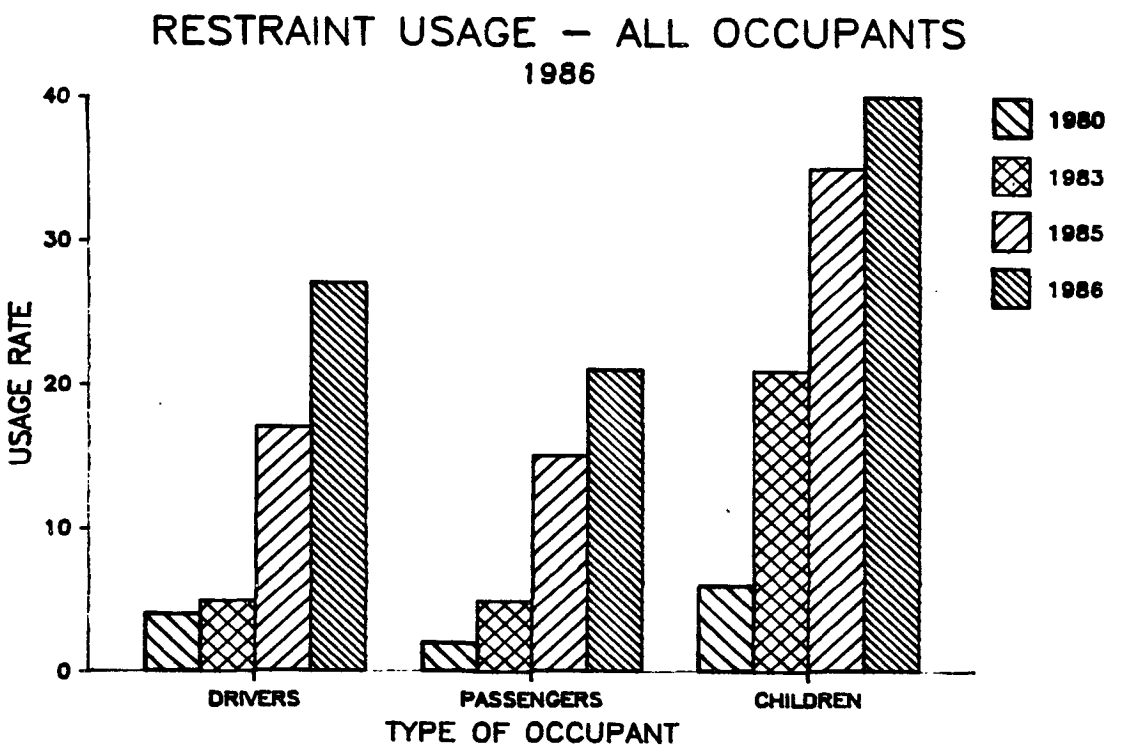


FIGURE 47

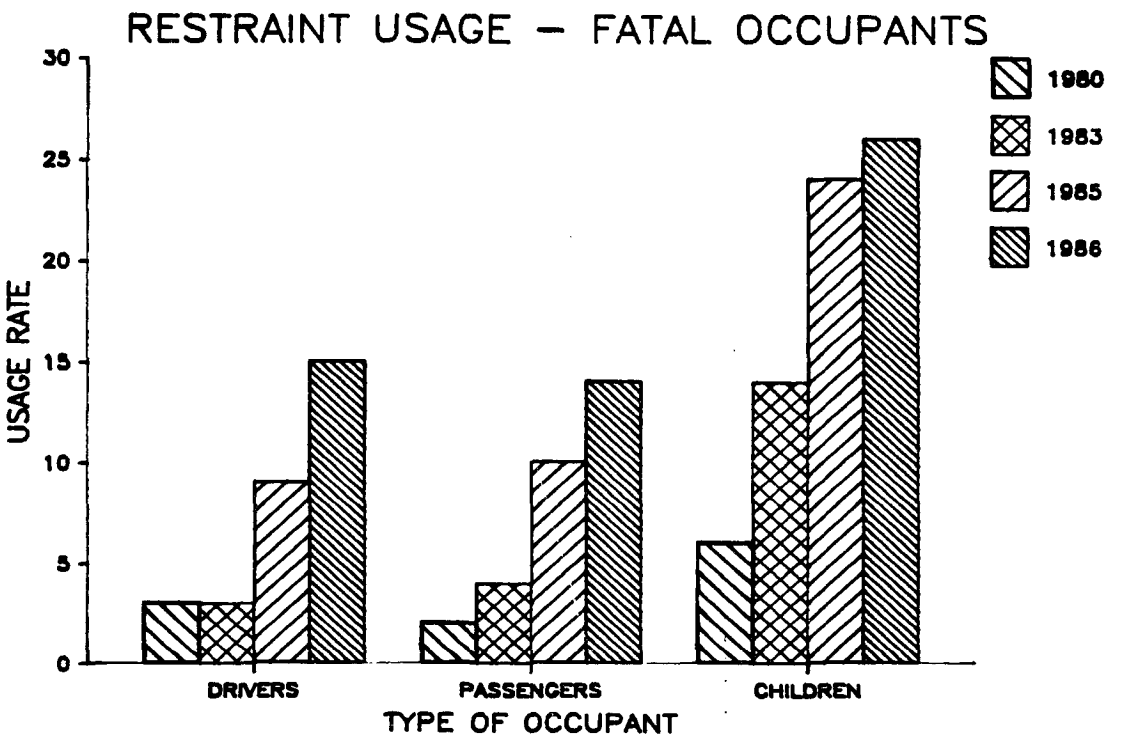


FIGURE 48

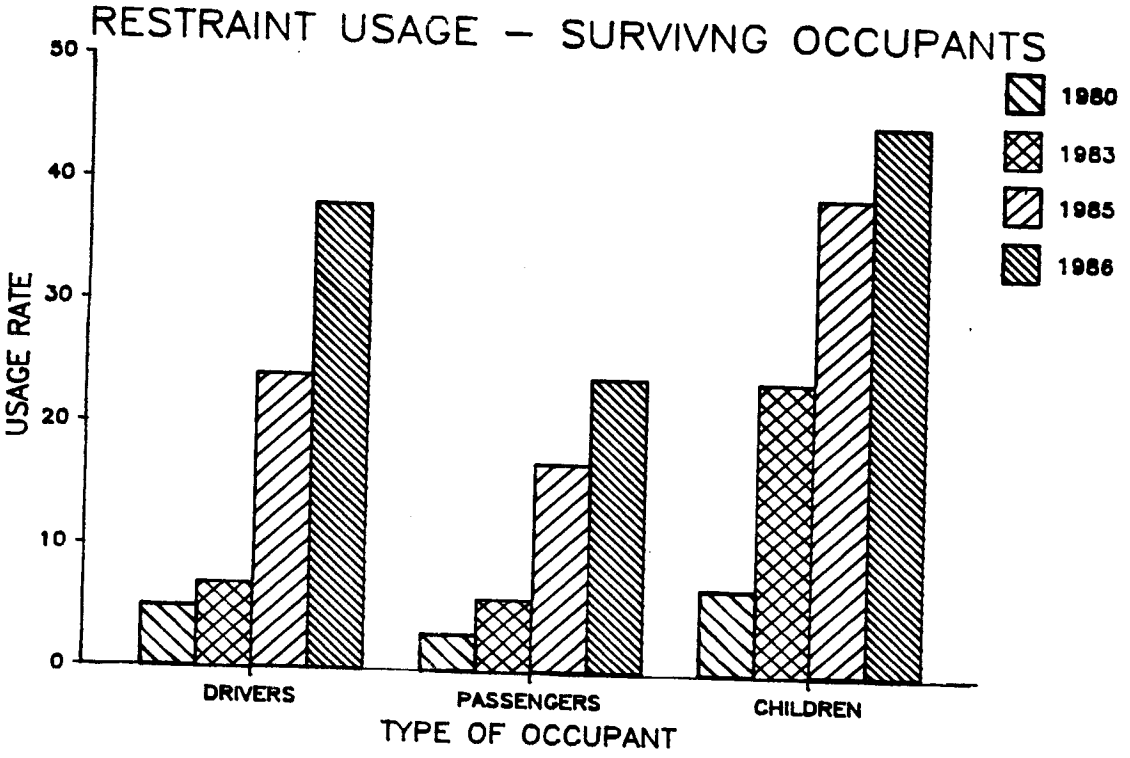


FIGURE 49