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16. Abstract <p>This report details facts and figures relevant to a better understanding of possible causes of and prevention implications for deaths and serious injuries due to traffic crashes in the state of Michigan during the period January 1994 through December 1998. Select results in brief:</p> <ul style="list-style-type: none"> • Statistical analyses suggest that the performance goals selected by OHSP are appropriate. • Michigan experienced a general decline in the proportion of fatal or serious-injury (KA) crashes from 1994 to 1998, however this decline is smaller than it has been in the past and may foreshadow an upswing in crashes. • It is reasonable to target male drivers age 21-34 years in particular to help OHSP achieve its traffic safety goals. • The summer months remain good targets for program efforts, but we may need to revisit programs during May and December because of recent increases in crashes during these months. • The vast majority of KA crashes occur on city/county roads, thus it is rational to continue to focus efforts on reducing the KA crash count on these city/county roads. • By far the largest vehicle group involved in KA crashes is passenger cars. • Because of the hazard drivers age 14-18 present to themselves and others as demonstrated by their crash rates, this is an important, if small, target group. • Drivers age 70 and over represent only 10% of all KA crash cases and do not have higher crash rates than the "average" driver, and thus are not a promising target group for achieving the overall traffic safety goals set by OHSP. • Males age 21-34 have the largest number of crashes and highest rates of KA-HBD 'had-been-drinking' crash involvement. • The largest reductions in KA-HBD crashes have occurred on months and days that have had the historic highs. The effect seems to be toward leveling off month-to-month, day-to-day variation. This may mean that we are beginning to see the boundaries of the "hard-core" problem with respect to KA-HBD crashes. • There are as many pedestrians that experience KA injury in crashes as rear-seat occupants (about 1,000 each year). 					
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Executive Summary

Statistical Trend Analysis

This year, the focus of the statistical trend analyses was to examine trends related to two central goals for the Office of Highway Safety Planning (OHSP) — namely reducing the proportion of fatal and severe injury (KA) crashes to 3% by the year 2001 and to reduce the proportion of crash-involved occupants who experience fatal or serious (KA) injury to 1.5% by the year 2001.

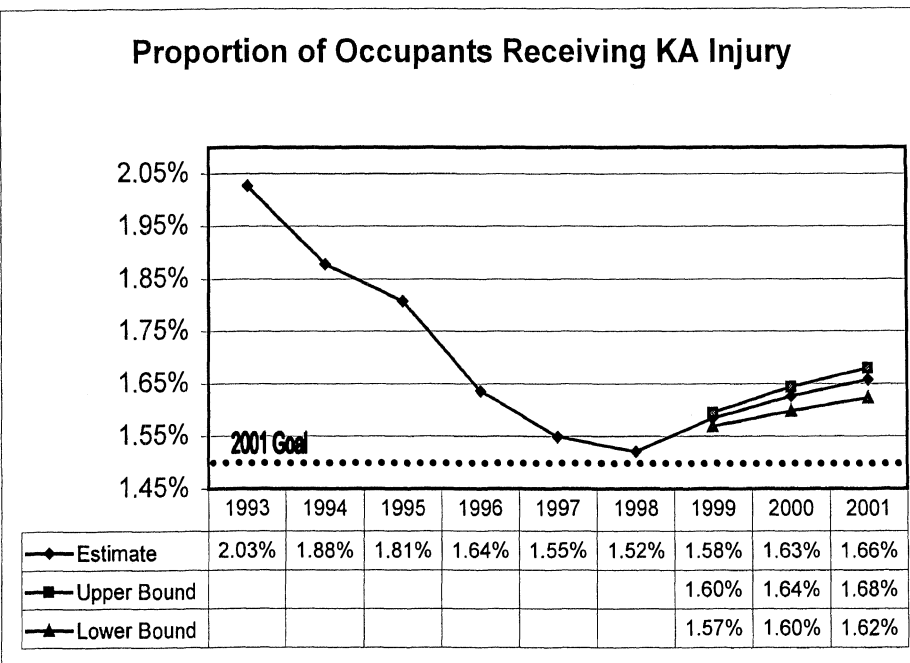
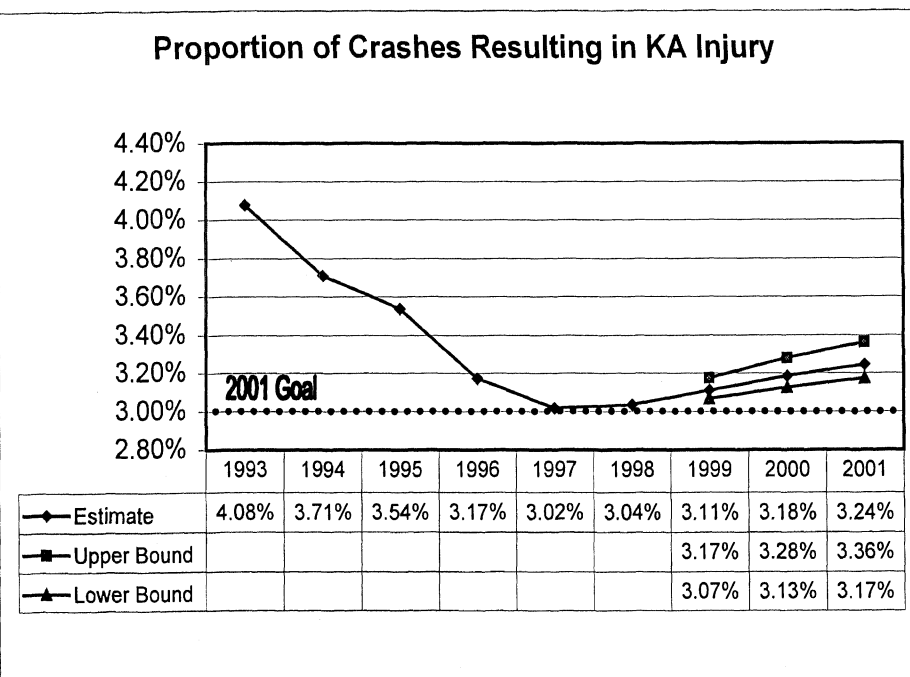
The statistical methods used to calculate the predictions presented here are nearly identical to those used in the previous report. Put simply, data on the proportion of KA crashes or injuries for each month for the period 1993-

1998 were included in a statistical time-series model that estimated what Michigan could expect to experience in the future, based on the statistical experience observed in the data. These statistical procedures result in data describing the "best" estimate of what is expected, as well as 95% confidence limits. These limits describe the range within which we can be 95% confident that the future KA crash and injury rates will fall if there is no change in the statistical pattern.

The charts to the left show the proportion of crashes resulting in KA injury and the proportion of crash-involved occupants experiencing KA injury for the period 1993-1998 and predicted proportions for 1999-2001.

Because the general shape and statistical predictions for both proportions examined here are nearly identical, descriptions in the following discussion apply to both unless otherwise noted.

The charts show a general decline in the proportion of KA crashes and crash-involved persons experiencing KA injury from 1993 to 1998. However, these charts also show that the declines from earlier in the period are not being seen



in the most recent years, and we may even be bottoming out. Predictions about future proportions show that a slight increase in these proportions from 1998 levels may be anticipated. Based on the statistical analyses, we

cannot count on a continuation of the current trend to achieve the proposed goals of reducing the proportion of fatal and severe injury (KA) crashes to 3% by the year 2001 and to reduce the proportion of crash-involved occupants who experience fatal or serious (KA) injury to 1.5% by the year 2001 without some change to further reduce these numbers. An examination of the 95% confidence levels shows that we should not be surprised if (absent some new change to the environment) we see a slight increase in these proportions. However, the "best estimate" predictions from these statistical models suggest that continued efforts will be required to achieve the current goals.

How do these findings impact OHSP planning? First, the statistical analyses suggest that the goals selected by OHSP are appropriate and rational. The goals are not beyond what one could expect to achieve given the efforts that can be exerted by OHSP and its partners, yet the goals appear to be beyond that which could be expected to occur in the absence of new program efforts from OHSP. Furthermore, if the apparent decline in these proportions from 1993 to 1998 is due in part to OHSP and partner efforts, then it may well be the case that OHSP and its partners must not only continue their current program efforts, but these efforts will need to be increased in intensity, focus, or efficiency to achieve the selected goals. In addition, it would appear that absent an increase in program intensity, focus or efficiency, Michigan may experience increasing numbers and rates of KA crash involvement.

Key Results

Number and Rate of Fatal or Serious Injury Crashes					
Year	Number of Crashes	Rate per 100 Million VMT	Rate per 1000 Registered Vehicles	Rate per 1000 Population	Rate per 1000 Licensed Drivers
94	14,762	17.325	1.869	1.555	2.236
95	14,890	17.373	1.846	1.559	2.231
96	13,820	15.765	1.673	1.445	2.071
97	12,843	14.393	1.534	1.341	1.881
98	12,201	13.318	1.422	1.243	1.765
<i>Change 94 to 98</i>	-17.35%	-23.13%	-23.91%	-20.06%	-21.01%
<i>Change 97 to 98</i>	-5.00%	-7.47%	-7.30%	-7.31%	-6.17%

The table above lists the number of crashes in which the most serious injury noted on the police crash report was a fatal injury (Killed) or a serious (A-level) injury (hereafter identified together as KA injuries) along with associated rates as indicated. The last row of the table shows the percent increase or decrease in the indicated measure in the 1-year period 1997 to 1998. For example, in the column titled *Number of Crashes* you can see that the figure in the last row, *Change 97 to 98*, is -5.00%. This means that there were 5 percent fewer KA crashes in 1998 than in 1997. The row just under the double line shows the percent increase or decrease in the indicated measure over the 5-year period 1994 to 1998. For example, in the column titled *Number of Crashes*, you can see that the figure in the next-to-last row, *Change 94 to 98*, is -17.35%. This means that there were 17.35 percent fewer KA crashes in 1998 than in 1994.

A word of caution for interpreting the change percentages presented in this table. The 95% confidence band for each percentage reported in this table is +/- 7%. What this means is that percentages under 7% in this table are not different than we would have expected given observed year-to-year fluctuations. Using the earlier examples, we can say that there was a statistically significant decline in the number of crashes that occurred between 1994 and 1998 because the decline (17.35%) is greater than 7%. On the other hand, we cannot say that there was a statistically significant decline in the number of crashes that occurred between 1997 and 1998 because the decline (5.00%) is less than 7%.

This table shows that there have been significant declines in KA crashes and crash rates since 1994. It also shows that while the number of KA crashes did not decline significantly between 1997 and 1998, the rate of crashes per VMT (vehicle miles travelled), registered vehicle, and population did decline. When we examine the change figures for the number of crashes versus the crash rates, we see that the crash-rate figures are 30% to 50% higher than those of the number of crashes. This indicates that significant progress is being achieved because the number of crashes that occur each year is declining faster than the amount of travel or vehicles on the road.

Fatal or Serious Injury Crash Frequency and Rates By Age, Sex, and Year					
Driver Age	Sex	Year	Count	Rate per 1000 Population	Rate per 1000 Licensed Drivers
16-20 yr	F	94	1,010	3.103	3.964
		95	1,040	3.154	4.001
		96	973	2.895	3.743
		97	881	2.272	3.279
		98	828	2.334	3.03
		Change 94 to 98	-18.02%	-24.78%	-23.56%
		Change 97 to 98	-6.02%	2.73%	-7.59%
	M	94	1,732	5.187	6.395
		95	1,747	5.152	6.374
		96	1,594	4.548	5.816
		97	1,493	4.16	5.264
		98	1,412	3.845	4.913
		Change 94 to 98	-18.48%	-25.87%	-23.17%
		Change 97 to 98	-5.43%	-7.57%	-6.67%
21-34 yr	F	94	1,590	1.563	1.686
		95	1,557	1.557	1.679
		96	1,512	1.551	1.63
		97	1,401	1.517	1.562
		98	1,141	1.188	1.29
		Change 94 to 98	-28.24%	-23.99%	-23.49%
		Change 97 to 98	-18.56%	-21.69%	-17.41%
	M	94	3,214	3.251	3.411
		95	3,138	3.23	3.377
		96	2,805	2.945	3.019
		97	2,605	2.686	2.868
		98	2,395	2.585	2.657
		Change 94 to 98	-25.48%	-20.49%	-22.10%
		Change 97 to 98	-8.06%	-3.76%	-7.36%

A word of caution for interpreting the change percentages presented in this and subsequent tables. The 95% confidence band for each percentage reported in this and all subsequent tables is +/-15%. What this means is that percentages under 15% in these tables are not different than we would have expected given observed year-to-year fluctuations.

The data in this table (which continues on the next two pages) show that declines in crashes and crash rates were not distributed evenly across age groups.

In general, the largest reductions were observed in the 21-34 year age group, particularly among females of this age. The smallest changes were observed among drivers age 35-54.

The implications for these data on OHSP program planning are mixed. It appears that programs and policies designed to reduce KA crashes involving drivers less than age 35 have been quite successful. While this is great, it also means that future declines among this large and important market segment may be more difficult to achieve than those in years past.

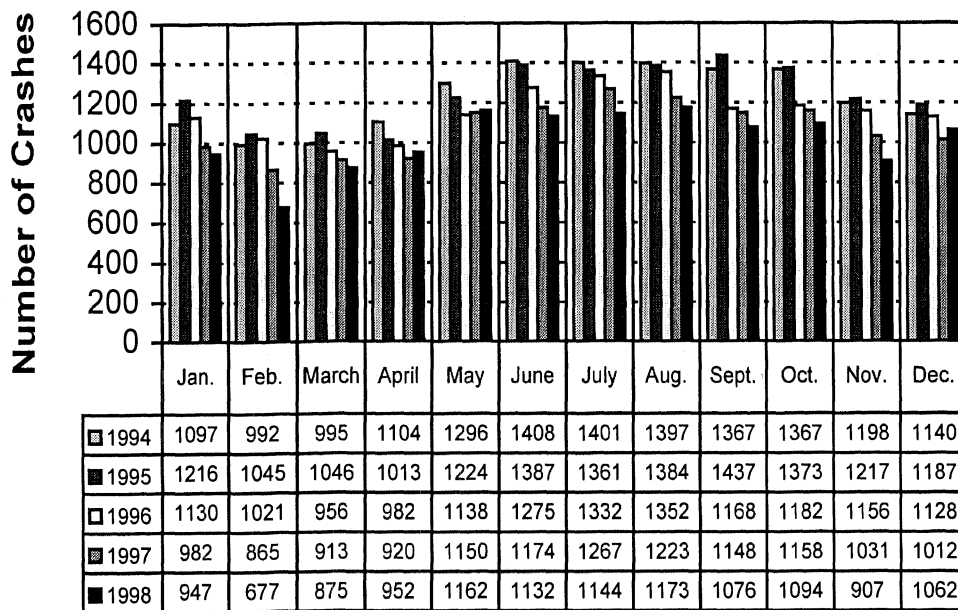
**Fatal or Serious Injury Crash Frequency and Rates
By Age, Sex, and Year**

Driver Age	Sex	Year	Count	Rate per 1000 Population	Rate per 1000 Licensed Drivers
35-54 yr	F	94	1,266	0.942	0.984
		95	1,374	0.994	1.042
		96	1,340	0.973	1.017
		97	1,191	0.829	0.871
		98	1,252	0.847	0.901
		Change 94 to 98	-1.11%	-10.08%	-8.43%
		Change 97 to 98	5.12%	2.17%	3.44%
	M	94	2,315	1.781	1.836
		95	2,440	1.825	1.89
		96	2,243	1.641	1.737
		97	2,171	1.641	1.62
		98	2,149	1.501	1.576
		Change 94 to 98	-7.17%	-15.72%	-14.16%
		Change 97 to 98	-1.01%	-8.53%	-2.72%
55-69 yr	F	94	386	0.65	0.737
		95	384	0.65	0.73
		96	343	0.582	0.653
		97	323	0.572	0.597
		98	349	0.571	0.63
		Change 94 to 98	-9.59%	-12.15%	-14.52%
		Change 97 to 98	8.05%	-0.17%	5.53%
	M	94	624	1.175	1.217
		95	675	1.272	1.311
		96	609	1.152	1.183
		97	604	1.1	1.146
		98	588	1.071	1.09
		Change 94 to 98	-5.77%	-8.85%	-10.44%
		Change 97 to 98	-2.65%	-2.64%	-4.89%

On the other hand, it would appear from the data that we have had far less success with another significant segment of the market, namely drivers age 35-54. If OHSP's crash goals are to be met, this important segment of the population will need to be reached more effectively than has been the case since 1994.

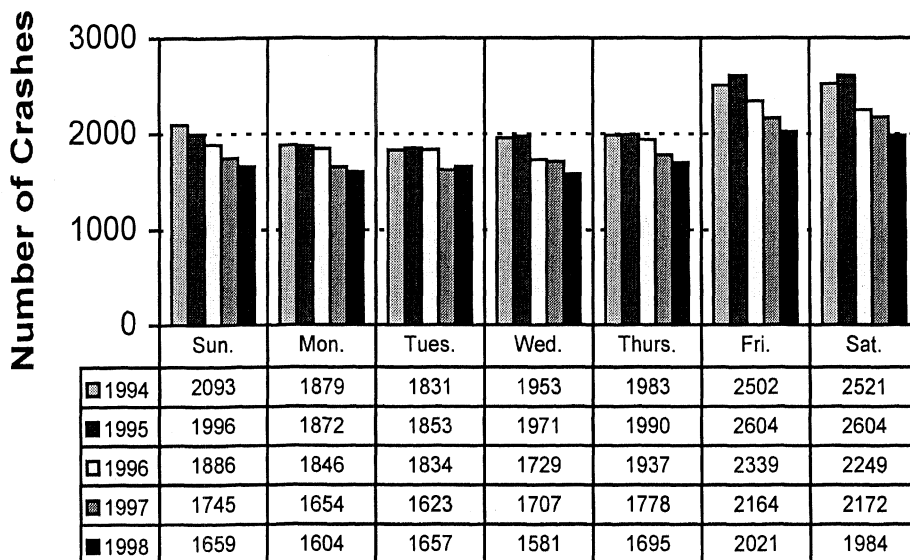
On the brighter side, there have been two significant traffic-safety policy changes that have occurred or will occur soon that will likely have a major impact on KA crash rates and frequencies. Specifically, Michigan's standard-enforcement safety-belt-use law will go into effect in the spring of 2000 and a set of laws affecting sanctions issued to repeat-offender drunk drivers went into effect fall of 1999. Both of these policy changes should have significant effects in reducing the number and rate of KA crashes among those segments of the driver population where the KA crash problem is most severe.

Fatal or Serious Injury Crashes by Month and Year



Based on the data from the preceding chart, it would appear that we may be moving toward a period in which the summer crash experience is only slightly higher than that of most other periods, unlike earlier years in which the summer months had by far the greatest KA crash experience. We are also beginning to see that the year-to-year reductions observed since 1994 are generally becoming smaller and have even reversed themselves in a few cases (note especially May and December). These findings would suggest that additional effort may be required to maintain and possibly recover the rate of decline observed in prior years.

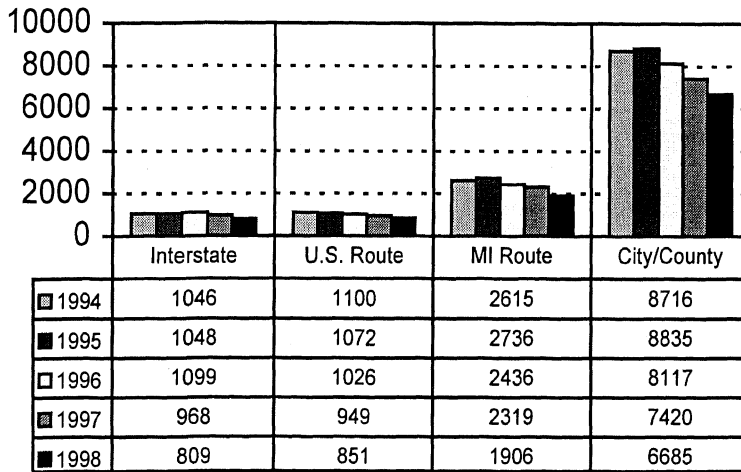
Fatal or Serious Injury Crashes by Day of Week and Year



As was the case when we examined the month-by-month chart above, in this chart we can see that the rate of year-to-year declines observed each day of the week has gotten smaller in recent years (and reversed itself on Tuesdays). Once again, these data point out that significant efforts may be required to maintain the previous levels of decline.

Fatal or Serious Injury Crashes by Highway Class and Year

Number of Crashes



City/County roads continue to predominate the KA crash picture in Michigan. In order for Michigan to achieve its traffic-safety goals, greater success will be required on these roadways. Note that less than 20% of all crashes occur on interstate OR U.S. routes.

Number and Rate of Fatal or Serious Injury Crashes Drivers Age 14-18		
<i>Year</i>	<i>Number of Crashes</i>	<i>Rate per 1000 Licensed Drivers</i>
94	2792	9.48
95	2735	9.00
96	2513	8.27
97	2390	6.79
98	2174	6.02
<i>Change 94 to 98</i>	-22.13%	-36.50%
<i>Change 97 to 98</i>	-9.04%	-11.34%

This table shows that the numbers of KA crashes and crash rates declined each year since 1994. Although this is a small subgroup, it remains an important one. As the effects of the relatively new graduated licensing system become more evident as drivers move through the system, it is expected that these numbers will decline rapidly.

Number and Rate of Fatal or Serious Injury Crashes Drivers Age 70+		
<i>Year</i>	<i>Number of Crashes</i>	<i>Rate per 1000 Licensed Drivers</i>
94	1,290	2.13
95	1,348	2.14
96	1,333	2.11
97	1,234	1.89
98	1,221	1.81
<i>Change 94 to 98</i>	-5.35%	-15.02%
<i>Change 97 to 98</i>	-1.06%	-4.23%

This is a small but growing subpopulation which does not appear to have an overwhelming KA crash problem at the moment. However, because this group is growing in size, it should be carefully monitored.

Number and Rate of Fatal or Serious Injuries Among Pedestrians and Bicyclists			
	<i>Year</i>	<i>Number of KA Injuries</i>	<i>Rate per 100K Population</i>
<i>Bike</i>	94	467	4.920
	95	427	4.472
	96	397	4.151
	97	389	4.062
	98	375	3.820
<i>Pedestrian</i>	94	1210	12.748
	95	1271	13.310
	96	1189	12.432
	97	1073	11.205
	98	1084	11.042

This table shows that pedestrian crashes outnumber bicycle crashes by 3 to 1. More importantly, note that the number of pedestrian KA injuries in 1998 (1,084) is actually slightly larger than that for KA injuries experienced in the rear seat of motor vehicles (995). This pattern holds true for each year examined. When considering program resources, we should keep in mind that KA crash injuries to pedestrians are as numerous as those to rear-seat occupants.

Number and Rate of Fatal or Serious Injury 'Had-Been-Drinking' Crashes					
<i>Year</i>	<i>Number of Crashes</i>	<i>Rate per 100 Million VMT</i>	<i>Rate per 1000 Registered Vehicles</i>	<i>Rate per 1000 Population</i>	<i>Rate per 1000 Licensed Drivers</i>
94	3,294	3.866	0.417	0.347	0.499
95	3,198	3.731	0.397	0.335	0.479
96	2,781	3.172	0.337	0.291	0.417
97	2,635	2.953	0.315	0.275	0.386
98	2,518	2.748	0.293	0.257	0.364
<i>Change 94 to 98</i>	-23.56%	-28.92%	-29.74%	-25.21%	-27.05%
<i>Change 94 to 98</i>	-4.44%	-6.94%	-6.98%	-6.54%	-5.70%

This table shows that significant declines in had-been-drinking (HBD) crashes resulting in death or serious injury have been experienced since 1994. It is likely that the new set of laws designed to impact the repeat alcohol offender that went into effect October 1999 will have a noticeable impact on these figures in years to come.

**Fatal or Serious Injury Crash Frequency and Rates
'Had-Been-Drinking' Crashes
by Year, Age Group, and Sex**

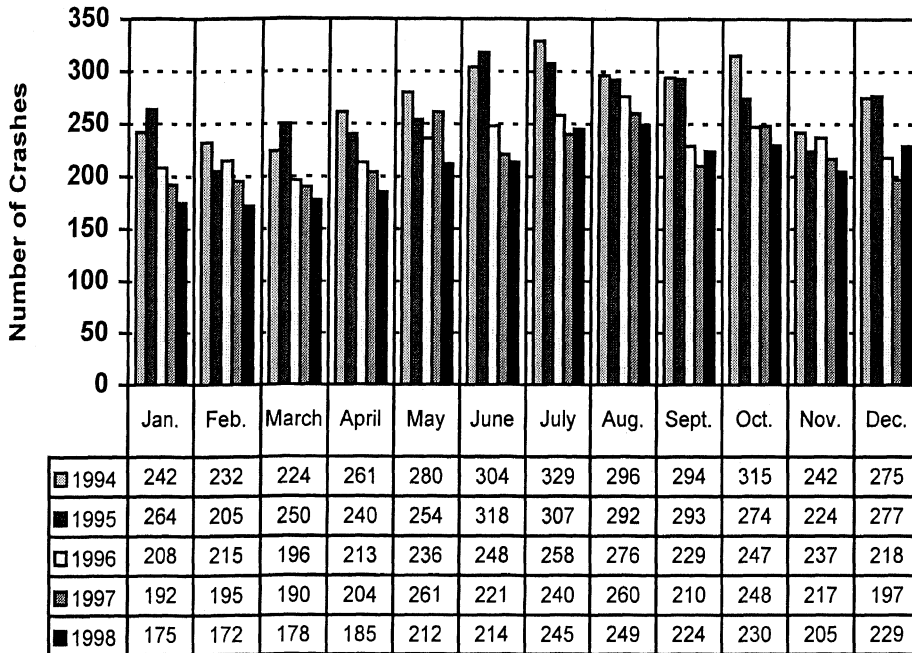
Age	Sex	Year	Number of Crashes	Rate per 1000 Population	Rate per 1000 Licensed Drivers
16-20 yr	F	94	59	0.181	0.232
		95	56	0.17	0.215
		96	64	0.19	0.246
		97	37	0.095	0.138
		98	62	0.175	0.227
		Change 94 to 98	5.08%	-3.31%	-2.16%
		Change 97 to 98	67.57%	84.21%	64.49%
	M	94	291	0.871	1.075
		95	296	0.873	1.08
		96	250	0.713	0.912
		97	221	0.616	0.779
		98	232	0.632	0.807
		Change 94 to 98	-20.27%	-27.44%	-24.93%
		Change 97 to 98	4.98%	2.60%	3.59%
21-34 yr	F	94	306	0.301	0.324
		95	271	0.271	0.292
		96	261	0.268	0.281
		97	225	0.244	0.251
		98	208	0.217	0.235
		Change 94 to 98	-32.03%	-27.91%	-27.47%
		Change 97 to 98	-7.56%	-11.07%	-6.37%
	M	94	1280	1.295	1.359
		95	1247	1.284	1.342
		96	1007	1.057	1.084
		97	1035	1.067	1.14
		98	911	0.983	1.011
		Change 94 to 98	-28.83%	-24.09%	-25.61%
		Change 97 to 98	-11.98%	-7.87%	-11.32%

The largest number of HBD crashes occur among male drivers age 21-54, but it is male drivers age 21-34 that represent Michigan's largest drunk-driving crash group. Males age 21-34 consistently have both the most HBD crashes resulting in death and serious injury and the highest rates of these crashes.

The good news is that it is just this problem group (males age 21-34) that has experienced the largest reductions in HBD crashes. The bad news is that in order to continue to achieve this decline, we must not only continue what is being done, but increase our efforts to reach new subgroups of this population.

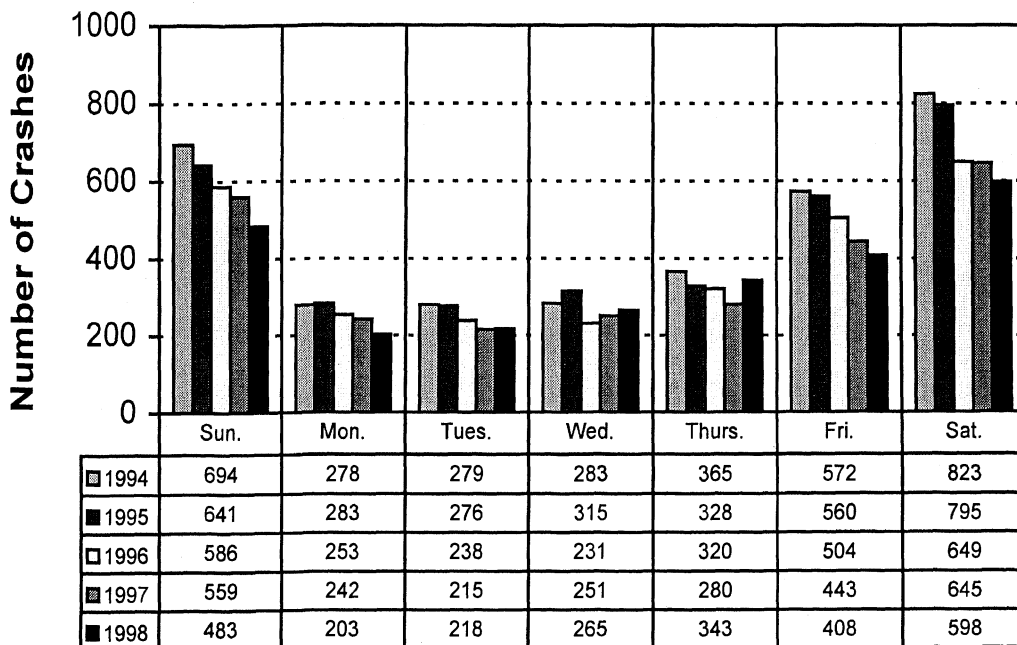
Fatal or Serious Injury Crash Frequency and Rates 'Had-Been-Drinking' Crashes by Year, Age Group, and Sex					
Age	Sex	Year	Number of Crashes	Rate per 1000 Population	Rate per 1000 Licensed Drivers
35-54 yr	F	94	179	0.133	0.139
		95	215	0.156	0.163
		96	206	0.15	0.156
		97	176	0.123	0.129
		98	196	0.133	0.141
		Change 94 to 98	9.50%	0.00%	1.44%
		Change 97 to 98	11.36%	8.13%	9.30%
	M	94	822	0.632	0.652
		95	849	0.635	0.658
		96	763	0.558	0.591
		97	744	0.563	0.555
		98	744	0.52	0.546
		Change 94 to 98	-9.49%	-17.72%	-16.26%
		Change 97 to 98	0.00%	-7.64%	-1.62%
55-69 yr	F	94	11	0.019	0.021
		95	20	0.034	0.038
		96	8	0.014	0.015
		97	17	0.03	0.031
		98	12	0.02	0.022
		Change 94 to 98	9.09%	5.26%	4.76%
		Change 97 to 98	-29.41%	-33.33%	-29.03%
	M	94	100	0.188	0.195
		95	142	0.268	0.276
		96	112	0.212	0.218
		97	117	0.213	0.222
		98	102	0.186	0.189
		Change 94 to 98	2.00%	-1.06%	-3.08%
		Change 97 to 98	-12.82%	-12.68%	-14.86%

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Month and Year



This chart appears to show a phenomenon first described in last year's trend report. That is, the declines that have been observed, particularly in summer and traditional holiday months have begun to taper off, and in some cases reverse themselves (e.g., July, September, and December). This is probably a sign that we have reached those persons whose drinking and driving behavior is relatively easy to modify and we are thus left with the more difficult cases. These persons should be affected by the new repeat offender laws that went into effect October 1999.

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Day of Week and Year



This chart more clearly shows the declining effect noted in the discussion of the previous chart. Note that while crash frequencies have been declining on the weekend days, these declines have lessened in the last two years. Also note that the number of HBD crashes has remained relatively stable or even slightly increased on weekdays. This also supports the hypothesis that we have reached a point where new efforts will be required to achieve additional gains against alcohol-impaired driving.

FATAL OR SERIOUS INJURY (KA) CRASHES

All Drivers

Table 1 - Number and Rate by Year

Number and Rate of Fatal or Serious Injury Crashes					
Year	Number of Crashes	Rate per 100 Million VMT	Rate per 1000 Registered Vehicles	Rate per 1000 Population	Rate per 1000 Licensed Drivers
94	14,762	17.325	1.869	1.555	2.236
95	14,890	17.373	1.846	1.559	2.231
96	13,820	15.765	1.673	1.445	2.071
97	12,843	14.393	1.534	1.341	1.881
98	12,201	13.318	1.422	1.243	1.765
<i>Change 94 to 98</i>	-17.35%	-23.13%	-23.91%	-20.06%	-21.01%
<i>Change 97 to 98</i>	-5.00%	-7.47%	-7.30%	-7.31%	-6.17%

The table above lists the number of crashes in which the most serious injury noted on the police crash report was a fatal injury (Killed) or a serious (A-level) injury (hereafter identified together as KA injuries) along with associated rates as indicated. The last row of the table shows the percent increase or decrease in the indicated measure in the 1-year period 1997 to 1998. For example, in the column titled *Number of Crashes* you can see that the figure in the last row, *Change 97 to 98*, is -5.00%. This means that there were 5 percent fewer KA crashes in 1998 than in 1997. The row just under the double line shows the percent increase or decrease in the indicated measure over the 5-year period 1994 to 1998. For example, in the column titled *Number of Crashes* you can see that the figure in the next-to-last row, *Change 94 to 98*, is -17.35%. This means that there were 17.35 percent fewer KA crashes in 1998 than in 1994.

A word of caution for interpreting the change percentages presented in this and subsequent tables. The 95% confidence band for each percentage reported in this table is +/- 7%*. What this means is that percentages under 7% in this table are not different than we would have expected given observed year-to-year fluctuations. Using the earlier examples, we can say that there was a statistically significant decline in the number of crashes that occurred between 1994 and 1998 because the decline (17.35%) is greater than 7%. On the other hand, we cannot say that there was a statistically significant decline in the number of crashes that occurred between 1997 and 1998 because the decline (5.00%) is less than 7%.

This table shows that there have been significant declines in KA crashes and crash rates since 1994. It also shows that while the number of KA crashes did not decline significantly between 1997 and 1998, the rate of crashes per VMT, registered vehicle, and population did decline. When we examine the change figures for the number of crashes versus the crash rates, we see that the crash rate figures are 30% to 50% higher than those of the number of crashes. This indicates that significant progress is being achieved because the number of crashes that occur each year is declining faster than the amount of travel or vehicles on the road.

* It is even higher for all subsequent tables because they are subsets of this table with higher associated variability. The 95% confidence band for all subsequent tables is +/- 15%.

Table 2 - Number and Rate by Age, Sex, and Year

Fatal or Serious Injury Crash Frequency and Rates By Age, Sex, and Year					
Driver Age	Sex	Year	Count	Rate per 1000 Population	Rate per 1000 Licensed Drivers
16-20 yr	F	94	1,010	3.103	3.964
		95	1,040	3.154	4.001
		96	973	2.895	3.743
		97	881	2.272	3.279
		98	828	2.334	3.03
		Change 94 to 98	-18.02%	-24.78%	-23.56%
		Change 97 to 98	-6.02%	2.73%	-7.59%
	M	94	1,732	5.187	6.395
		95	1,747	5.152	6.374
		96	1,594	4.548	5.816
		97	1,493	4.16	5.264
		98	1,412	3.845	4.913
Change 94 to 98		-18.48%	-25.87%	-23.17%	
Change 97 to 98	-5.43%	-7.57%	-6.67%		
21-34 yr	F	94	1,590	1.563	1.686
		95	1,557	1.557	1.679
		96	1,512	1.551	1.63
		97	1,401	1.517	1.562
		98	1,141	1.188	1.29
		Change 94 to 98	-28.24%	-23.99%	-23.49%
		Change 97 to 98	-18.56%	-21.69%	-17.41%
	M	94	3,214	3.251	3.411
		95	3,138	3.23	3.377
		96	2,805	2.945	3.019
		97	2,605	2.686	2.868
		98	2,395	2.585	2.657
		Change 94 to 98	-25.48%	-20.49%	-22.10%
Change 97 to 98	-8.06%	-3.76%	-7.36%		

A word of caution for interpreting the change percentages presented in this and subsequent tables. The 95% confidence band for each percentage reported in this and all subsequent tables is +/-15%. What this means is that percentages under 15% in these tables are not different than we would have expected given observed year-to-year fluctuations.

The data in this table (which continues on the next two pages) show that declines in crashes and crash rates were not distributed evenly across age groups.

In general, the largest reductions were observed in the 21-34 year age group, particularly among females of this age. The smallest changes were observed among drivers age 35-54.

The implications for these data on OHSP program planning are mixed. It appears that programs and policies designed to reduce KA crashes involving drivers less than age 35 have been quite successful. While this is great, it also means that future declines among this large and important market segment may be more difficult to achieve than those in years past.

Table 2 - Number and Rate by Age, Sex, and Year (continued)

Fatal or Serious Injury Crash Frequency and Rates By Age, Sex, and Year					
Driver Age	Sex	Year	Count	Rate per 1000 Population	Rate per 1000 Licensed Drivers
35-54 yr	F	94	1,266	0.942	0.984
		95	1,374	0.994	1.042
		96	1,340	0.973	1.017
		97	1,191	0.829	0.871
		98	1,252	0.847	0.901
		Change 94 to 98	-1.11%	-10.08%	-8.43%
		Change 97 to 98	5.12%	2.17%	3.44%
	M	94	2,315	1.781	1.836
		95	2,440	1.825	1.89
		96	2,243	1.641	1.737
		97	2,171	1.641	1.62
		98	2,149	1.501	1.576
		Change 94 to 98	-7.17%	-15.72%	-14.16%
		Change 97 to 98	-1.01%	-8.53%	-2.72%
55-69 yr	F	94	386	0.65	0.737
		95	384	0.65	0.73
		96	343	0.582	0.653
		97	323	0.572	0.597
		98	349	0.571	0.63
		Change 94 to 98	-9.59%	-12.15%	-14.52%
		Change 97 to 98	8.05%	-0.17%	5.53%
	M	94	624	1.175	1.217
		95	675	1.272	1.311
		96	609	1.152	1.183
		97	604	1.1	1.146
		98	588	1.071	1.09
		Change 94 to 98	-5.77%	-8.85%	-10.44%
		Change 97 to 98	-2.65%	-2.64%	-4.89%

On the other hand, it would appear from the data that we have had far less success with another significant segment of the market, namely drivers age 35-54. If OHSP's crash goals are to be met, this important segment of the population will need to be reached more effectively than has been the case since 1994.

On the brighter side, there have been two significant traffic-safety policy changes that have occurred or will occur soon that will likely have a major impact on KA crash rates and frequencies. Specifically, Michigan's standard-enforcement safety-belt-use law will go into effect in the spring of 2000 and a set of laws affecting sanctions issued to repeat-offender drunk drivers went into effect fall of 1999. Both of these policy changes should have significant effects in reducing the number and rate of KA crashes among those segments of the driver population where the KA crash problem is most severe.

Table 2 - Number and Rate by Age, Sex, and Year (continued)

Fatal or Serious Injury Crash Frequency and Rates By Age, Sex, and Year					
Driver Age	Sex	Year	Count	Rate per 1000 Population	Rate per 1000 Licensed Drivers
70+ yr	F	94	371	0.746	1.156
		95	330	0.654	0.987
		96	343	0.671	1.026
		97	343	0.725	0.987
		98	347	0.65	0.971
		Change 94 to 98	-6.47%	-12.87%	-16.00%
		Change 97 to 98	1.17%	-10.34%	-1.62%
	M	94	475	1.524	1.665
		95	520	1.631	1.756
		96	495	1.514	1.672
		97	460	1.712	1.504
		98	432	1.241	1.367
		Change 94 to 98	-9.05%	-18.57%	-17.90%
		Change 97 to 98	-6.09%	-27.51%	-9.11%

Fatal or Serious Injury Crashes by Month and Year

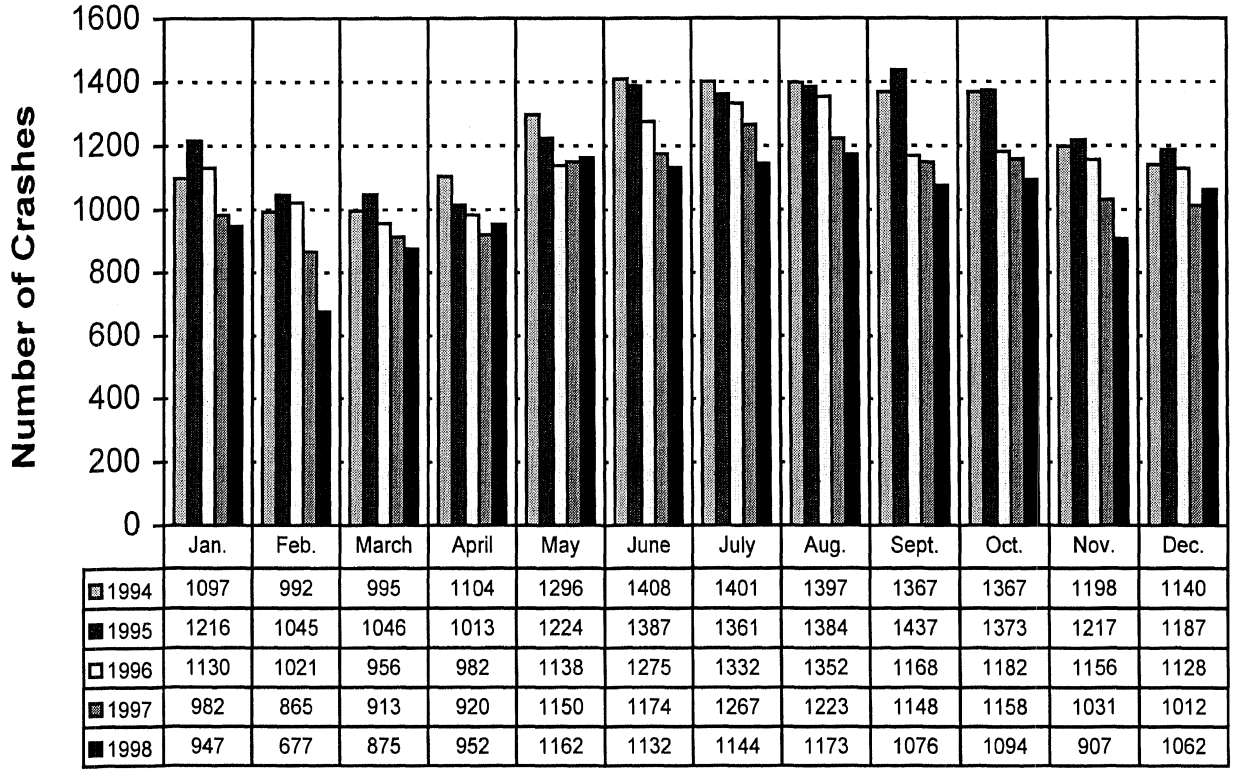


Chart 1 - Number by Month and Year

Based on the data from the preceding chart, it would appear that we may be moving toward a period in which the summer crash experience is only slightly higher than that of most other periods unlike earlier years in which the summer months had by far the greatest KA crash experience. We are also beginning to see that the year-to-year reductions observed since 1994 are generally becoming smaller and have even reversed themselves in a few cases (note especially April, May, and December). These findings would suggest that additional effort may be required to maintain and possibly recover the rate of decline observed in prior years.

Fatal or Serious Injury Crashes by Day of Week and Year

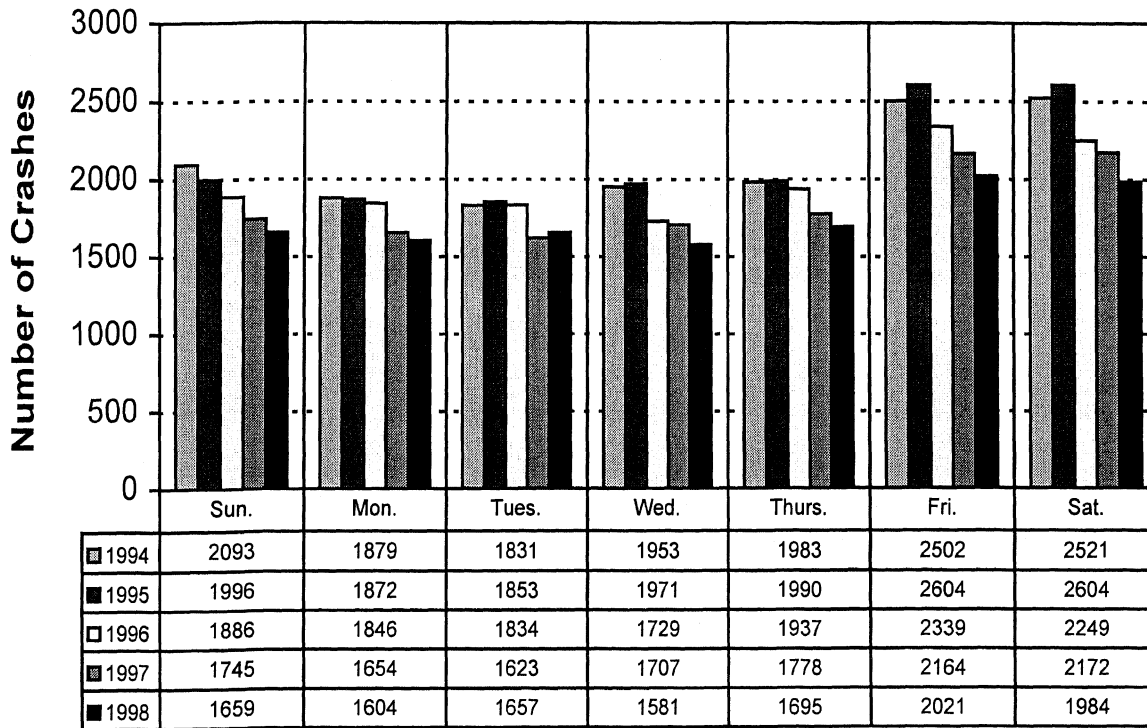


Chart 2 - Number by Day of Week and Year

As was the case when we examined the month-by-month chart on the previous page, in this chart we can see that the rate of year-to-year declines observed each day has gotten smaller in recent years (and reversed itself on Tuesdays). Once again these data point out that significant efforts may be required to maintain the previous levels of decline.

Fatal or Serious Injury Crashes by Light Condition and Year

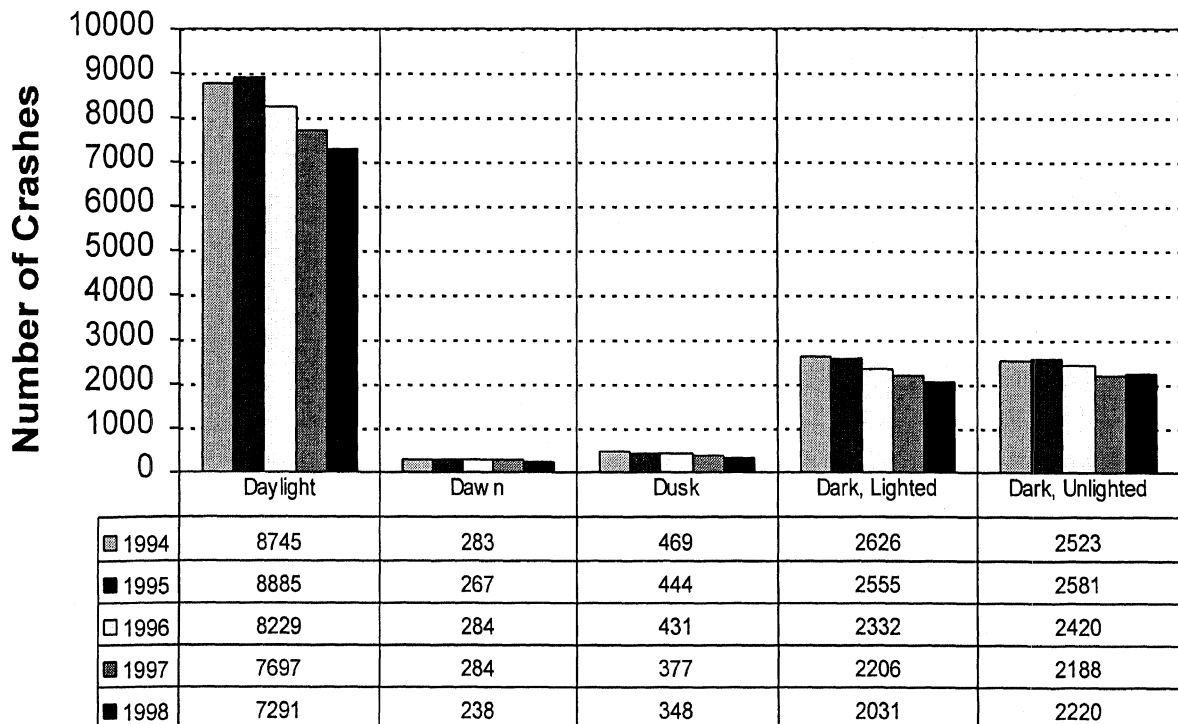


Chart 3 - Number by Light Condition and Year

Declines are observed in each of the lighting categories with the exception of dark, unlighted road segments. Daylight crashes still make up about 70% of all crashes and should remain an important prevention focus. Special programs focusing attention on dark, unlighted road hazards may also be useful.

Fatal or Serious Injury Crashes by Precipitation and Year

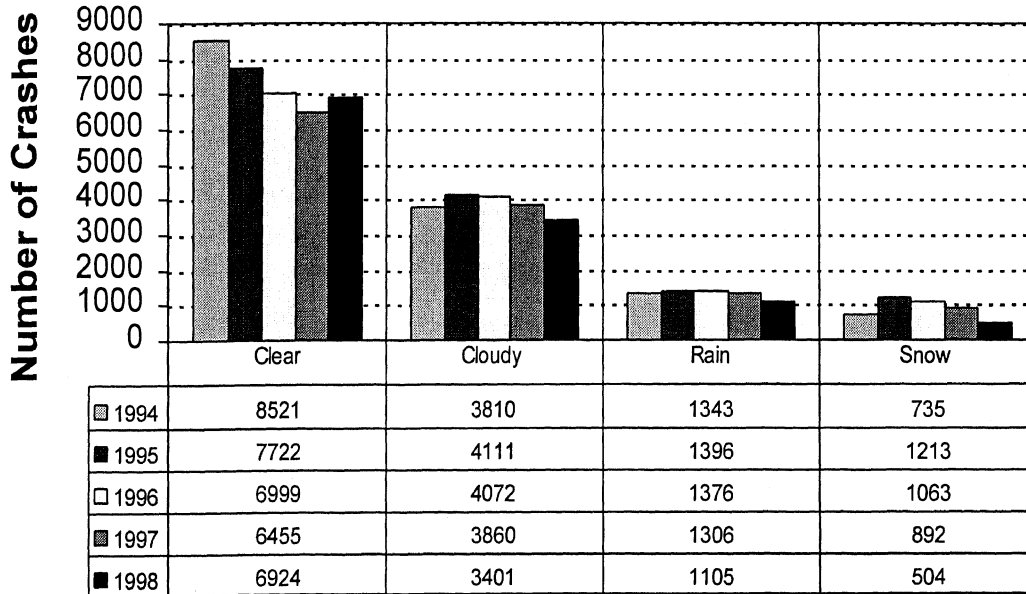


Chart 4 - Number by Precipitation and Year

After three years of decline, KA crashes in clear weather increased from 1997 to 1998. Because there is no good way to know how much travel each year occurred during which weather condition, there is no way to know if this increase is the result of some change in driving or simply the result of better weather. However, the data do make it clear that there is no reason to support a large foul weather crash prevention campaign because rain and snow crashes make up less than 20% of all KA crashes.

Fatal or Serious Injury Crashes by Highway Class and Year

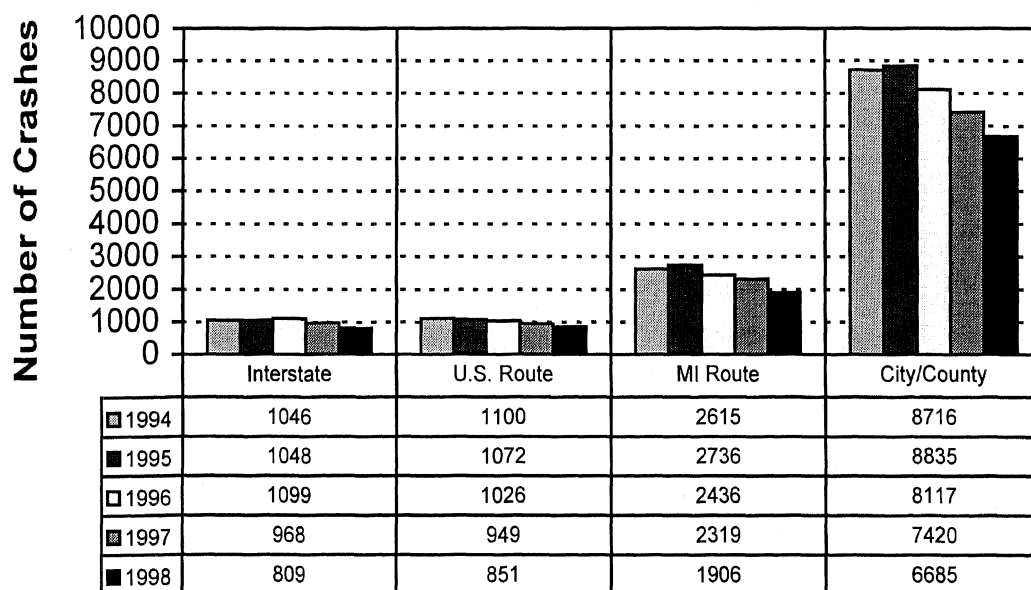


Chart 5 - Number by Highway Class and Year

City/County roads continue to predominate the KA crash picture in Michigan. In order for Michigan to achieve its traffic-safety goals, greater success will be required on these roadways. Note that less than 20% of all crashes occur on interstate or U.S. routes.

Fatal or Serious Injury Crashes by Speed Limit and Year

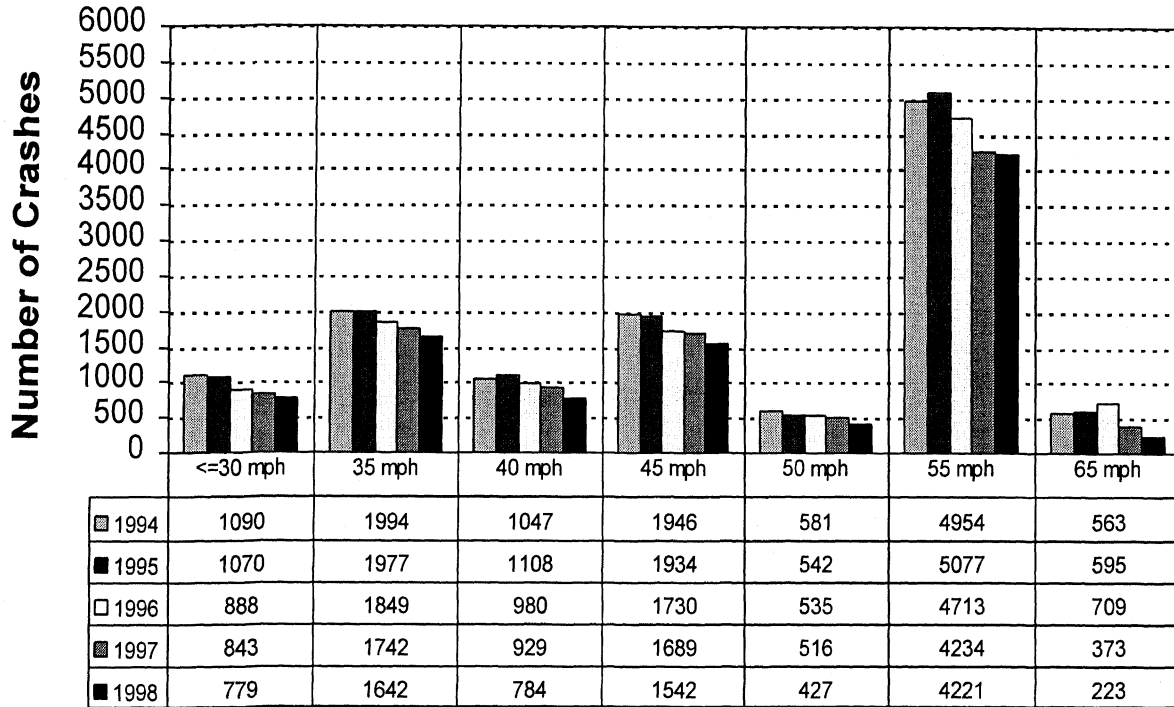


Chart 6 - Number by Speed Limit and Year

This chart shows that roads with a 55 mph speed limit not only make up the largest single category of KA crashes, but also shows the smallest decline from 1997 to 1998. These data would strongly suggest these roads as a focus for immediate attention.

Fatal or Serious Injury Crashes by Road Surface Condition and Year

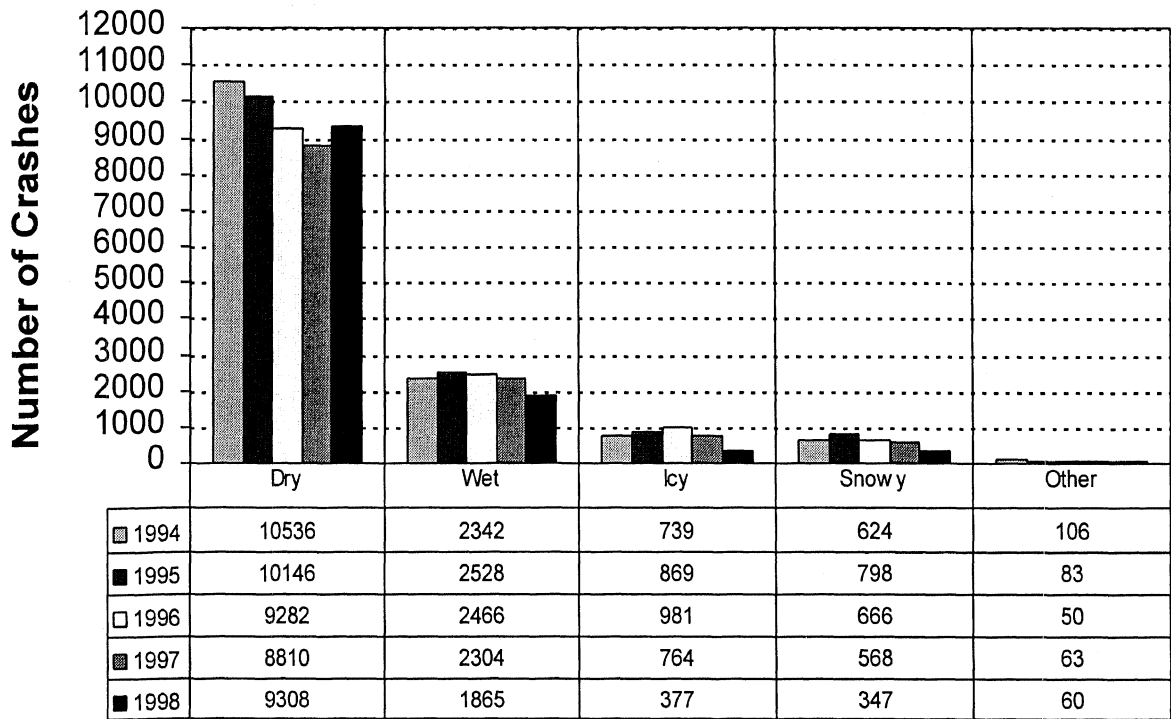


Chart 7 - Number by Road Surface Condition and Year

As was the case with precipitation, we can see that most crashes occur on dry roads. This would suggest little need to focus new efforts on driving on adverse road conditions.

Table 3 - Number by Hazardous Action and Year (Single-Vehicle)

		Number of Vehicles Involved in Single-Vehicle Crashes by Hazardous Action and Year														
		None	Speed Too Fast	Speed Too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
Number of Vehicles	1994	492	1799	17	7	42	8	98	14	57	9	4	4	196	1177	208
	1995	494	1889	12	20	41	4	74	9	47	6	3	5	168	1190	254
	1996	476	1749	10	23	44	3	78	14	40	4	2	3	168	1174	215
	1997	446	1627	10	15	32	2	59	21	33	6	1	0	155	1047	218
	1998	410	1559	6	20	43	5	57	13	34	11	3	7	138	1045	229
	1994	0.8%	37.6%	17.7%	28.6%	28.6%	12.5%	27.6%	64.3%	43.9%	11.1%	25.0%	50.0%	27.0%	35.9%	6.7%
1995	1.4%	34.8%	50.0%	45.0%	26.8%	0.0%	27.0%	33.3%	48.9%	16.7%	33.3%	20.0%	20.0%	30.4%	35.2%	5.1%
1996	0.8%	34.2%	30.0%	39.1%	27.3%	33.3%	26.9%	42.9%	30.0%	0.0%	0.0%	0.0%	0.0%	33.9%	36.1%	5.6%
1997	1.1%	34.2%	10.0%	46.7%	43.8%	50.0%	28.8%	38.1%	27.3%	16.7%	0.0%	0.0%	30.3%	31.7%	5.1%	11.0%
1998	0.7%	34.9%	33.3%	30.0%	25.6%	20.0%	38.6%	61.5%	35.3%	45.5%	33.3%	28.6%	27.5%	32.4%	4.4%	
Proportion of Hazardous Actions Cited																

The table above shows that, according to the officer completing the crash report, most single-vehicle crashes are the result of excessive speed. However, in only about 35% of these crashes is the driver cited for the hazardous action that precipitated the crash. While it is well understood that in fatal and severe-injury crashes there are often ethical and legal constraints to issuing a citation, increasing the proportion of KA crashes (especially speed-related crashes) in which persons are cited would likely act to impress on persons that safe, legal driving is important and will be strictly enforced.

Table 4 - Number by Hazardous Action and Year (Multiple-Vehicle)

		Number of Vehicles Involved in Multiple-Vehicle Crashes by Hazardous Action and Year														
		None	Speed Too Fast	Speed Too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
Number of Vehicles	1994	10962	923	27	3182	1413	79	575	133	251	270	22	57	1736	1403	467
	1995	11266	1018	51	3114	1401	72	609	129	236	289	21	45	1704	1476	523
	1996	10371	939	48	2996	1350	62	493	144	250	250	17	36	1504	1344	589
	1997	9784	882	30	2875	1267	55	465	105	211	221	14	29	1418	1228	490
	1998	9118	698	30	2760	1184	44	454	110	236	220	25	40	1274	1240	530
Proportion of Hazardous Actions Cited	1994	0.2%	38.2%	33.3%	55.3%	54.8%	38.0%	36.9%	48.9%	38.7%	48.9%	22.7%	21.1%	50.9%	28.8%	1.7%
	1995	0.5%	37.6%	37.3%	55.2%	53.9%	27.8%	37.1%	51.2%	39.8%	43.3%	23.8%	37.8%	53.7%	27.4%	1.3%
	1996	0.4%	38.6%	41.7%	52.3%	52.4%	19.4%	39.8%	43.8%	38.8%	34.8%	35.3%	27.8%	51.2%	27.2%	2.0%
	1997	0.3%	40.0%	33.3%	53.3%	49.2%	30.9%	36.6%	39.1%	41.2%	42.5%	35.7%	44.8%	52.2%	25.2%	2.2%
	1998	0.5%	38.1%	30.0%	53.0%	49.3%	31.8%	37.4%	51.8%	39.8%	44.1%	40.0%	22.5%	52.0%	25.0%	1.5%

In contrast to single-vehicle crashes in which the most common hazardous action was excessive speed, among multiple-vehicle crashes the most common hazardous action reported by police was "none." Readers should note, however, that these crashes involve multiple vehicles and thus some of the vehicles were innocent bystanders. Among the hazardous actions listed, "failure to yield" had the most cases by 2 to 1 over the next leading action. Note that, like the single-vehicle crashes, hazardous actions in multiple-vehicle crashes are cited by police generally less than half the time they are noted on the crash report form.

Table 5 - Number by Vehicle Type and Year

Number of Vehicles Involved in KA Injury Crashes by Vehicle Type			
<i>Vehicle Type</i>	<i>Year</i>	<i>Count</i>	<i>Rate per 1000 Vehicles</i>
<i>Car</i>	94	17613	3.23
	95	17732	3.21
	96	16462	2.92
	97	15001	2.63
	98	13791	2.39
<i>Heavy Truck</i>	94	935	8.53
	95	885	8.07
	96	924	8.22
	97	811	7.12
	98	788	6.89
<i>Light Truck</i>	94	324	5.26
	95	333	5.45
	96	320	5.28
	97	319	5.32
	98	393	6.43
<i>Motorcycle</i>	94	804	6.86
	95	725	6.09
	96	657	5.44
	97	665	5.26
	98	718	5.19
<i>Pickup</i>	94	3348	3.02
	95	3438	2.97
	96	3159	2.61
	97	3095	2.46
	98	3055	2.28
<i>Van</i>	94	1555	10.18
	95	1799	11.62
	96	1684	10.73
	97	1573	9.89
	98	1560	9.67

By far the largest vehicle group in this table is passenger cars (almost 10,000 KA crashes more than all other vehicle types combined). For this reason, crashes involving passenger cars should be the central focus of OHSP program efforts. Efforts targeting other vehicle types may well result in declines in KA crashes involving those vehicle types, especially among subgroups of driver types like young males. However, such efforts would not, in all probability, move the state markedly toward the OHSP goals, even if the declines were dramatic.

Drivers Age 14-18

Table 6 - Number and Rate by Year

Number and Rate of Fatal or Serious Injury Crashes Drivers Age 14-18		
<i>Year</i>	<i>Number of Crashes</i>	<i>Rate per 1000 Licensed Drivers</i>
94	2792	9.48
95	2735	9.00
96	2513	8.27
97	2390	6.79
98	2174	6.02
<i>Change 94 to 98</i>	-22.13%	-36.50%
<i>Change 97 to 98</i>	-9.04%	-11.34%

This table shows that the number of KA crashes and crash rate declined each year since 1994. Although this is a small subgroup, it remains an important one. As the effects of the relatively new graduated licensing system become more evident as drivers move through the system, it is expected that these numbers will decline rapidly.

Table 7 - Number and Rate by Age, Sex, and Year

Fatal or Serious Injury Crash Frequency and Rate by Year, Age and Sex Drivers Age 14-18				
<i>Driver Age</i>	<i>Sex</i>	<i>Year</i>	<i>Count</i>	<i>Rate per 1000 Licensed Drivers</i>
14	M	94	153	87.13
		95	150	97.91
		96	124	80.94
		97	116	5.49
		98	112	4.82
	F	94	85	290.10
		95	71	282.87
		96	68	270.92
		97	67	3.21
		98	57	2.46
16	M	94	466	11.34
		95	459	10.68
		96	408	9.49
		97	404	9.12
		98	289	6.04
	F	94	374	9.40
		95	347	8.31
		96	344	8.24
		97	309	7.31
		98	250	5.32
17	M	94	499	9.43
		95	481	9.13
		96	447	8.48
		97	436	7.92
		98	415	7.67
	F	94	331	6.60
		95	304	5.96
		96	301	5.90
		97	274	5.18
		98	291	5.62
18	M	94	543	9.68
		95	532	9.08
		96	475	8.11
		97	443	7.49
		98	469	7.96
	F	94	283	5.40
		95	328	5.96
		96	302	5.49
		97	297	5.28
		98	270	4.86

While the data in this table are interesting, the effects of the graduated licensing system are likely to change these numbers and rates in the next few years. Program efforts should probably target greater compliance with the graduated licensing law and practice driving until the new law's effects are better known.

Fatal or Serious Injury Crashes by Month and Year - Drivers Age 14-18

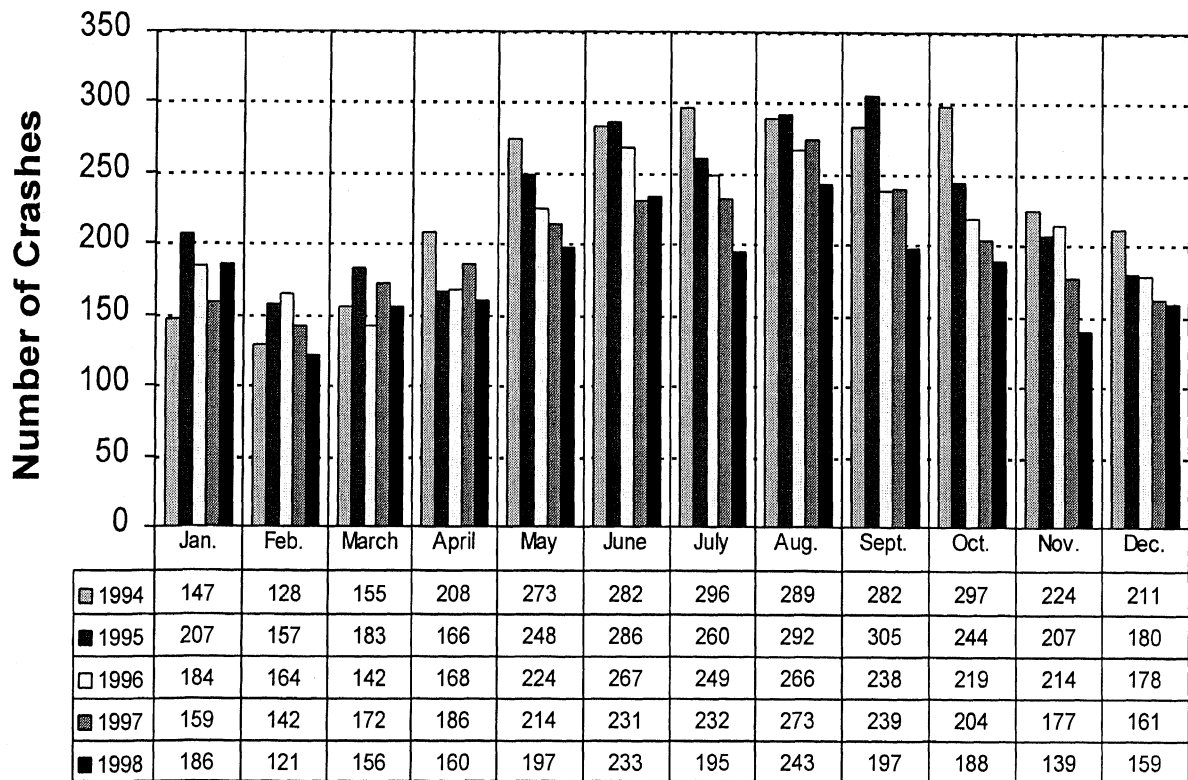


Chart 8 - Number by Month and Year

This chart shows that among this age group of drivers, declines were highest in the summer months and lowest during the spring and December. This would suggest a continuation of program activities in the summer months to maintain the positive change and a reemphasis of programs in the spring and December.

Fatal or Serious Injury Crashes by Day of Week and Year - Drivers Age 14-18

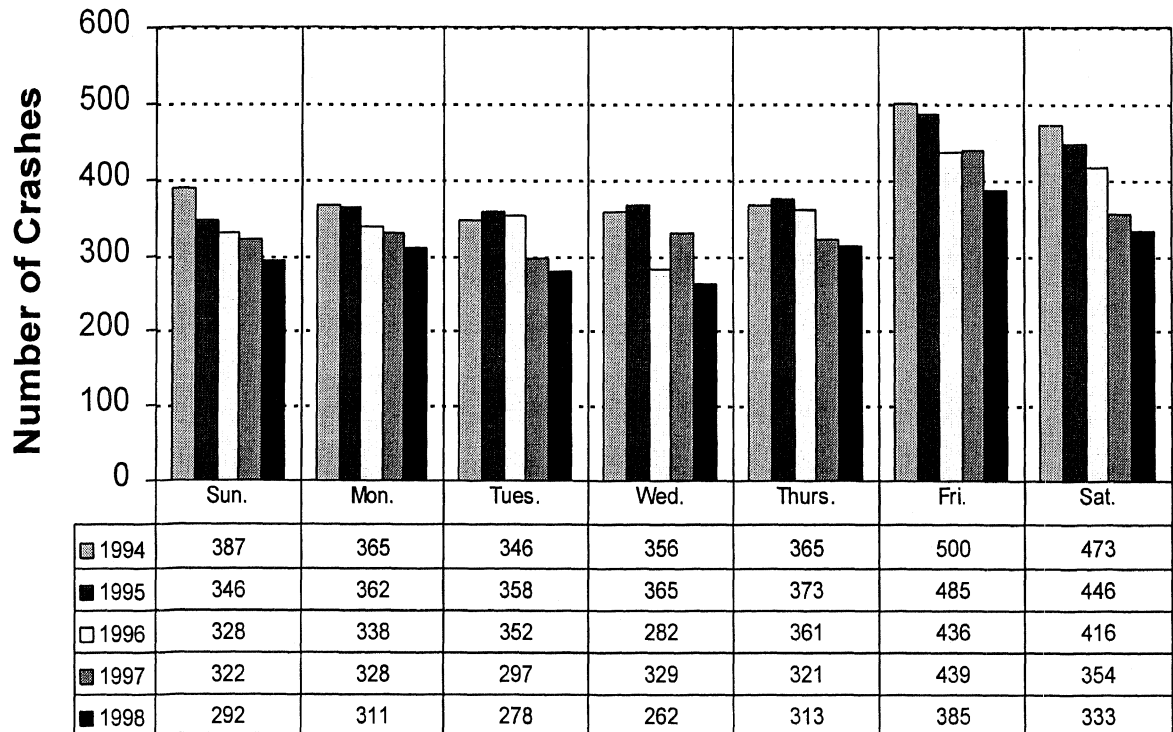


Chart 9 - Number by Day of Week and Year

Declines were observed for each day of the week, with the smallest declines occurring on Monday and Thursday.

Fatal or Serious Injury Crashes by Light Condition and Year - Drivers Age 14-18

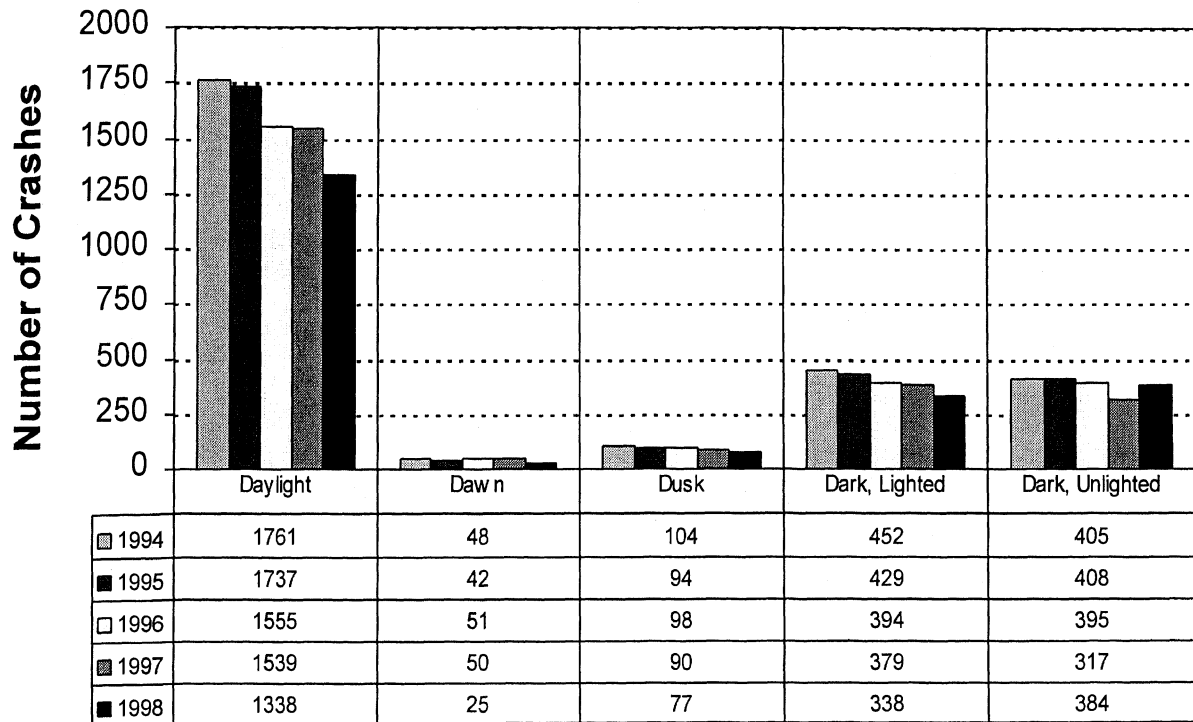


Chart 10 - Number by Light Condition and Year

Most crashes occurred during daylight. The number of crashes in darkness has remained a small proportion of crashes, but fairly constant over the years.

Fatal or Serious Injury Crashes by Precipitation and Year - Drivers Age 14-18

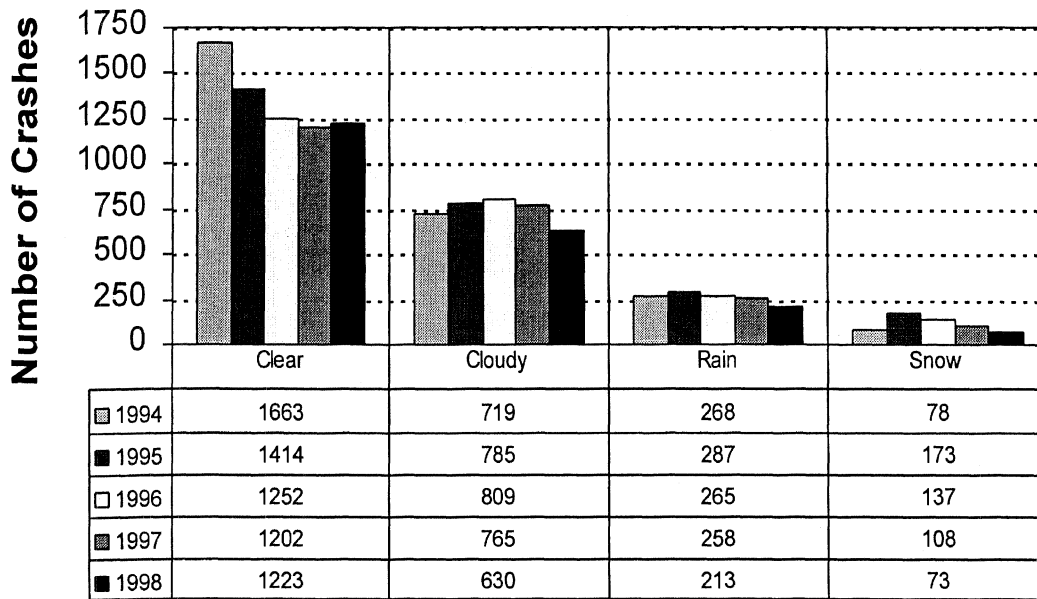


Chart 11 - Number by Precipitation and Year

This table provides no evidence that precipitation conditions are causing a significant problem for this group.

Fatal or Serious Injury Crashes by Highway Class and Year - Drivers Age 14-18

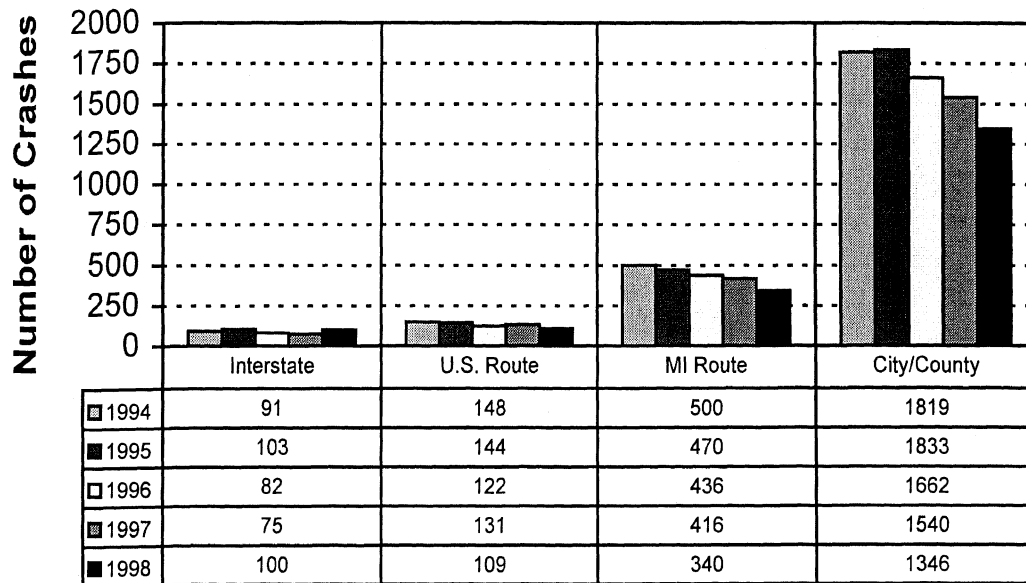


Chart 12 - Number by Highway Class and Year

If drivers age 14-18 were the focus of a program, this chart shows that the program should concentrate on driving on city/county roads.

Fatal or Serious Injury Crashes by Speed Limit and Year - Drivers Age 14-18

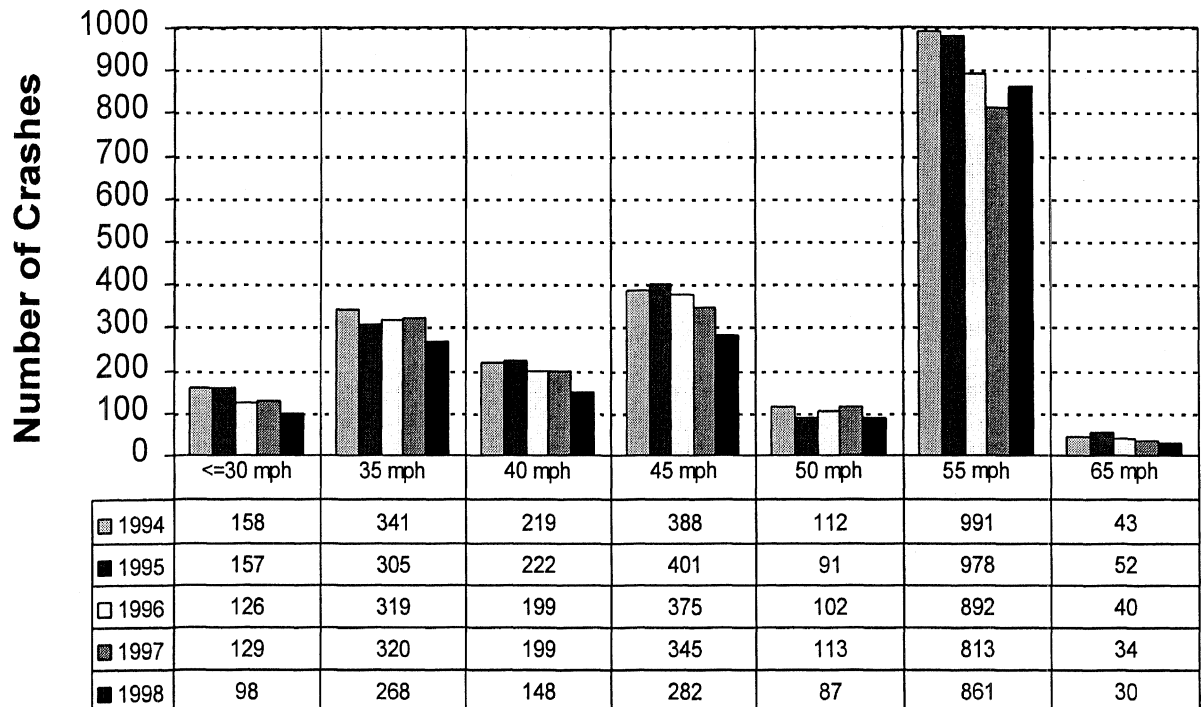


Chart 13 - Number by Speed Limit and Year

KA crashes among drivers age 14-18 are mostly on roads with a 55 mph speed limit. Indeed, 1998 observed the first increase in the number of crashes on 55 mph roads among drivers age 14-18 since before 1994.

Fatal or Serious Injury Crashes by Road Surface Condition and Year - Drivers Age 14-18

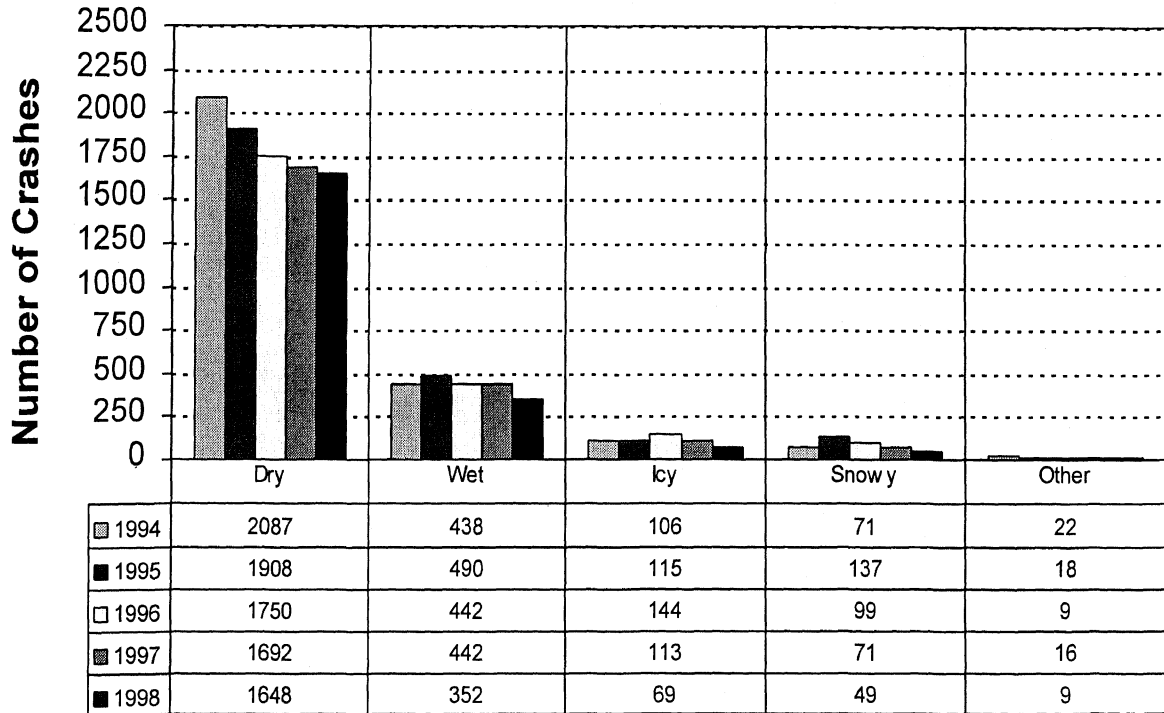


Chart 14 - Number by Road Surface Condition and Year

This chart provides no evidence that any given road condition is a special problem among drivers age 14-18.

Table 8 - Number by Hazardous Action and Year (Single-Vehicle)

		Number of Vehicles Involved in Single-Vehicle Crashes by Hazardous Action and Year Drivers Age 14-18														
		None	Speed Too Fast	Speed Too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
Number of Vehicles	1994	54	372	5	1	3	NA	16	5	12	2	1	0	30	171	17
	1995	52	364	2	2	3	NA	6	4	5	0	0	1	22	175	23
	1996	49	315	2	2	9	NA	8	5	1	0	1	1	27	175	21
	1997	41	307	3	1	4	NA	11	5	1	0	0	0	14	138	22
	1998	37	301	1	2	1	NA	9	4	1	1	1	2	17	148	29
		1994	0.0%	44.1%	40.0%	0.0%	33.3%	NA	12.5%	80.0%	58.3%	50.0%	100.0%	NA	33.3%	49.7%
Proportion of Hazardous Actions Cited	1995	1.9%	44.2%	100.0%	100.0%	33.3%	NA	33.3%	25.0%	80.0%	NA	NA	100.0%	40.9%	42.3%	4.4%
	1996	0.0%	46.7%	0.0%	100.0%	44.4%	NA	50.0%	40.0%	0.0%	NA	0.0%	0.0%	55.6%	39.4%	9.5%
	1997	0.0%	36.5%	33.3%	0.0%	25.0%	NA	63.6%	60.0%	100.0%	NA	NA	NA	28.6%	36.2%	0.0%
	1998	2.7%	45.5%	100.0%	0.0%	0.0%	NA	11.1%	50.0%	100.0%	100.0%	100.0%	100.0%	47.1%	37.2%	6.9%

We again see that the most frequently noted hazardous action among drivers age 14-18 is excessive speed.

Table 9 - Number by Hazardous Action and Year (Multiple-Vehicle)

Number of Vehicles Involved in Multiple-Vehicle Crashes by Hazardous Action and Year Drivers Age 14-18															
	None	Speed Too Fast	Speed Too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
1994	744	142	5	502	203	9	66	23	30	31	5	7	211	147	36
1995	739	157	8	485	192	6	75	14	15	32	1	4	219	183	33
1996	693	145	7	479	163	8	67	22	25	27	2	2	158	151	47
1997	692	131	2	450	184	7	69	12	24	27	1	2	190	125	34
1998	610	92	4	403	140	2	51	21	21	35	1	4	141	144	49
1994	0.1%	47.9%	80.0%	61.8%	64.5%	22.2%	43.9%	69.6%	56.7%	61.3%	20.0%	14.3%	61.6%	26.5%	5.6%
1995	0.8%	41.4%	37.5%	63.5%	67.7%	0.0%	53.3%	78.6%	53.3%	50.0%	0.0%	50.0%	63.0%	30.6%	3.0%
1996	0.7%	49.7%	57.1%	57.0%	65.6%	12.5%	52.2%	54.6%	36.0%	48.2%	0.0%	100.0%	63.9%	35.1%	2.1%
1997	0.4%	44.3%	0.0%	58.7%	59.2%	14.3%	42.0%	33.3%	37.5%	48.2%	0.0%	50.0%	64.2%	31.2%	0.0%
1998	0.2%	50.0%	25.0%	59.6%	56.4%	0.0%	52.9%	57.1%	33.3%	48.6%	0.0%	75.0%	61.0%	35.4%	0.0%
Number of Vehicles															
Proportion of Hazardous Actions Cited															

In multiple-vehicle crashes, when a hazardous action is noted by the police officer, drivers age 14-18 are most often noted for failure to yield.

Table 10 - Number by Vehicle Type and Year

Number of Vehicles Involved in KA Injury Crashes by Vehicle Type Drivers Age 14-18		
<i>Vehicle Type</i>	<i>Year</i>	<i>Count</i>
<i>Car</i>	94	2191
	95	2164
	96	1945
	97	1841
	98	1644
<i>Heavy Truck</i>	94	5
	95	1
	96	2
	97	4
	98	2
<i>Light Truck</i>	94	21
	95	19
	96	23
	97	23
	98	27
<i>Motorcycle</i>	94	62
	95	49
	96	44
	97	43
	98	43
<i>Pickup</i>	94	306
	95	305
	96	309
	97	297
	98	283
<i>Van</i>	94	78
	95	78
	96	86
	97	94
	98	74

In KA crashes, most drivers age 14-18 are driving a passenger car. The next most common vehicle is the pickup truck. This appears unlikely to change in the near future.

Drivers Age 70+

Table 11 - Number and Rate by Year

Number and Rate of Fatal or Serious Injury Crashes Drivers age 70+		
<i>Year</i>	<i>Number of Crashes</i>	<i>Rate per 1000 Licensed Drivers</i>
94	1,290	2.13
95	1,348	2.14
96	1,333	2.11
97	1,234	1.89
98	1,221	1.81
<i>Change 94 to 98</i>	-5.35%	-15.02%
<i>Change 97 to 98</i>	-1.06%	-4.23%

This is a small but growing subpopulation which does not appear to have an overwhelming KA crash problem at the moment. However, because this group is growing in size, it should be carefully monitored.

Table 12 - Number and Rate by Age, Sex, and Year

Fatal or Serious Injury Crash Frequency and Rate by Year, Age and Sex Drivers Age 70+				
<i>Driver Age</i>	<i>Sex</i>	<i>Year</i>	<i>Count</i>	<i>Rate per 1000 Licensed Drivers</i>
70-74	F	94	226	1.59
		95	203	1.40
		96	185	1.28
		97	181	1.25
		98	159	1.09
	M	94	256	1.97
		95	306	2.31
		96	303	2.28
		97	258	1.93
		98	236	1.75
75-79	F	94	165	1.66
		95	166	1.61
		96	181	1.75
		97	161	1.47
		98	168	1.50
	M	94	228	2.66
		95	246	2.76
		96	219	2.46
		97	215	2.29
		98	229	2.36
80-84	F	94	109	2.00
		95	92	1.57
		96	118	2.01
		97	107	1.70
		98	132	1.98
	M	94	155	3.31
		95	164	3.30
		96	168	3.38
		97	138	2.65
		98	130	2.34

Table 13 - Number and Rate by Age, Sex, and Year (continued)

Fatal or Serious Injury Crash Frequency and Rate by Year, Age and Sex Drivers Age 70+				
<i>Driver Age</i>	<i>Sex</i>	<i>Year</i>	<i>Count</i>	<i>Rate per 1000 Licensed Drivers</i>
85-89	F	94	41	2.03
		95	50	2.22
		96	31	1.37
		97	49	1.98
		98	44	1.69
	M	94	69	3.88
		95	70	3.63
		96	60	3.11
		97	72	3.50
		98	66	2.98
90-94	F	94	8	2.13
		95	7	1.53
		96	7	1.53
		97	10	1.88
		98	16	2.83
	M	94	13	3.06
		95	20	4.09
		96	20	4.09
		97	14	2.77
		98	21	3.89
95+	F	94	0	0.00
		95	0	0.00
		96	1	2.53
		97	2	4.51
		98	0	0.00
	M	94	0	0.00
		95	2	3.57
		96	4	7.14
		97	2	3.16
		98	0	0.00

Fatal or Serious Injury Crashes by Month and Year - Drivers Age 70+

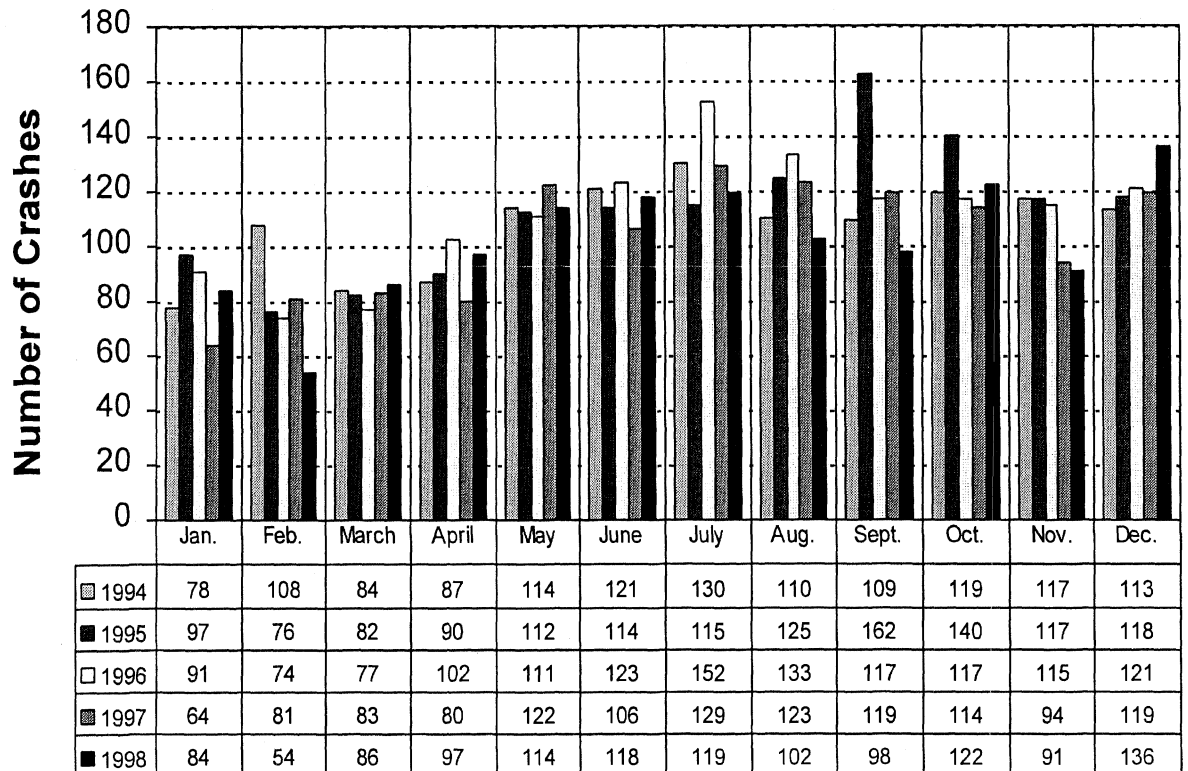


Chart 15 - Number by Month and Year

KA crash incidence among drivers age 70+ appear to cluster in the May-July period, and seem to change little from year-to-year for most months. It should also be noted that crash frequencies have generally increased from 1994 levels in the months of March, April, and December.

Fatal or Serious Injury Crashes by Day of Week and Year - Drivers Age 70+

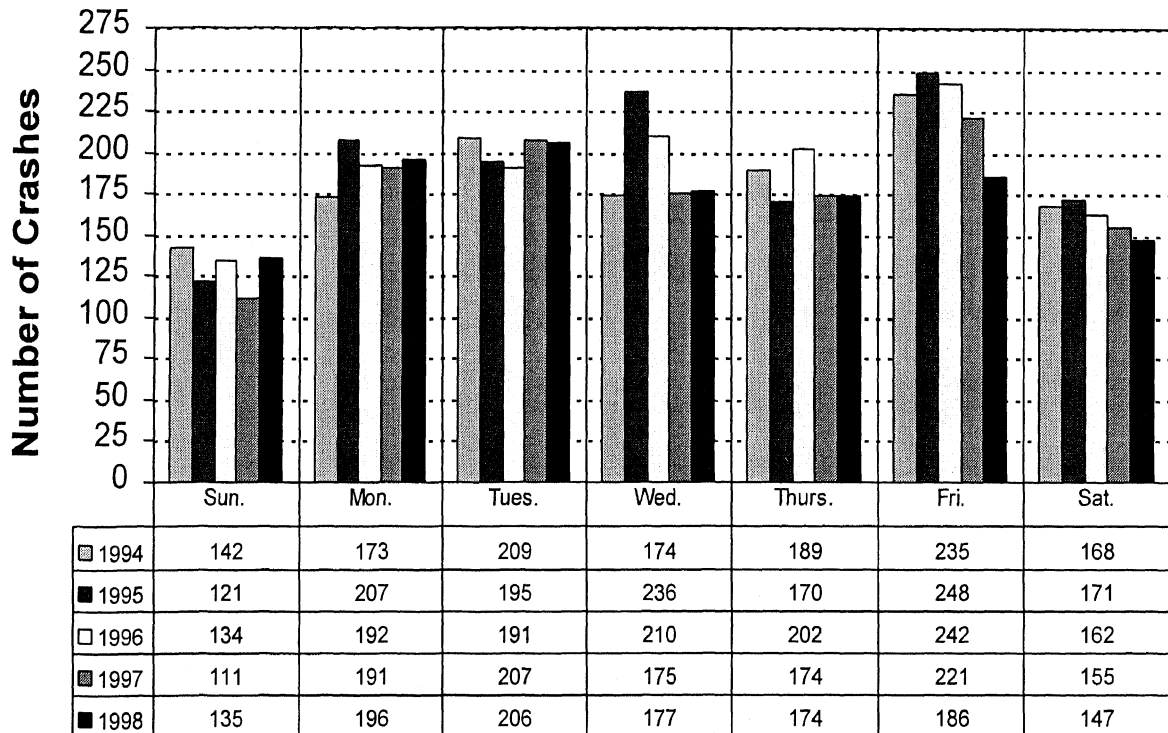


Chart 16 - Number by Day of Week

Crashes appear to have declined on weekends, but remain steady during weekdays.

Fatal or Serious Injury Crashes by Light Condition and Year - Drivers Age 70+

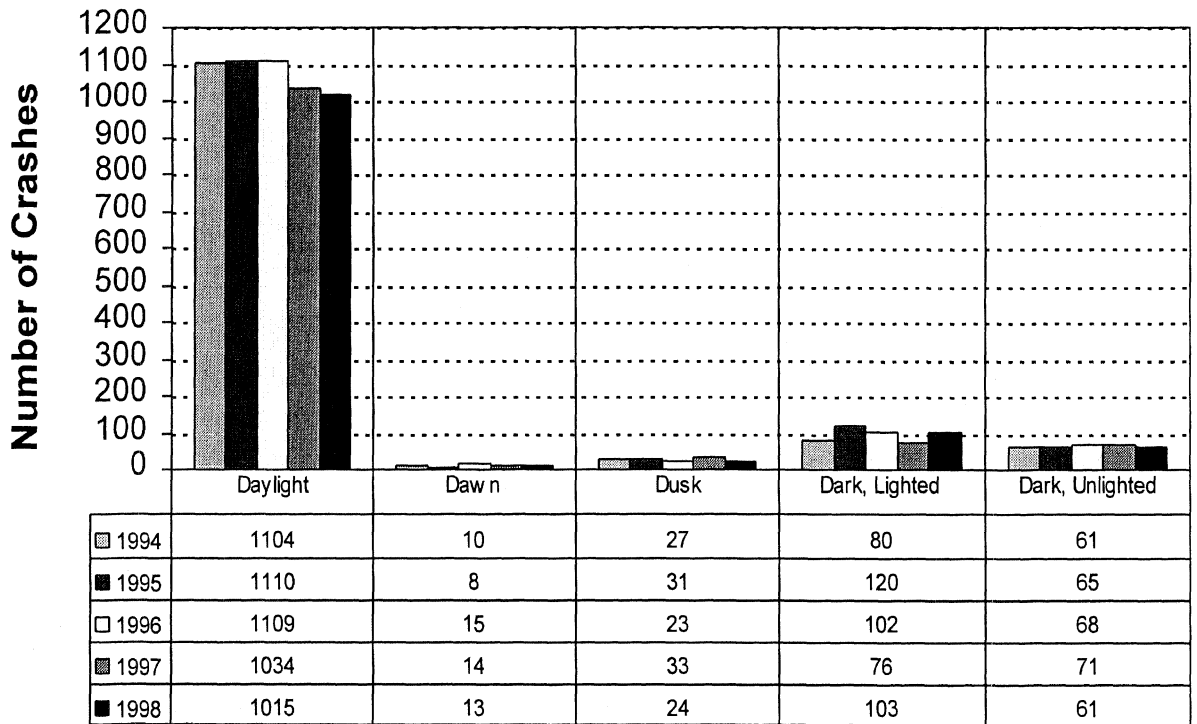


Chart 17 - Number by Light Condition and Year

Daylight is the light condition during which the vast majority of crashes occur for drivers age 70+.

Fatal or Serious Injury Crashes by Precipitation and Year - Drivers Age 70+

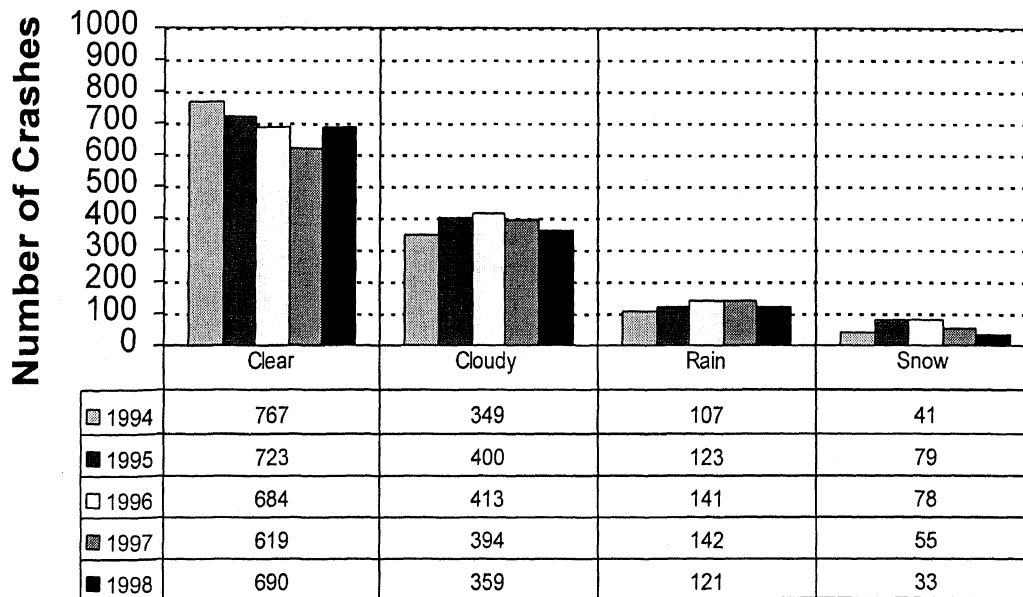


Chart 18 - Number by Precipitation and Year

There is no evidence of needed concern for drivers age 70+ with respect to precipitation.

Fatal or Serious Injury Crashes by Highway Class and Year - Drivers Age 70+

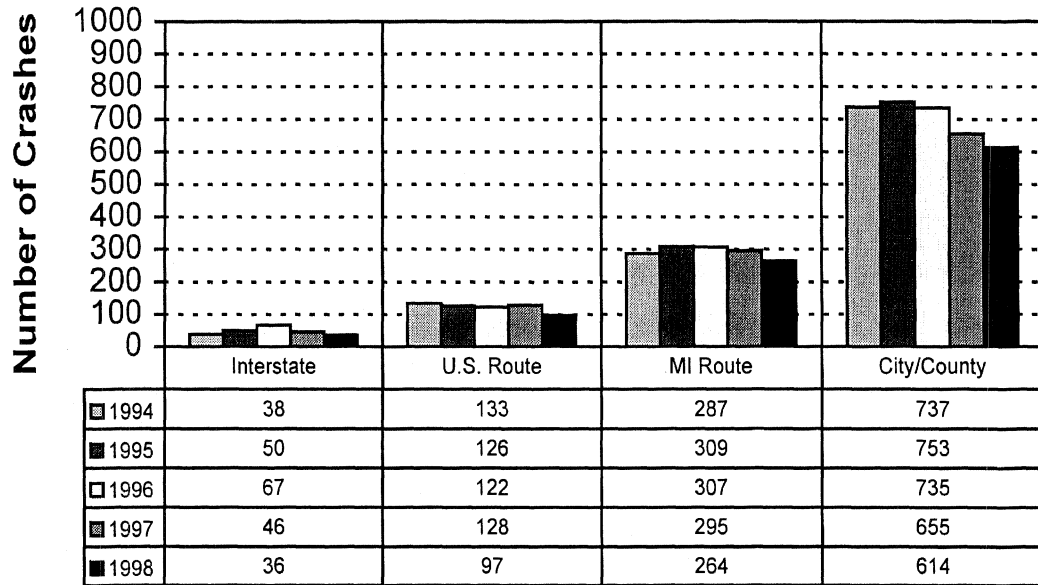


Chart 19 - Number by Highway Class and Year

While most crashes involving drivers age 70+ occur on city/county roads, a greater proportion of crashes involving drivers in this age group occur on Michigan routes and U.S. routes than for the other age groups examined.

Fatal or Serious Injury Crashes by Speed Limit and Year - Drivers Age 70+

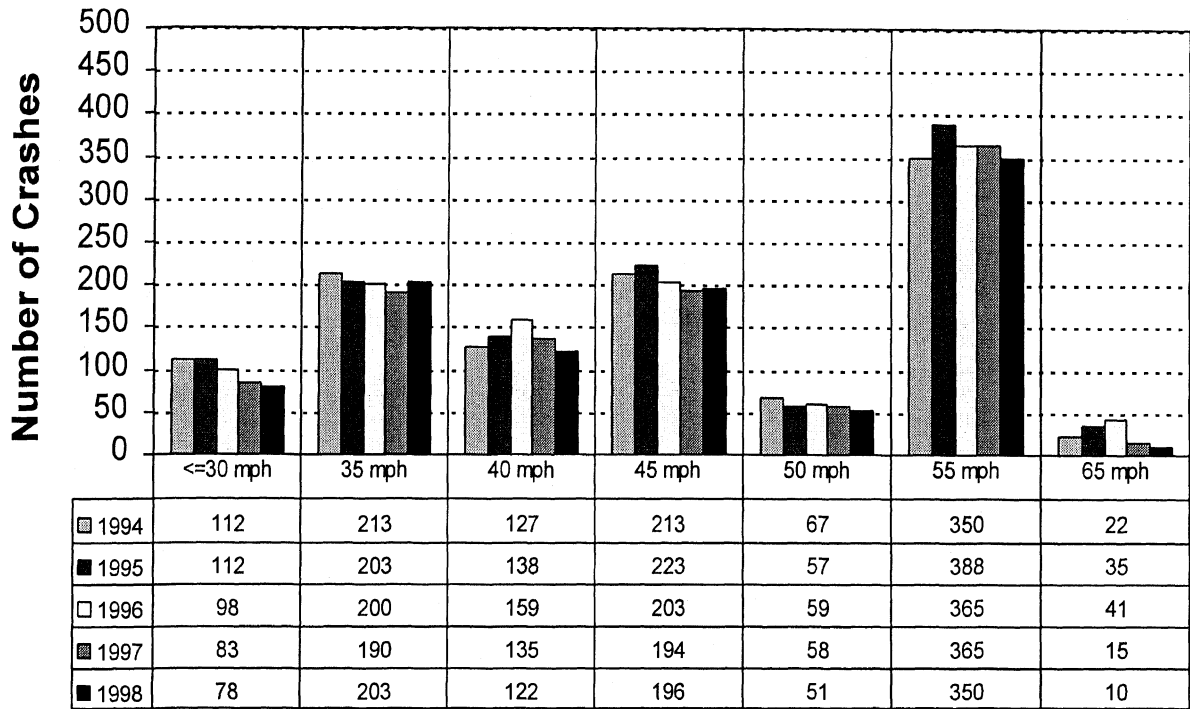


Chart 20 - Number by Speed Limit and Year

The pattern of KA crashes by speed limit among drivers age 70+ differs little from that of drivers of other age groups.

Fatal or Serious Injury Crashes by Road Surface Condition and Year - Drivers Age 70+

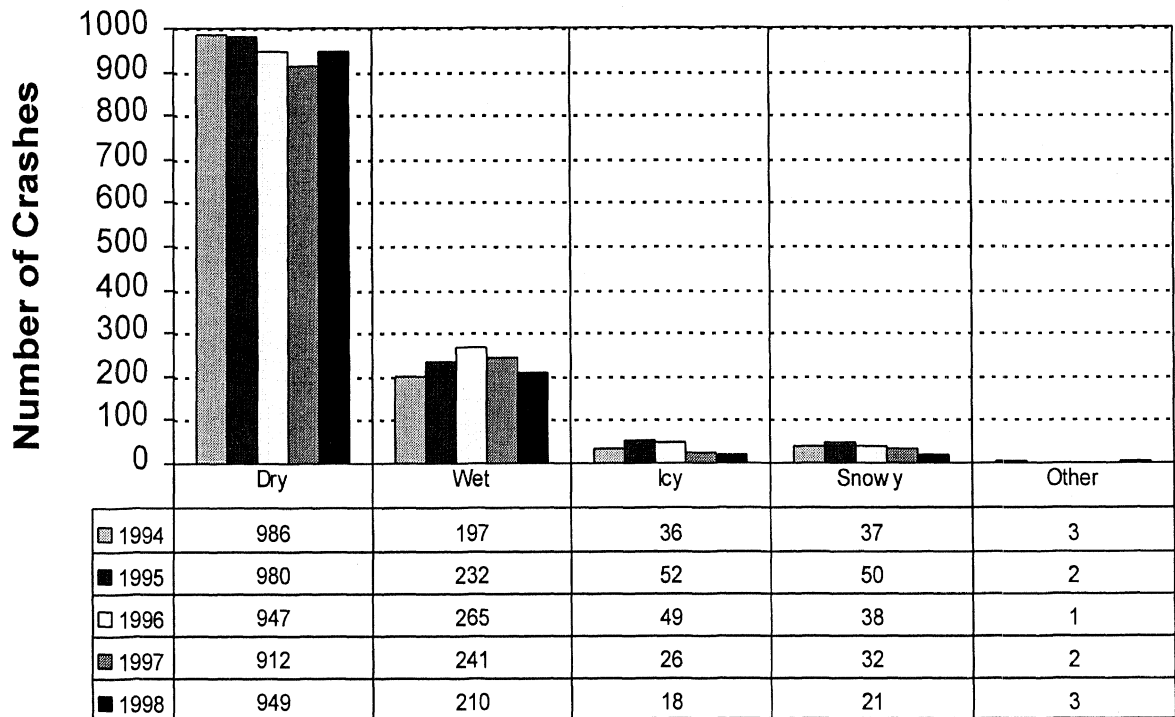


Chart 21 - Number by Road Surface Condition and Year

As was the case for the other driver subgroups, most crashes involving drivers age 70+ occur on dry roads.

Table 14 - Number by Hazardous Action and Year (Single-Vehicle)

		Number of Vehicles Involved in Single-Vehicle Crashes by Hazardous Action and Year Drivers Age 70+											
		None	Speed Too Fast	Speed Too Slow	Fail to Yield	Traffic Control	Left of Center	Improper Lane Use	Improper Turn	Improper Backing	Clear Distance	Other	Unknown
Number of Vehicles	1994	24	25	1	0	0	8	4	0	0	7	38	12
	1995	22	29	0	1	0	6	1	1	1	13	46	16
	1996	21	38	0	0	2	4	3	0	1	8	43	11
	1997	19	34	0	1	3	4	3	0	0	5	44	9
	1998	11	37	0	1	4	2	1	0	0	4	44	15
	1994	0.0%	20.0%	0.0%	NA	NA	12.5%	0.0%	NA	NA	14.3%	10.5%	0.0%
Proportion of Hazardous Actions Cited	1995	0.0%	17.2%	NA	0.0%	NA	50.0%	0.0%	0.0%	0.0%	7.7%	19.6%	0.0%
	1996	0.0%	26.3%	NA	NA	0.0%	25.0%	0.0%	NA	0.0%	0.0%	20.9%	9.1%
	1997	0.0%	32.4%	NA	100.0%	33.3%	25.0%	0.0%	NA	NA	20.0%	13.6%	0.0%
	1998	0.0%	18.9%	NA	0.0%	25.0%	50.0%	0.0%	NA	NA	0.0%	11.4%	0.0%

Unlike the other age groups, KA crashes among drivers age 70+ are not predominated by excessive speed. Indeed, the largest group for drivers of this age is other.

Table 15 - Number by Hazardous Action and Year (Multiple-Vehicle)

		Number of Vehicles Involved in Multiple-Vehicle Crashes by Hazardous Action and Year Drivers Age 70+														
		None	Speed Too Fast	Speed Too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
	1994	379	15	2	386	109	4	31	3	16	32	2	3	87	72	24
Number of Vehicles	1995	446	20	5	390	102	7	29	3	13	34	3	5	93	45	22
	1996	440	26	5	346	101	4	29	5	26	31	1	2	79	75	29
	1997	396	19	4	367	91	6	29	1	13	23	1	3	93	65	24
	1998	388	10	2	367	108	1	29	3	13	24	0	0	87	65	26
Proportion of Hazardous Actions Cited	1994	0.3%	40.0%	0.0%	52.3%	58.7%	75.0%	29.0%	0.0%	50.0%	56.3%	50.0%	33.3%	48.3%	19.4%	4.2%
	1995	0.7%	45.0%	20.0%	53.6%	50.0%	14.3%	34.5%	0.0%	38.5%	55.9%	33.3%	20.0%	44.1%	24.4%	0.0%
	1996	0.5%	30.8%	0.0%	48.0%	58.4%	0.0%	55.2%	40.0%	42.3%	51.6%	100.0%	50.0%	44.3%	26.7%	0.0%
	1997	0.0%	26.3%	75.0%	49.1%	53.9%	33.3%	31.0%	100.0%	69.2%	39.1%	0.0%	66.7%	46.2%	23.1%	0.0%
	1998	0.3%	30.0%	100.0%	50.7%	46.3%	100.0%	37.9%	66.7%	30.8%	54.2%	NA	NA	40.2%	15.4%	0.0%

In another departure from the other age groups in which the largest category here was *None* by a wide margin, *Failure to Yield* is mentioned almost as often as *None* among drivers age 70+ involved in multiple-vehicle crashes.

Table 16 - Number by Vehicle Type and Year

Number of Vehicles Involved in KA Injury Crashes by Vehicle Type Drivers Age 70+		
<i>Vehicle Type</i>	<i>Year</i>	<i>Count</i>
<i>Car</i>	94	1082
	95	1124
	96	1130
	97	1026
	98	992
<i>Heavy Truck</i>	94	1
	95	5
	96	2
	97	6
	98	3
<i>Light Truck</i>	94	7
	95	12
	96	4
	97	7
	98	12
<i>Motorcycle</i>	93	1
	94	2
	95	5
	96	0
	97	4
<i>Pickup</i>	94	104
	95	103
	96	97
	97	85
	98	97
<i>Van</i>	94	50
	95	54
	96	53
	97	67
	98	65

Among drivers age 70+ involved in KA crashes, the vehicle most often used (by far) is the passenger car.

KA INJURED OCCUPANTS

All Drivers

Table 17 - Number and Rate by Occupant Position and Year

Number and Rate of Occupants with Fatal or Serious Injuries by Occupant Position and Year			
<i>Occupant Position</i>	<i>Year</i>	<i>Number of KA Injured Occupants</i>	<i>Rate per 1000 Population</i>
<i>Driver</i>	94	11,489	1.210
	95	11,723	1.228
	96	10,988	1.149
	97	10,028	1.047
	98	9,357	0.953
<i>Front Center</i>	94	212	0.022
	95	183	0.019
	96	152	0.016
	97	159	0.017
	98	113	0.012
<i>Front Right</i>	94	3,459	0.364
	95	3,423	0.359
	96	3,154	0.330
	97	2,937	0.307
	98	2,671	0.272
<i>Rear Center</i>	94	204	0.022
	95	199	0.021
	96	171	0.018
	97	195	0.020
	98	169	0.017
<i>Rear Left</i>	94	489	0.052
	95	457	0.048
	96	419	0.044
	97	386	0.040
	98	413	0.042
<i>Rear Right</i>	94	574	0.061
	95	536	0.056
	96	474	0.050
	97	425	0.044
	98	413	0.042

The majority of occupants that experience fatal or serious injury are drivers and front-right passengers. Clearly for OHSP to achieve its traffic-safety goals, the emphasis should be on the behavior of the driver first and the right-front passenger second.

To put the numbers in perspective, it would require only a 5% reduction in the number of drivers that experience KA injury to provide the same change toward achieving the statewide goal as preventing 100% of the KA injuries among rear-right occupants.

However, we must keep in mind that the occupants of these two seating positions (driver and rear-right) represent two different populations (i.e., drivers are adults, rear-right occupants are generally children or older adults). Therefore, any set of activities that focuses on the driver to the exclusion of the others could result in an entire market segment being left out of the programming mix.

Table 18 - Number and Rate Among Pedestrians and Bicyclists

Number and Rate of Fatal or Serious Injuries Among Pedestrians and Bicyclists			
	<i>Year</i>	<i>Number of KA Injuries</i>	<i>Rate per 100K Population</i>
<i>Bike</i>	94	467	4.920
	95	427	4.472
	96	397	4.151
	97	389	4.062
	98	375	3.820
<i>Pedestrian</i>	94	1210	12.748
	95	1271	13.310
	96	1189	12.432
	97	1073	11.205
	98	1084	11.042

This table shows that pedestrian crashes outnumber bicycle crashes by 3 to 1. More importantly, note that the number of pedestrian KA injuries in 1998 (1,084) is actually slightly larger than that for KA injuries experienced in the rear seat of motor vehicles (995). This pattern holds true for each year examined. When considering program resources, we should keep in mind that KA crash injuries to pedestrians are as numerous as those to rear-seat occupants.

Table 19 - Number by Age, Sex, and Occupant Type

Number of Occupants with Fatal or Serious Injuries By Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
0 yr	F	94	5	1	0
		95	11	3	0
		96	20	1	0
		97	12	0	0
		98	7	0	0
	M	94	22	1	0
		95	18	1	0
		96	16	1	0
		97	15	0	0
		98	11	1	0
1 yr	F	94	16	7	0
		95	11	4	0
		96	15	4	0
		97	6	3	0
		98	16	4	0
	M	94	20	3	0
		95	18	3	0
		96	24	2	0
		97	6	2	0
		98	10	4	0
2 yr	F	94	22	6	0
		95	23	4	0
		96	23	8	0
		97	10	3	0
		98	18	3	0
	M	94	24	6	0
		95	32	12	0
		96	22	6	0
		97	17	6	0
		98	16	7	1
3 yr	F	94	25	5	0
		95	30	9	0
		96	24	9	0
		97	19	1	0
		98	18	5	0
	M	94	30	9	2
		95	42	11	1
		96	39	8	0
		97	27	7	0
		98	19	11	3

The data in this table show that the most likely targets for OHSP programming should be persons age 16-54. The highest concentration of KA injuries within this subgroup is among persons age 21-34.

Table 20 - Number by Age, Sex, and Occupant Type (continued)

Number of Occupants with Fatal or Serious Injuries by Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
4 yr	F	94	36	7	1
		95	33	4	1
		96	36	9	1
		97	19	5	0
		98	19	3	1
	M	94	35	10	1
		95	24	13	2
		96	33	12	6
		97	22	13	2
5-9 yr	F	94	118	46	15
		95	148	51	23
		96	134	45	9
		97	105	37	16
		98	141	47	10
	M	94	170	79	66
		95	173	82	45
		96	131	98	42
		97	120	77	52
10-15 yr	F	94	442	71	43
		95	421	86	33
		96	346	66	35
		97	308	66	22
		98	278	61	21
	M	94	411	104	125
		95	387	93	112
		96	343	86	115
		97	255	94	95
16-20 yr	F	94	1431	36	7
		95	1401	27	15
		96	1368	41	5
		97	1167	37	6
		98	1102	44	11
	M	94	1725	71	33
		95	1621	62	36
		96	1564	57	22
		97	1305	71	38
		98	1315	61	24

Table 21 - Number by Age, Sex, and Occupant Type (continued)

Number of Occupants with Fatal or Serious Injuries By Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
21-34 yr	F	94	2298	68	15
		95	2346	82	9
		96	2095	58	15
		97	1809	60	11
		98	1659	56	15
	M	94	3131	149	53
		95	3061	170	46
		96	2776	137	41
		97	2426	132	35
		98	2270	114	32
35-54 yr	F	94	1995	91	6
		95	2132	89	6
		96	2016	81	11
		97	1807	72	14
		98	1740	80	13
	M	94	2163	167	55
		95	2236	198	51
		96	2172	196	43
		97	2004	162	54
		98	2005	192	65
55-64 yr	F	94	463	18	2
		95	492	22	0
		96	423	16	1
		97	383	11	2
		98	406	12	3
	M	94	411	29	10
		95	414	28	9
		96	411	44	7
		97	409	33	7
		98	412	39	5
65-69 yr	F	94	212	14	2
		95	225	8	1
		96	205	7	0
		97	160	9	1
		98	158	14	0
	M	94	168	15	4
		95	189	17	1
		96	153	19	5
		97	150	14	4
		98	155	3	2

Table 22 - Number by Age, Sex, and Occupant Type (continued)

Number of Occupants with Fatal or Serious Injuries by Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
70-74 yr	F	94	221	12	0
		95	218	9	0
		96	170	11	0
		97	163	10	1
		98	196	8	0
	M	94	147	8	1
		95	160	17	1
		96	163	12	3
		97	140	18	1
		98	125	5	4
75-79 yr	F	94	198	11	0
		95	201	7	1
		96	193	7	0
		97	177	6	1
		98	176	13	0
	M	94	122	15	2
		95	163	11	2
		96	119	8	1
		97	121	10	3
		98	116	20	3
80-84 yr	F	94	112	12	0
		95	130	9	0
		96	135	4	0
		97	113	5	0
		98	128	11	0
	M	94	93	4	1
		95	85	7	2
		96	114	12	2
		97	93	10	3
		98	78	11	2

Table 23 - Number by Age, Sex, and Occupant Type (continued)

Number of Occupants with Fatal or Serious Injuries by Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
85-89 yr	F	94	54	4	0
		95	53	3	0
		96	49	3	0
		97	63	5	0
		98	49	8	0
	M	94	45	6	2
		95	46	3	0
		96	40	5	0
		97	53	4	2
		98	53	3	0
90 + yr	F	94	14	0	0
		95	17	0	0
		96	20	0	0
		97	22	5	0
		98	20	0	0
	M	94	14	1	0
		95	12	3	0
		96	16	3	1
		97	9	0	1
		98	16	1	0

Drivers Age 14-18

Table 24 - Number by Seat Position and Year

Number and Rate of Fatal or Serious Injuries by Seat Position and Year Drivers Age 14-18			
<i>Seat Position</i>	<i>Year</i>	<i>Number of KA Injuries</i>	<i>Rate per 1000 Licensed Drivers</i>
<i>Driver</i>	94	1343	4.560
	95	1329	4.374
	96	1242	4.088
	97	1114	3.166
	98	1043	2.880
<i>Front Center</i>	94	45	0.153
	95	28	0.092
	96	41	0.135
	97	27	0.077
	98	30	0.083
<i>Front Right</i>	94	610	2.071
	95	543	1.787
	96	553	1.820
	97	506	1.438
	98	449	1.240
<i>Rear Center</i>	94	54	0.183
	95	32	0.105
	96	30	0.099
	97	37	0.105
	98	34	0.094
<i>Rear Left</i>	94	111	0.377
	95	85	0.280
	96	92	0.303
	97	68	0.193
	98	93	0.257
<i>Rear Right</i>	94	151	0.513
	95	101	0.332
	96	102	0.336
	97	85	0.242
	98	89	0.246

These patterns are the same as were seen for all drivers. This is a driver group that should show significant impact (i.e., reductions in injury counts and rates) if the graduated license programs are effective.

Table 25 - Number by Age, Sex, and Occupant Type

Number of Occupants with Fatal or Serious Injuries by Age, Gender, and Occupant Type Drivers age 14-18					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
0 yr	F	96	1	0	0
		97	2	0	0
		98	0	0	0
	M	96	2	0	0
		98	1	0	0
1 yr	F	94	1	0	0
		95	3	0	0
		98	2	0	0
	M	94	2	0	0
		95	1	0	0
		96	2	0	0
		97	1	0	0
		98	2	0	0
2 yr	F	94	1	0	0
		95	2	0	0
		97	2	0	0
		98	2	0	0
	M	94	3	0	0
		95	1	0	0
		98	1	0	0
3 yr	F	94	2	0	0
		96	1	0	0
		97	1	0	0
		98	0	0	0
	M	94	1	0	0
		95	4	0	0
		96	1	0	0
		97	2	0	0
4 yr	F	94	1	0	0
		95	2	0	0
		96	1	0	0
		97	2	0	0
		98	1	0	0
	M	94	1	0	0
		97	2	0	0
		98	0	0	0

These data show that drivers age 14-18 tend to have KA crashes with passengers near to their age (16-20 yr) and slightly younger (10-15 yr). This would suggest that peer approaches could help reach multiple segments of the adolescent traffic-safety problem.

Table 26 - Number by Age, Sex, and Occupant Type (continued)

Number of Occupants with Fatal or Serious Injuries by Age, Gender, and Occupant Type Drivers age 14-18					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
5-9 yr	F	94	6	0	0
		95	4	0	0
		96	9	0	0
		97	3	0	0
		98	3	0	0
	M	94	8	0	0
		95	2	0	0
		96	4	0	0
		97	8	0	0
		98	11	0	0
10-15 yr	F	94	207	35	8
		95	192	28	9
		96	152	24	12
		97	145	29	4
		98	123	19	5
	M	94	206	36	38
		95	176	42	39
		96	158	35	28
		97	122	29	34
		98	124	27	28
16-20 yr	F	94	825	23	2
		95	779	22	9
		96	773	29	3
		97	674	27	4
		98	638	30	6
	M	94	1004	44	21
		95	911	36	21
		96	903	35	18
		97	734	44	29
		98	728	37	19
21-34 yr	F	94	19	0	0
		95	18	0	0
		96	17	0	0
		97	9	0	0
		98	15	0	0
	M	94	52	0	0
		95	32	0	0
		96	28	0	0
		97	20	0	0
		98	26	0	0

Table 27 - Number by Age, Sex, and Occupant Type (continued)

Number of Occupants with Fatal or Serious Injuries by Age, Gender, and Occupant Type Drivers age 14-18					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
35-54 yr	F	94	17	0	0
		95	22	0	0
		96	29	0	0
		97	24	0	0
		98	25	0	0
	M	94	8	0	0
		95	9	0	0
		96	6	0	0
		97	10	0	0
		98	10	0	0
55-64 yr	F	94	1	0	0
		95	1	0	0
		96	4	0	0
		97	1	0	0
		98	2	0	0
	M	94	1	0	0
		95	1	0	0
		96	4	0	0
		97	2	0	0
		98	2	0	0
65-69 yr	F	94	2	0	0
		95	2	0	0
		96	1	0	0
		97	1	0	0
		98	0	0	0
	M	94	1	0	0
		95	2	0	0
		97	1	0	0
		98	0	0	0

Table 28 - Number by Age, Sex, and Occupant Type (continued)

Number of Occupants with Fatal or Serious Injuries by Age, Gender, and Occupant Type Drivers age 14-18					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
70-74 yr	F	95	1	0	0
		98	1	0	0
	M	96	1	0	0
		98	1	0	0
75-79 yr	F	96	1	0	0
		98	0	0	0
	M	95	1	0	0
		97	1	0	0
80-84 yr	F	96	1	0	0
		98	1	0	0
	M	93	1	0	0
		98	0	0	0
85-89 yr	F	97	3	0	0
		98	0	0	0
	M	98	0	0	0
90 + yr	F	98	0	0	0
	M	94	1	0	0
		95	1	0	0
		98	0	0	0

Drivers Age 70+

Table 29 - Number and Rate by Seat Position and Year

Number and Rate of Fatal or Serious Injuries by Seat Position and Year Drivers Age 70+			
<i>Seat Position</i>	<i>Year</i>	<i>Number of KA Injuries</i>	<i>Rate per 1000 Licensed Drivers</i>
<i>Driver</i>	94	728	1.201
	95	772	1.225
	96	750	1.190
	97	720	1.102
	98	703	1.044
<i>Front Center</i>	94	6	0.010
	95	4	0.006
	96	5	0.008
	97	4	0.006
	98	6	0.009
<i>Front Right</i>	94	208	0.343
	95	219	0.347
	96	205	0.325
	97	192	0.294
	98	187	0.277
<i>Rear Center</i>	94	3	0.005
	95	5	0.008
	96	3	0.005
	97	3	0.005
	98	6	0.009
<i>Rear Left</i>	94	14	0.023
	95	13	0.021
	96	10	0.016
	97	9	0.014
	98	7	0.010
<i>Rear Right</i>	94	12	0.020
	95	14	0.022
	96	12	0.019
	97	11	0.017
	98	11	0.016

These data also follow the patterns seen for young drivers and all drivers.

Table 30 - Number by Age and Gender

Number of Occupants with Fatal or Serious Injuries by Age and Gender Drivers Age 70+			
Age	Sex	Year	Number of KA Injured Occupants
0 yr	F	94	1
2 yr	F	95	1
		97	2
3 yr	M	95	1
5-9 yr	F	94	1
		95	4
		98	1
	M	94	2
		95	3
		96	1
10-15 yr	F	94	1
		95	4
		96	3
		97	3
		98	0
	M	95	1
		96	3
		97	1
16-20 yr	F	94	3
		96	1
		97	1
	M	94	2
		97	1
		98	1
21-34 yr	F	94	2
		95	5
		96	4
		97	1
		98	1
	M	94	1
		95	1
		96	1
		97	1
		98	1

As was the case for drivers age 14-18, drivers age 70+ tend to have KA crashes with passengers in their cars that are close to their own age.

Table 31 - Number by Age and Gender (continued)

Number of Occupants with Fatal or Serious Injuries by Age and Gender Drivers Age 70+			
Age	Sex	Year	Number of KA Injured Occupants
35-54 yr	F	94	7
		95	13
		96	16
		97	10
		98	8
	M	94	4
		95	4
		96	3
		97	8
		98	4
55-64 yr	F	94	12
		95	12
		96	10
		97	5
		98	9
	M	94	2
		95	4
		96	1
		97	1
		98	1
65-69 yr	F	94	26
		95	24
		96	30
		97	11
		98	20
	M	94	2
		95	2
		96	1
		97	3
		98	0
70-74 yr	F	94	183
		95	188
		96	133
		97	136
		98	160
	M	94	134
		95	140
		96	145
		97	134
		98	116

Table 32 - Number by Age and Gender (continued)

Number of Occupants with Fatal or Serious Injuries by Age and Gender Drivers Age 70+			
Age	Sex	Year	Number of KA Injured Occupants
75-79 yr	F	94	169
		95	167
		96	169
		97	148
		98	145
	M	94	114
		95	153
		96	111
		97	110
		98	112
80-84 yr	F	94	98
		95	96
		96	114
		97	97
		98	117
	M	94	86
		95	81
		96	106
		97	89
		98	74
85-89 yr	F	94	44
		95	39
		96	37
		97	46
		98	38
	M	94	44
		95	43
		96	37
		97	46
		98	48
90 + yr	F	94	7
		95	7
		96	14
		97	14
		98	16
	M	94	7
		95	8
		96	14
		97	6
		98	16

'HAD-BEEN DRINKING' KA CRASHES

All Drivers

Table 33 - Number and Rate by Year

Number and Rate of Fatal or Serious Injury 'Had-Been-Drinking' Crashes					
Year	Number of Crashes	Rate per 100 Million VMT	Rate per 1000 Registered Vehicles	Rate per 1000 Population	Rate per 1000 Licensed Drivers
94	3,294	3.866	0.417	0.347	0.499
95	3,198	3.731	0.397	0.335	0.479
96	2,781	3.172	0.337	0.291	0.417
97	2,635	2.953	0.315	0.275	0.386
98	2,518	2.748	0.293	0.257	0.364
Change 94 to 98	-23.56%	-28.92%	-29.74%	-25.21%	-27.05%
Change 97 to 98	-4.44%	-6.94%	-6.98%	-6.54%	-5.70%

This table shows that significant declines in had-been-drinking (HBD) crashes resulting in death or serious injury have been experienced since 1994. It is likely that the new set of laws designed to impact the repeat alcohol offender that went into effect October 1999 will have a noticeable impact on these figures in years to come.

Table 34 - Number and Rate by Age, Sex, and Year

Fatal or Serious Injury Crash Frequency and Rates 'Had-Been-Drinking' Crashes by Year, Age Group, and Sex					
Age	Sex	Year	Number of Crashes	Rate per 1000 Population	Rate per 1000 Licensed Drivers
16-20 yr	F	94	59	0.181	0.232
		95	56	0.17	0.215
		96	64	0.19	0.246
		97	37	0.095	0.138
		98	62	0.175	0.227
		Change 94 to 98	5.08%	-3.31%	-2.16%
		Change 97 to 98	67.57%	84.21%	64.49%
	M	94	291	0.871	1.075
		95	296	0.873	1.08
		96	250	0.713	0.912
		97	221	0.616	0.779
		98	232	0.632	0.807
		Change 94 to 98	-20.27%	-27.44%	-24.93%
		Change 97 to 98	4.98%	2.60%	3.59%
21-34 yr	F	94	306	0.301	0.324
		95	271	0.271	0.292
		96	261	0.268	0.281
		97	225	0.244	0.251
		98	208	0.217	0.235
		Change 94 to 98	-32.03%	-27.91%	-27.47%
		Change 97 to 98	-7.56%	-11.07%	-6.37%
	M	94	1280	1.295	1.359
		95	1247	1.284	1.342
		96	1007	1.057	1.084
		97	1035	1.067	1.14
		98	911	0.983	1.011
		Change 94 to 98	-28.83%	-24.09%	-25.61%
		Change 97 to 98	-11.98%	-7.87%	-11.32%

The largest number of HBD crashes occur among male drivers age 21-54, but it is male drivers age 21-34 that represent Michigan's largest drunk driving crash group. Males age 21-34 consistently have both the most HBD crashes resulting in death and serious injury and the highest rates of these crashes.

The good news is that it is just this problem group (males age 21-34) that has experienced the largest reductions in HBD crashes. The bad news is that in order to continue to achieve this decline, we must not only continue what is being done, but increase our efforts to reach new subgroups of this population.

Table 35 - Number and Rate by Age, Sex, and Year (continued)

Fatal or Serious Injury Crash Frequency and Rates 'Had-Been-Drinking' Crashes by Year, Age Group, and Sex					
Age	Sex	Year	Number of Crashes	Rate per 1000 Population	Rate per 1000 Licensed Drivers
35-54 yr	F	94	179	0.133	0.139
		95	215	0.156	0.163
		96	206	0.15	0.156
		97	176	0.123	0.129
		98	196	0.133	0.141
		Change 94 to 98	9.50%	0.00%	1.44%
		Change 97 to 98	11.36%	8.13%	9.30%
	M	94	822	0.632	0.652
		95	849	0.635	0.658
		96	763	0.558	0.591
		97	744	0.563	0.555
		98	744	0.52	0.546
		Change 94 to 98	-9.49%	-17.72%	-16.26%
		Change 97 to 98	0.00%	-7.64%	-1.62%
55-69 yr	F	94	11	0.019	0.021
		95	20	0.034	0.038
		96	8	0.014	0.015
		97	17	0.03	0.031
		98	12	0.02	0.022
		Change 94 to 98	9.09%	5.26%	4.76%
		Change 97 to 98	-29.41%	-33.33%	-29.03%
	M	94	100	0.188	0.195
		95	142	0.268	0.276
		96	112	0.212	0.218
		97	117	0.213	0.222
		98	102	0.186	0.189
		Change 94 to 98	2.00%	-1.06%	-3.08%
		Change 97 to 98	-12.82%	-12.68%	-14.86%

Table 36 - Number and Rate by Age, Sex, and Year (continued)

Fatal or Serious Injury Crash Frequency and Rates 'Had-Been-Drinking' Crashes by Year, Age Group, and Sex					
Age	Sex	Year	Number of Crashes	Rate per 1000 Population	Rate per 1000 Licensed Drivers
70+ yr	F	94	2	0.004	0.006
		95	2	0.004	0.006
		96	1	0.002	0.003
		97	5	0.011	0.014
		98	8	0.015	0.022
		Change 94 to 98	300.00%	275.00%	266.67%
		Change 97 to 98	60.00%	36.36%	57.14%
	M	94	30	0.096	0.105
		95	28	0.088	0.095
		96	37	0.113	0.125
		97	26	0.097	0.085
		98	28	0.08	0.089
		Change 94 to 98	-6.67%	-16.67%	-15.24%
		Change 97 to 98	7.69%	-17.53%	4.71%

Table 37 - Number of HBD Pedestrian and Bicyclist by Age, Sex, and Year

Number of 'Had-Been-Drinking' Bicyclists and Pedestrians with Fatal or Serious Crash Injuries by Age Group, Gender, and Year				
Age Group	Gender	Year	Bicyclists	Pedestrians
10-15 yr	F	94	0	0
		95	0	0
		96	0	1
		97	0	0
		98	0	0
	M	94	0	0
		95	0	1
		96	0	0
		97	0	0
		98	0	1
16-20 yr	F	94	0	1
		95	0	2
		96	0	2
		97	0	1
		98	1	6
	M	94	1	6
		95	1	13
		96	2	10
		97	0	11
		98	0	8
21-34 yr	F	94	2	13
		95	0	16
		96	1	11
		97	0	6
		98	0	9
	M	94	9	41
		95	10	57
		96	10	35
		97	4	36
		98	8	28
35-54 yr	F	94	0	11
		95	1	12
		96	1	15
		97	1	12
		98	1	15
	M	94	15	34
		95	11	51
		96	10	58
		97	4	60
		98	16	65

Table 38 - Number of HBD Pedestrian and Bicyclist by Age, Sex, and Year (continued)

Number of 'Had-Been-Drinking' Bicyclists and Pedestrians with Fatal or Serious Crash Injuries by Age Group, Gender, and Year				
<i>Age Group</i>	<i>Gender</i>	<i>Year</i>	<i>Bicyclists</i>	<i>Pedestrians</i>
55-64 yr	F	94	0	0
		95	0	1
		96	0	0
		97	0	1
		98	0	0
	M	94	0	8
		95	0	11
		96	3	9
		97	20	7
		98	0	7
65-69 yr	F	94	0	1
		95	0	0
		96	0	0
		97	0	0
		98	0	0
	M	94	0	1
		95	0	5
		96	0	5
		97	0	1
		98	0	0

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Month and Year

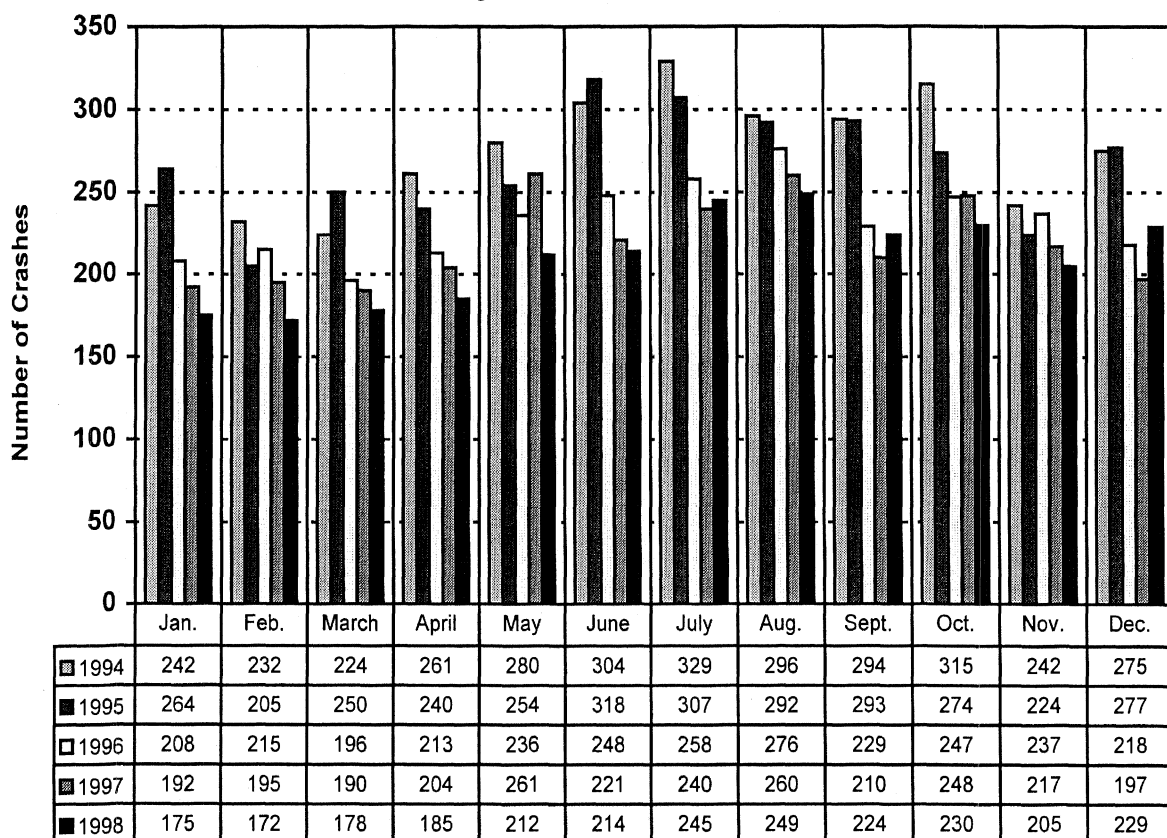


Chart 22 - Number by Month and Year

This chart appears to show a phenomenon first described in last year's trend report. That is, the declines that have been observed, particularly in summer and traditional holiday months have begun to taper off, and in some cases reverse themselves (e.g., July and December). This is probably a sign that we have reached those persons whose drinking and driving behavior is relatively easy to modify, and we are thus left with the more difficult cases. These persons should be affected by the new repeat-offender laws that went into effect October 1999.

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Day of Week and Year

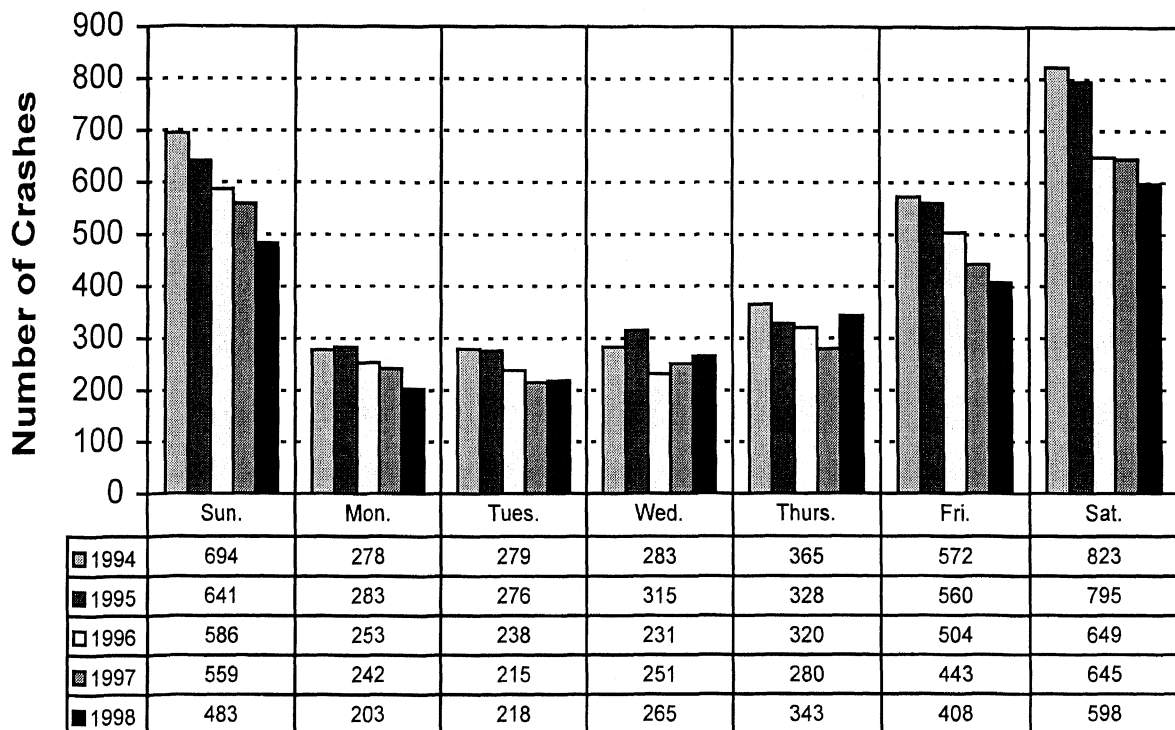


Chart 23 - Number by Day of Week

This chart more clearly shows the declining effect noted in the discussion of the previous chart. Note that while crash frequencies have been declining on the weekend days, that these declines have lessened in the last two years. Also note that the number of HBD crashes has remained relatively stable or even slightly increased on weekdays. This also supports the hypothesis that we have reached a point where new efforts will be required to achieve additional gains against alcohol-impaired driving.

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Highway Class and Year

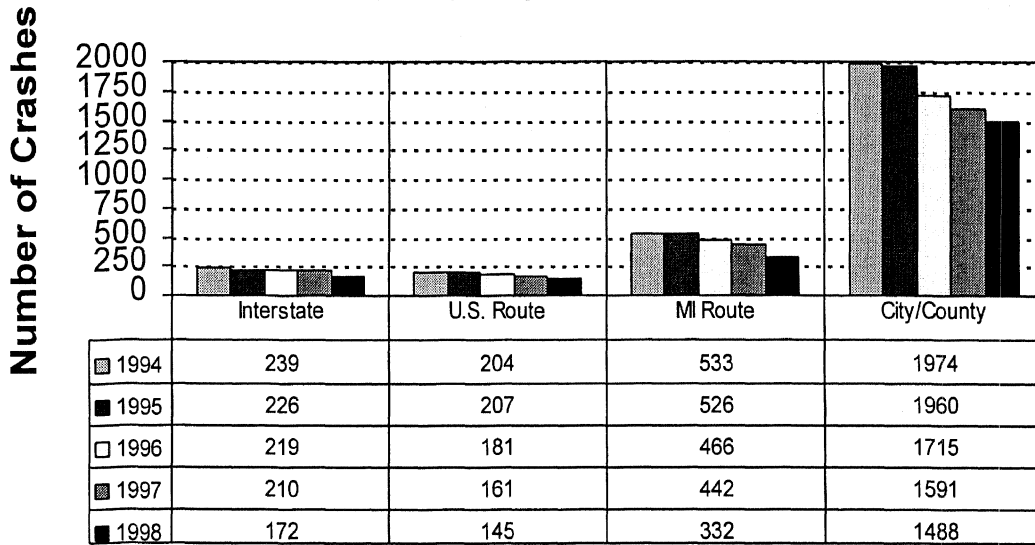


Chart 24 - Number by Highway Class and Year

Alcohol-impaired driving crashes are most common on city/county roads. Year-to-year declines have been steady for all road types.

Drivers Age 14-18

Table 39 - Number and Rate by Year

Number and Rate of Fatal or Serious 'Had-Been-Drinking' Crashes by Year Drivers Age 14-18			
	<i>Year</i>	<i>Number of Crashes</i>	<i>Rate per 1000 Licensed Drivers</i>
<i>Driver Age 14-18</i>	94	167	0.567
	95	153	0.504
	96	147	0.484
	97	116	0.330
	98	130	0.360

This is obviously a small problem in terms of achieving statewide traffic-safety goals.

Table 40 - Number and Rate by Age, Sex, and Year

Number and Rate of Fatal or Serious Injury 'Had-Been-Drinking' Crashes by Driver Age, Gender, and Year Drivers Age 14-18				
Age	Sex	Year	Number of Crashes	Rate per 1000 Licensed Drivers
14 yr	F	94	2	6.826
		95	1	3.984
		96	2	7.968
		97	1	0.048
		98	1	0.043
	M	94	4	2.278
		95	0	0
		96	1	0.653
		97	4	0.189
		98	4	0.172
16 yr	F	94	3	0.075
		95	3	0.072
		96	7	0.168
		97	6	0.142
		98	3	0.064
	M	94	20	0.486
		95	19	0.442
		96	13	0.302
		97	15	0.339
		98	8	0.167
17 yr	F	94	16	0.319
		95	5	0.098
		96	13	0.255
		97	5	0.095
		98	13	0.251
	M	94	46	0.869
		95	45	0.854
		96	35	0.664
		97	29	0.527
		98	33	0.610
18 yr	F	94	15	0.286
		95	16	0.291
		96	12	0.218
		97	12	0.213
		98	21	3.778
	M	94	60	1.069
		95	63	1.076
		96	63	1.076
		97	41	0.694
		98	47	7.975

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Month and Year - Drivers Age 14-18

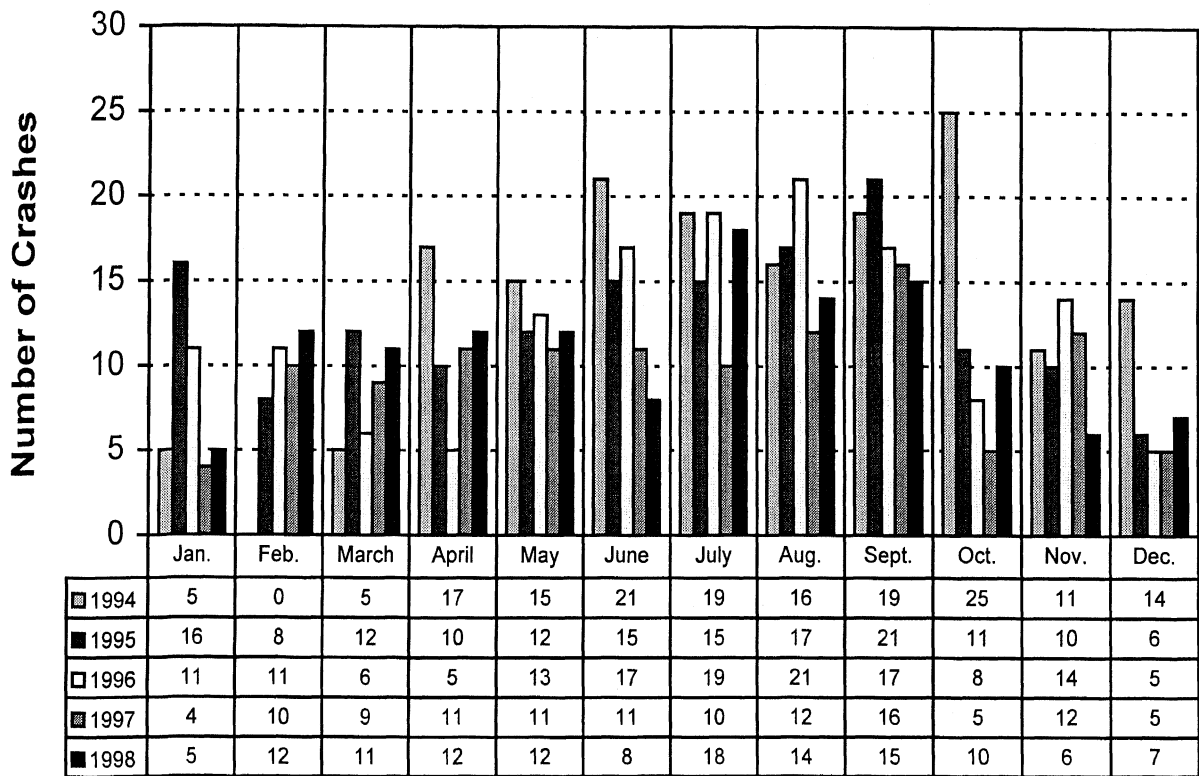


Chart 25 - Number by Month and Year

Small sample sizes make interpretation of this chart difficult. There are no apparent trends to speak of.

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Day of Week and Year - Drivers Age 14-18

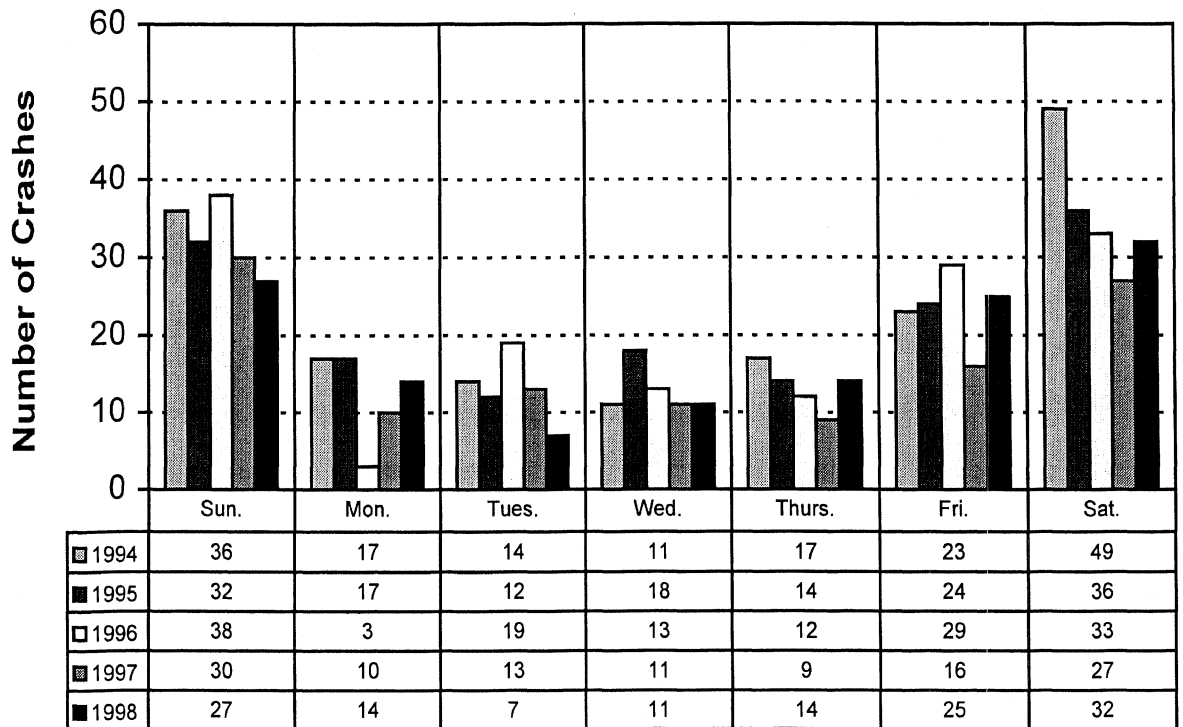


Chart 26 - Number by Day of Week

Although these data should be interpreted with extreme caution given the small sample sizes, it would appear that Friday, Saturday, and Sunday remain key times to focus on prevention among this age group.

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Highway Class and Year - Drivers Age 14-18

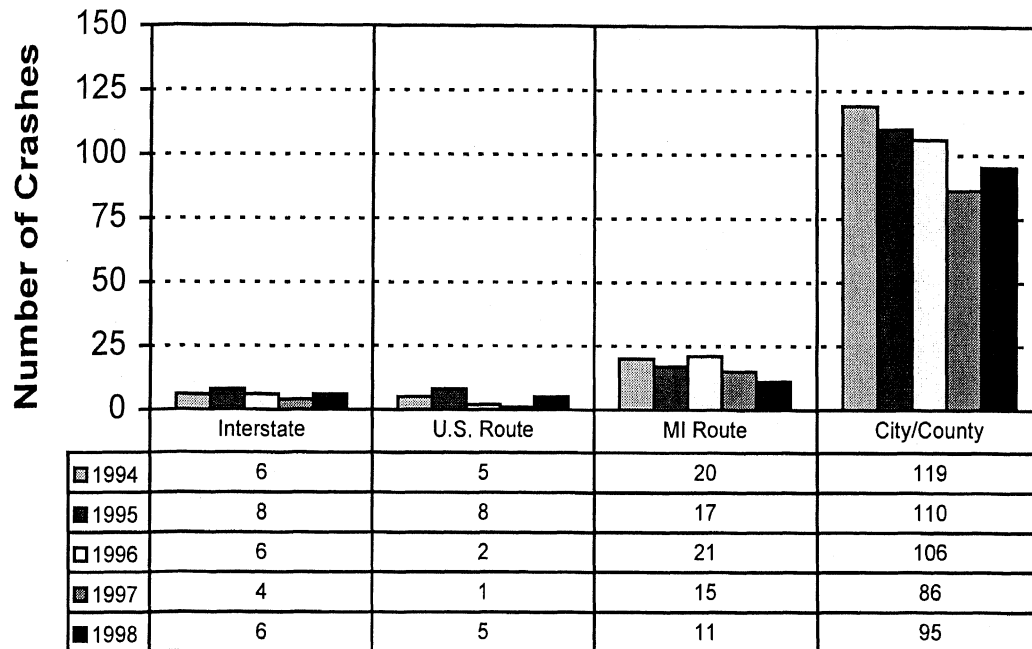


Chart 27 - Number by Highway Class and Year

Most crashes are on city/county roads. Note that the annual decline in crashes on these roads ended in 1998, making them a potential target for future program efforts.

Drivers Age 70+

Table 41 - Number and Rate by Year

Number and Rate of Fatal or Serious Injury 'Had-Been-Drinking' Crashes by Year Drivers Age 70+			
	<i>Year</i>	<i>Number of Crashes</i>	<i>Rate per 1000 Licensed Drivers</i>
<i>Driver Age 70+</i>	94	33	0.054
	95	30	0.048
	96	40	0.063
	97	31	0.047
	98	37	0.055

This is too small a group to worry about at this point. This table is included for completeness, for future reference, and for persons interested in the traffic-safety issues involving older drivers.

Table 42 - Number and Rate by Age, Sex, and Year

Fatal or Serious Injury Crash Frequency and Rate -- 'Had-Been-Drinking' Crashes by Year, Age Group, and Sex Drivers Age 70+				
Age	Sex	Year	Number of Crashes	Rate per 1000 Licensed Drivers
70-74 yr	F	94	0	0.000
		95	1	0.007
		96	0	0.000
		97	4	0.028
		98	3	0.021
	M	94	14	0.108
		95	10	0.075
		96	19	0.143
		97	17	0.127
		98	17	0.126
75-79 yr	F	94	1	0.010
		95	1	0.010
		96	1	0.010
		97	0	0.000
		98	4	0.036
	M	94	9	0.105
		95	14	0.157
		96	6	0.067
		97	6	0.064
		98	6	0.062
80-84 yr	F	94	1	0.018
		95	0	0.000
		96	0	0.000
		97	1	0.016
		98	1	0.015
	M	94	6	0.128
		95	3	0.060
		96	9	0.181
		97	2	0.038
		98	3	0.054
85-89 yr	F	94	0	0.000
		95	0	0.000
		96	0	0.000
		97	0	0.000
		98	0	0
	M	94	0	0.000
		95	1	0.052
		96	2	0.104
		97	1	0.049
		98	1	0.045

Table 43 - Number and Rate by Age, Sex, and Year (continued)

Fatal or Serious Injury Crash Frequency and Rate -- 'Had-Been-Drinking' Crashes by Year, Age Group, and Sex Drivers Age 70+				
<i>Age</i>	<i>Sex</i>	<i>Year</i>	<i>Number of Crashes</i>	<i>Rate per 1000 Licensed Drivers</i>
90-94 yr	F	94	0	0.000
		95	0	0.000
		96	0	0.000
		97	0	0.000
		98	0	0
	M	94	1	0.236
		95	0	0.000
		96	0	0.000
		97	0	0.000
		98	1	0.185
95+ yr	F	94	0	0.000
		95	0	0.000
		96	0	0.000
		97	0	0.000
		98	0	0
	M	94	0	0.000
		95	0	0.000
		96	1	1.786
		97	0	0.000
		98	0	0

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Month and Year - Drivers Age 70+

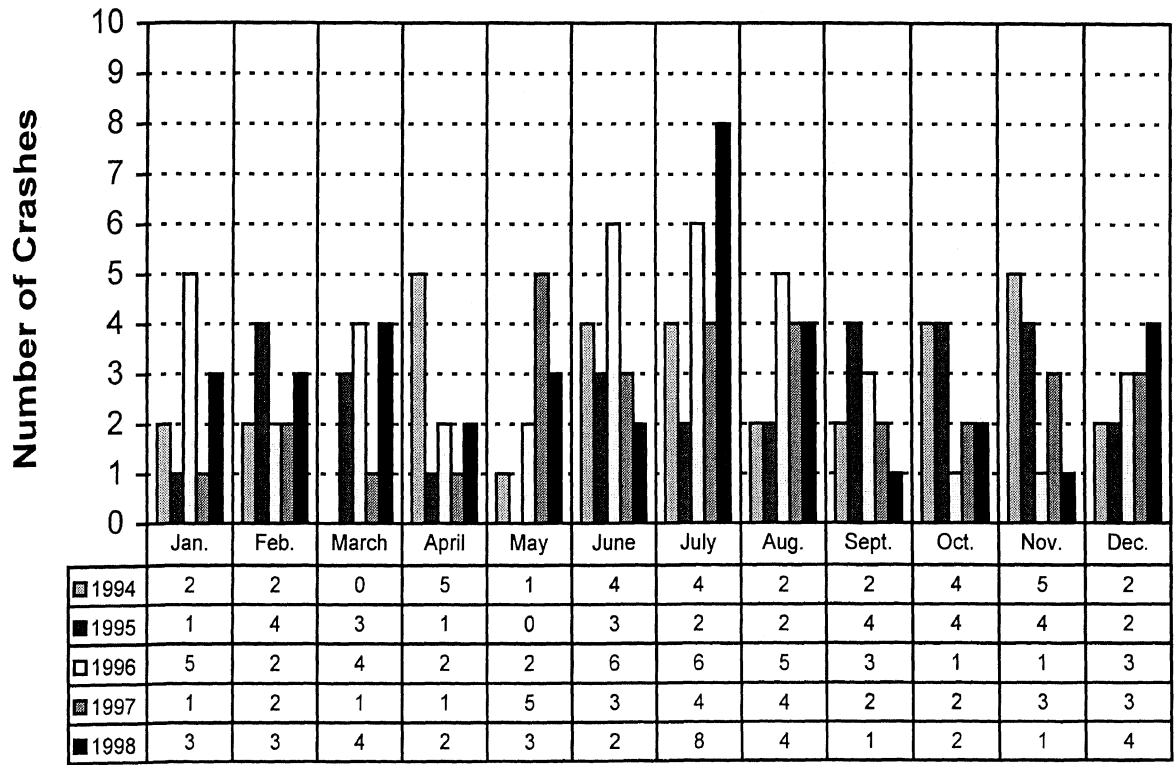


Chart 28 - Number by Month and Year

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Day of Week and Year - Drivers Age 70+

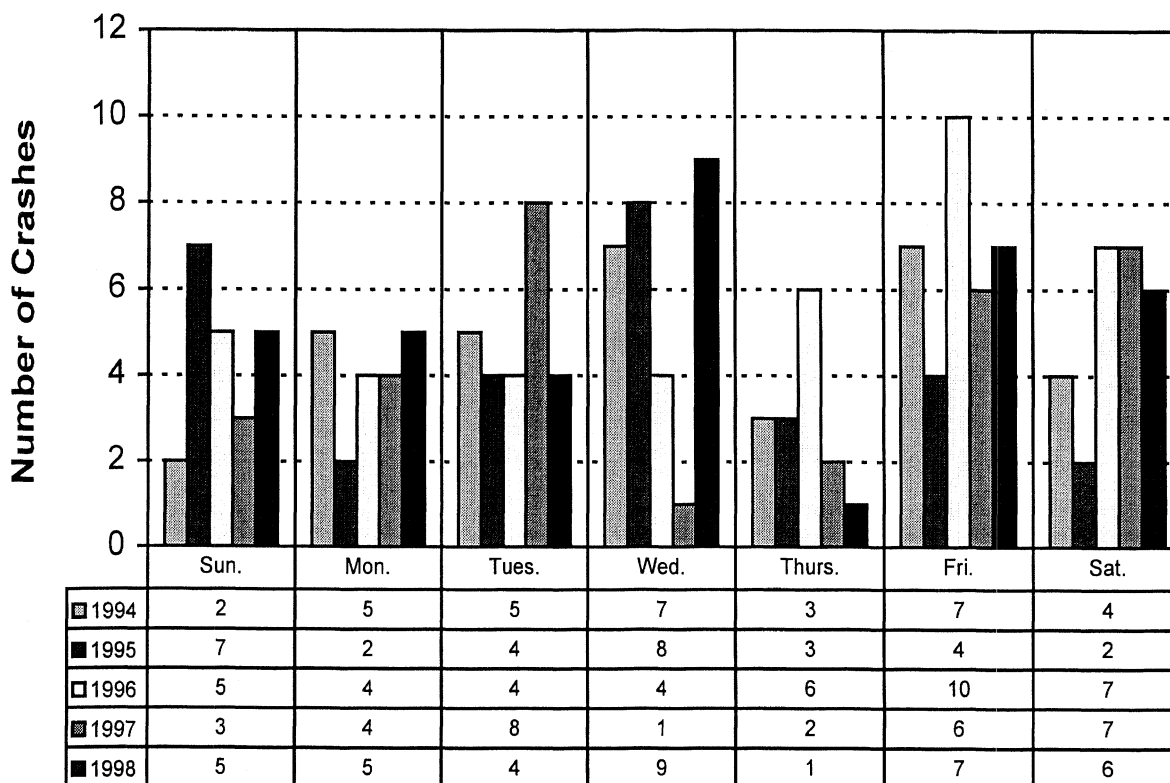


Chart 29 - Number by Day of Week and Year

Fatal or Serious Injury 'Had-Been Drinking' Crashes by Highway Class and Year - Drivers Age 70+

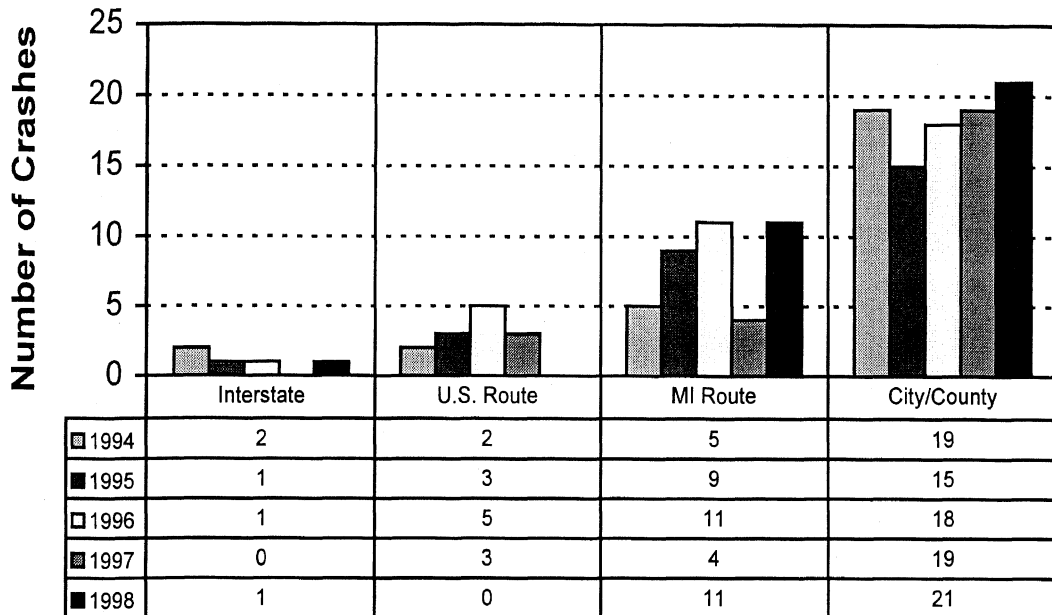


Chart 30 - Number by Highway Class and Year

'HAD-BEEN-DRINKING' KA CRASH OCCUPANTS

All Drivers

Table 44 - Number by Age, Sex, Occupant Type, and Year

Number of Occupants with Fatal or Serious Injuries from 'Had-Been-Drinking' Crashes by Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
0 yr	F	94	0	0	0
		95	2	0	0
		96	1	0	0
		97	1	0	0
		98	1	0	0
	M	94	4	0	0
		95	2	1	0
		96	0	1	0
		97	1	0	0
		98	2	0	0
1 yr	F	94	1	0	0
		95	3	0	0
		96	2	0	0
		97	1	0	0
		98	1	0	0
	M	94	2	0	0
		95	3	0	0
		96	3	0	0
		97	2	0	0
		98	1	0	0
2 yr	F	94	4	0	0
		95	2	0	0
		96	3	0	0
		97	0	0	0
		98	3	0	0
	M	94	5	0	0
		95	5	1	0
		96	2	0	0
		97	2	0	0
		98	2	0	0
3 yr	F	94	4	1	0
		95	6	0	0
		96	3	0	0
		97	3	0	0
		98	1	2	0
	M	94	2	1	0
		95	7	0	0
		96	5	0	0
		97	3	1	0
		98	3	0	0

Table 45 - Number by Age, Sex, Occupant Type, and Year (continued)

Number of Occupants with Fatal or Serious Injuries from 'Had-Been-Drinking' Crashes by Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
4 yr	F	94	3	0	1
		95	2	0	0
		96	6	0	1
		97	1	0	0
		98	0	1	0
	M	94	6	0	0
		95	7	0	0
		96	3	0	0
		97	2	0	0
		98	2	1	0
5-9 yr	F	94	20	0	1
		95	25	2	0
		96	14	0	0
		97	14	1	2
		98	22	1	0
	M	94	27	4	2
		95	23	2	3
		96	18	6	3
		97	17	4	2
		98	13	2	2
10-15 yr	F	94	64	1	1
		95	42	6	1
		96	37	5	0
		97	26	4	1
		98	22	2	1
	M	94	75	2	3
		95	37	8	3
		96	30	5	4
		97	25	2	1
		98	23	3	2
16-20 yr	F	94	182	4	1
		95	178	5	2
		96	152	5	0
		97	117	3	0
		98	134	11	1
	M	94	402	17	4
		95	351	15	2
		96	336	12	3
		97	319	13	1
		98	272	12	0

Table 46 - Number by Age, Sex, Occupant Type, and Year (continued)

Number of Occupants with Fatal or Serious Injuries from 'Had-Been-Drinking' Crashes by Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
21-34 yr	F	94	494	19	4
		95	490	23	0
		96	387	14	1
		97	324	9	0
		98	294	12	0
	M	94	1,271	63	12
		95	1,208	76	13
		96	1,015	48	11
		97	971	49	6
		98	913	41	9
35-54 yr	F	94	311	15	1
		95	343	14	2
		96	304	15	2
		97	269	19	2
		98	264	19	1
	M	94	735	46	18
		95	743	64	13
		96	679	66	11
		97	631	71	20
		98	632	70	17
55-64 yr	F	94	45	0	0
		95	46	2	0
		96	25	2	0
		97	30	1	0
		98	28	0	0
	M	94	79	9	0
		95	89	11	3
		96	81	11	3
		97	71	8	2
		98	70	8	0
65-69 yr	F	94	8	1	0
		95	18	1	0
		96	20	0	0
		97	9	0	0
		98	8	1	0
	M	94	24	3	0
		95	24	7	0
		96	19	6	0
		97	33	1	0
		98	28	0	0

Table 47 - Number by Age, Sex, Occupant Type, and Year (continued)

Number of Occupants with Fatal or Serious Injuries from 'Had-Been-Drinking' Crashes by Age, Gender, and Occupant Type					
Occupant Age	Sex	Year	Number of KA Injured Persons		
			Occupants	Pedestrians	Bicyclists
70-74 yr	F	94	12	0	0
		95	16	0	0
		96	9	0	0
		97	11	2	0
		98	10	0	0
	M	94	15	0	0
		95	14	2	0
		96	20	1	0
		97	14	4	1
		98	17	0	1
75-79 yr	F	94	6	1	0
		95	4	0	0
		96	11	0	0
		97	4	0	0
		98	7	0	0
	M	94	10	1	0
		95	17	2	0
		96	8	1	0
		97	12	1	0
		98	6	1	0
80-84 yr	F	94	4	1	0
		95	1	0	0
		96	3	0	0
		97	4	0	0
		98	6	0	0
	M	94	8	1	0
		95	3	0	0
		96	14	1	0
		97	4	0	0
		98	7	0	0
85-89 yr	F	94	2	0	0
		95	1	0	0
		97	6	0	0
		98	0	0	0
	M	94	1	0	0
		95	1	0	0
		96	1	1	0
		97	1	1	0
		98	2	0	0
90+ yr	F	94	2	0	0
		96	1	0	0
		98	0	0	0
	M	96	2	0	0
		97	1	0	0
		98	1	0	0

Table 49 - Air Bag Deployment by Seat Position and Year

Air Bag Deployment in Fatal or Serious Injury Crashes by Seat Position and Year				
	<i>Year</i>	<i>Air Bag Deployed</i>	<i>Air Bag Not Deployed</i>	<i>% of Available Air Bags that Deployed</i>
<i>Driver</i>	94	1281	1957	39.56%
	95	1977	2883	40.68%
	96	2589	3365	43.48%
	97	2962	3901	43.16%
	98	3285	4357	42.99%
<i>Passenger</i>	94	98	236	29.34%
	95	251	370	40.42%
	96	379	497	43.26%
	97	369	487	43.11%
	98	541	596	47.58%

Clearly the number of vehicles equipped with air bags becoming involved in crashes is increasing quickly. We should also note that air bags only deployed in 40-50% of all crashes that resulted in death or serious injury. This emphasizes the point that air bags are no magic cure, and this should be made clear to the public.

Table 50 - Helmet Use by Seat Position and Year

Motorcycle Helmet Use in Fatal or Serious Injury Crashes by Seat Position and Year				
	<i>Year</i>	<i>Helmet Worn</i>	<i>Helmet Not Worn</i>	<i>% Wearing Helmet</i>
<i>Driver</i>	94	598	85	87.55%
	95	569	60	90.46%
	96	533	75	87.66%
	97	537	65	89.20%
	98	624	81	88.51%
<i>Passenger</i>	94	85	20	80.95%
	95	80	15	84.21%
	96	77	16	82.80%
	97	76	12	86.36%
	98	97	15	86.61%

Helmet use is high and relatively stable.

Table 51 - Belt use by Seat Position, Air Bag Deployment, and Year

Belt Use Among Persons Involved in Fatal or Serious Injury Crashes by Seat Position, Air Bag Deployment, and Year							
	Year	Belted, Bag Deployed	Not Belted, Bag Deployed	% Belt Use, Bag Deployed	Belted, No Deployment	Not Belted, No Deployment	% Belt Use, No Deployment
<i>Driver</i>	94	993	222	81.73%	1552	222	87.49%
	95	1524	314	82.92%	2287	346	86.86%
	96	2065	339	85.90%	2779	364	88.42%
	97	2291	427	84.29%	3185	450	87.62%
	98	2492	521	82.71%	3616	457	88.78%
<i>Passenger</i>	94	77	16	82.80%	172	49	77.83%
	95	194	44	81.51%	255	85	75.00%
	96	296	64	82.22%	361	101	78.14%
	97	273	68	80.06%	346	110	75.88%
	98	405	99	80.36%	403	141	74.22%

Police-reported belt use was the same regardless of whether the crash caused the air bag to deploy or not.

Table 52 - Belt Use by Occupant Age, Sex, Injury, Seat Position, and Year

Belt Use Among Persons Involved in Fatal or Serious Injury Crashes by Occupant Age, Sex, Injury, Seat Position, and Year											
Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
0 yr	Driver/Errors	F	94	0	0	0	0.00%	2	0	0	100.00%
			96	0	0	0	0.00%	1	0	0	100.00%
			97	1	0	0	100.00%	0	0	0	0.00%
			98	0	0	0	0.00%	0	0	0	0.00%
		M	94	0	0	4	0.00%	6	0	0	100.00%
			95	2	0	0	100.00%	1	0	0	100.00%
			96	0	0	1	0.00%	0	0	0	0.00%
			97	1	0	1	50.00%	3	0	1	75.00%
	98	3	0	0	100.00%	1	0	0	100.00%		
	Center front	F	94	0	0	0	0.00%	0	0	2	0.00%
			95	0	0	1	0.00%	0	1	0	100.00%
			98	0	0	0	0.00%	0	1	0	100.00%
		M	94	1	0	1	50.00%	0	1	0	100.00%
	98		0	1	0	100.00%	0	0	0	0.00%	
	Right front	F	94	0	3	0	100.00%	1	3	0	100.00%
			95	0	2	3	40.00%	1	3	1	80.00%
			96	2	5	1	87.50%	0	0	1	0.00%
			97	0	0	1	0.00%	0	3	0	100.00%
			98	0	0	1	0.00%	0	1	1	50.00%
		M	94	1	4	4	55.56%	0	3	0	100.00%
			95	1	3	2	66.67%	0	2	1	66.67%
			96	1	1	2	50.00%	0	5	0	100.00%
	97	1	2	0	100.00%	0	0	0	0.00%		
	98	0	0	1	0.00%	1	1	0	100.00%		
	Left rear	F	94	1	0	1	50.00%	2	4	0	100.00%
			95	0	2	0	100.00%	0	3	0	100.00%
			96	1	4	1	83.33%	1	5	0	100.00%
			97	0	1	1	50.00%	0	1	0	100.00%
98			0	1	1	50.00%	1	2	1	75.00%	
M		94	0	0	0	0.00%	0	4	1	80.00%	
		95	0	1	1	50.00%	0	1	0	100.00%	
		96	0	2	1	66.67%	2	1	0	100.00%	
		97	0	3	0	100.00%	0	5	0	100.00%	
98	0	0	0	0.00%	0	1	0	100.00%			
Center rear	F	94	0	0	0	0.00%	0	5	0	100.00%	
		95	0	1	0	100.00%	1	3	0	100.00%	
		96	0	1	0	100.00%	0	3	0	100.00%	
		97	0	2	0	100.00%	0	1	0	100.00%	
		98	0	1	0	100.00%	1	4	0	100.00%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
	Right rear	M	94	1	0	1	50.00%	0	1	1	50.00%
			95	0	0	0	0.00%	0	4	0	100.00%
			96	0	1	1	50.00%	1	2	0	100.00%
			97	1	2	0	100.00%	0	1	0	100.00%
			98	0	1	0	100.00%	0	5	0	100.00%
		F	94	0	0	0	0.00%	0	8	0	100.00%
			95	0	0	1	0.00%	0	2	0	100.00%
			96	0	1	0	100.00%	0	2	0	100.00%
			97	0	2	1	66.67%	0	3	0	100.00%
			98	0	2	0	100.00%	0	3	0	100.00%
	M	94	0	2	1	66.67%	0	3	0	100.00%	
		95	0	3	1	75.00%	1	4	1	83.33%	
		96	0	2	0	100.00%	0	7	0	100.00%	
		97	0	0	0	0.00%	0	3	0	100.00%	
		98	1	1	0	100.00%	0	5	0	100.00%	
	1 yr	Driver/Errors	F	94	0	0	0	0.00%	1	0	0
97				0	0	0	0.00%	0	1	0	100.00%
98				0	0	0	0.00%	0	0	0	0.00%
M			94	0	0	1	0.00%	1	0	0	100.00%
			98	0	0	0	0.00%	1	0	0	100.00%
Center front		F	94	0	0	0	0.00%	0	1	2	33.33%
			95	0	0	0	0.00%	1	1	1	66.67%
			96	0	0	1	0.00%	0	0	0	0.00%
			97	0	0	1	0.00%	1	0	0	100.00%
			98	0	1	0	100.00%	0	0	1	0.00%
		M	94	0	0	0	0.00%	0	1	0	100.00%
			95	0	0	1	0.00%	0	2	0	100.00%
			96	1	0	1	50.00%	1	0	0	100.00%
			97	0	0	0	0.00%	1	0	0	100.00%
			98	0	1	0	100.00%	0	0	0	0.00%
Right front		F	94	1	0	1	50.00%	2	4	0	100.00%
			95	2	0	1	66.67%	1	3	2	66.67%
			96	0	2	0	100.00%	0	2	1	66.67%
			97	0	0	0	0.00%	0	2	1	66.67%
			98	0	0	1	0.00%	0	0	0	0.00%
		M	94	5	3	1	88.89%	2	2	1	80.00%
			95	0	1	1	50.00%	0	6	1	85.71%
			96	2	1	0	100.00%	0	2	2	50.00%
			97	1	0	1	50.00%	1	1	1	66.67%
	98		0	0	0	0.00%	0	1	0	100.00%	
Left rear	F	94	1	0	0	100.00%	3	4	0	100.00%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants					
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use		
			95	0	2	0	100.00%	1	3	2	66.67%		
			96	1	4	0	100.00%	1	4	0	100.00%		
			97	0	0	0	0.00%	1	7	0	100.00%		
			98	1	1	0	100.00%	0	2	0	100.00%		
			M	94	1	2	0	100.00%	1	1	0	100.00%	
				95	0	1	0	100.00%	0	2	0	100.00%	
				96	0	6	0	100.00%	1	1	1	66.67%	
				97	0	0	0	0.00%	0	9	0	100.00%	
				98	0	2	1	66.67%	0	6	0	100.00%	
		Center rear		F	94	3	0	1	75.00%	1	0	0	100.00%
					95	0	1	0	100.00%	0	0	0	0.00%
					96	0	0	3	0.00%	1	0	0	100.00%
					97	0	2	0	100.00%	1	4	0	100.00%
			98		0	0	2	0.00%	0	2	0	100.00%	
			M	94	1	2	0	100.00%	0	4	0	100.00%	
				95	0	4	1	80.00%	1	5	2	75.00%	
				96	0	2	2	50.00%	0	1	1	50.00%	
				97	0	1	0	100.00%	0	1	0	100.00%	
	Right rear	F	94	4	2	2	75.00%	0	5	2	71.43%		
			95	0	3	0	100.00%	0	2	0	100.00%		
			96	0	2	0	100.00%	1	3	0	100.00%		
			97	1	0	1	50.00%	0	4	1	80.00%		
			98	2	2	2	66.67%	0	6	0	100.00%		
		M	94	0	1	2	33.33%	0	1	0	100.00%		
95			0	2	0	100.00%	0	8	1	88.89%			
96			1	5	1	85.71%	1	5	0	100.00%			
97			0	0	0	0.00%	2	5	1	87.50%			
98	2	2	0	100.00%	0	2	0	100.00%					
2 yr	Driver/Errors	F	94	1	0	0	100.00%	1	0	0	100.00%		
			98	0	0	0	0.00%	0	0	0	0.00%		
		M	95	0	0	1	0.00%	0	0	0	0.00%		
			97	0	0	0	0.00%	0	0	1	0.00%		
			98	0	0	0	0.00%	0	0	0	0.00%		
			98	0	0	0	0.00%	0	0	0	0.00%		
	Center front	F	94	0	1	2	33.33%	0	1	0	100.00%		
			95	0	0	1	0.00%	2	0	2	50.00%		
			96	0	0	0	0.00%	0	1	0	100.00%		
			98	0	0	1	0.00%	1	0	0	100.00%		
		M	94	0	0	2	0.00%	0	1	0	100.00%		
			95	1	0	0	100.00%	0	0	0	0.00%		
96	1	0	1	50.00%	1	0	2	33.33%					

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
			97	0	0	0	0.00%	0	0	1	0.00%
			98	0	0	0	0.00%	0	0	0	0.00%
	Right front	F	94	2	1	0	100.00%	1	1	1	66.67%
			95	1	1	7	22.22%	0	2	1	66.67%
			96	2	0	2	50.00%	3	1	1	80.00%
			97	0	0	0	0.00%	1	2	0	100.00%
			98	0	1	3	25.00%	0	0	0	0.00%
		M	94	4	1	3	62.50%	3	0	2	60.00%
			95	4	2	2	75.00%	0	2	1	66.67%
			96	1	1	2	50.00%	2	0	0	100.00%
			97	2	1	2	60.00%	0	1	1	50.00%
			98	0	0	0	0.00%	0	0	3	0.00%
	Left rear	F	94	1	4	4	55.56%	0	5	2	71.43%
			95	0	1	1	50.00%	5	3	2	80.00%
			96	1	4	2	71.43%	1	3	1	80.00%
			97	3	0	1	75.00%	1	4	0	100.00%
			98	0	2	1	66.67%	0	1	0	100.00%
		M	94	1	1	0	100.00%	0	7	0	100.00%
			95	3	1	1	80.00%	3	1	0	100.00%
			96	3	2	0	100.00%	3	4	0	100.00%
			97	1	4	0	100.00%	1	1	1	66.67%
			98	1	1	1	66.67%	0	4	3	57.14%
	Center rear	F	94	1	0	1	50.00%	1	1	0	100.00%
			95	0	0	2	0.00%	2	3	1	83.33%
			96	2	0	0	100.00%	0	2	1	66.67%
			97	2	0	0	100.00%	0	3	0	100.00%
			98	1	1	0	100.00%	1	4	1	83.33%
		M	94	1	0	2	33.33%	1	2	0	100.00%
95			1	0	1	50.00%	0	2	1	66.67%	
96			2	0	1	66.67%	0	1	0	100.00%	
97			0	0	0	0.00%	3	1	0	100.00%	
98			2	0	0	100.00%	2	2	0	100.00%	
Right rear	F	94	0	2	0	100.00%	2	4	0	100.00%	
		95	0	5	1	83.33%	1	0	0	100.00%	
		96	3	5	0	100.00%	4	1	0	100.00%	
		97	0	2	2	50.00%	1	1	0	100.00%	
		98	0	3	0	100.00%	2	2	0	100.00%	
	M	94	0	0	2	0.00%	3	0	0	100.00%	
		95	2	5	0	100.00%	2	4	0	100.00%	
		96	0	2	2	50.00%	1	2	1	75.00%	
		97	1	1	0	100.00%	2	4	0	100.00%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants					
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use		
3 yr	Driver/Errors	F	98	2	2	2	66.67%	0	3	0	100.00%		
			94	0	0	1	0.00%	0	0	1	0.00%		
			97	1	0	0	100.00%	0	0	0	0.00%		
			98	0	0	0	0.00%	0	0	0	0.00%		
			95	1	0	0	100.00%	0	0	0	0.00%		
		M	96	1	0	0	100.00%	1	0	0	100.00%		
			97	0	1	0	100.00%	0	0	1	0.00%		
			98	0	0	0	0.00%	0	0	0	0.00%		
			Center front	F	94	0	0	1	0.00%	2	0	0	100.00%
					95	1	0	2	33.33%	1	0	0	100.00%
	96	1			0	1	50.00%	0	0	1	0.00%		
	97	2			0	0	100.00%	0	0	0	0.00%		
	98	0			0	0	0.00%	1	0	0	100.00%		
	M	94		4	0	3	57.14%	1	0	0	100.00%		
		95		1	0	0	100.00%	2	0	0	100.00%		
		96		0	0	1	0.00%	2	0	1	66.67%		
		97		2	0	0	100.00%	0	0	0	0.00%		
		98		1	0	1	50.00%	0	0	1	0.00%		
	Right front	F	94	7	0	2	77.78%	6	0	2	75.00%		
			95	5	1	5	54.55%	3	0	1	75.00%		
			96	3	0	2	60.00%	5	1	1	85.71%		
			97	4	0	3	57.14%	2	1	0	100.00%		
			98	2	0	2	50.00%	3	1	0	100.00%		
		M	94	5	0	1	83.33%	5	3	1	88.89%		
			95	6	3	5	64.29%	2	2	0	100.00%		
			96	7	2	3	75.00%	5	2	0	100.00%		
			97	4	2	3	66.67%	4	1	2	71.43%		
			98	1	1	0	100.00%	3	1	0	100.00%		
	Left rear	F	94	3	0	0	100.00%	3	2	2	71.43%		
			95	2	0	3	40.00%	2	0	4	33.33%		
96			3	0	1	75.00%	3	3	1	85.71%			
97			1	1	0	100.00%	2	0	0	100.00%			
98			1	2	0	100.00%	2	0	0	100.00%			
M		94	3	0	2	60.00%	5	0	0	100.00%			
		95	1	1	1	66.67%	2	4	2	75.00%			
		96	7	0	1	87.50%	5	1	0	100.00%			
		97	1	1	1	66.67%	3	2	0	100.00%			
		98	0	2	0	100.00%	3	1	3	57.14%			
Center rear	F	94	0	0	0	0.00%	2	0	1	66.67%			
		95	2	0	0	100.00%	3	0	1	75.00%			
		96	1	1	1	66.67%	1	0	2	33.33%			

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants					
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use		
	Right rear	M	97	0	0	2	0.00%	1	1	1	66.67%		
			98	3	0	1	75.00%	4	1	0	100.00%		
			94	0	0	3	0.00%	1	0	0	100.00%		
			95	3	2	1	83.33%	0	1	0	100.00%		
			96	2	2	1	80.00%	1	0	3	25.00%		
			97	0	2	1	66.67%	0	2	0	100.00%		
			98	0	2	0	100.00%	0	1	0	100.00%		
			94	1	2	2	60.00%	2	3	0	100.00%		
		F	95	2	0	1	66.67%	4	3	1	87.50%		
			96	3	2	2	71.43%	6	2	2	80.00%		
			97	1	1	0	100.00%	2	1	0	100.00%		
			98	3	0	0	100.00%	5	4	1	90.00%		
		M	94	5	1	0	100.00%	2	0	1	66.67%		
			95	4	1	1	83.33%	4	4	1	88.89%		
			96	2	3	2	71.43%	3	3	1	85.71%		
			97	1	1	0	100.00%	4	2	0	100.00%		
					98	1	2	0	100.00%	1	1	3	40.00%
		4 yr	Driver/Errors	F	95	0	0	0	0.00%	0	1	0	100.00%
96	1				0	0	100.00%	0	0	0	0.00%		
98	0				0	0	0.00%	0	0	0	0.00%		
M	95			1	0	0	100.00%	0	0	0	0.00%		
	97			0	0	1	0.00%	0	0	0	0.00%		
	98			1	0	0	100.00%	0	0	0	0.00%		
Center front	F		94	1	0	2	33.33%	2	0	0	100.00%		
			95	1	0	1	50.00%	1	0	0	100.00%		
			96	1	0	0	100.00%	1	1	0	100.00%		
			97	0	0	0	0.00%	1	0	0	100.00%		
	M		98	0	0	0	0.00%	0	0	0	0.00%		
			94	0	0	0	0.00%	3	0	0	100.00%		
			95	1	0	0	100.00%	1	0	0	100.00%		
			96	0	0	2	0.00%	0	0	0	0.00%		
Right front	F		97	2	0	2	50.00%	0	0	0	0.00%		
			98	0	0	0	0.00%	1	0	0	100.00%		
			94	11	0	2	84.62%	8	0	5	61.54%		
			95	10	2	4	75.00%	4	0	2	66.67%		
	M	96	8	0	2	80.00%	8	0	1	88.89%			
		97	4	0	1	80.00%	5	0	0	100.00%			
	F	98	7	0	1	87.50%	5	1	0	100.00%			
		94	16	0	1	94.12%	7	1	2	80.00%			
		95	6	0	0	100.00%	6	0	2	75.00%			
		96	14	0	2	87.50%	5	1	1	85.71%			

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
			97	4	0	1	80.00%	8	2	0	100.00%
			98	3	0	1	75.00%	6	0	1	85.71%
			94	2	0	2	50.00%	3	3	3	66.67%
	Left rear	F	95	1	1	1	66.67%	4	0	0	100.00%
			96	4	1	3	62.50%	4	1	0	100.00%
			97	0	2	0	100.00%	2	0	0	100.00%
			98	1	0	1	50.00%	1	1	0	100.00%
			94	5	1	2	75.00%	3	0	1	75.00%
		M	95	2	2	0	100.00%	5	2	0	100.00%
			96	2	0	1	66.67%	4	0	0	100.00%
			97	3	1	1	80.00%	4	0	1	80.00%
			98	3	0	1	75.00%	3	1	1	80.00%
			94	3	1	2	66.67%	3	0	0	100.00%
	Center rear	F	95	0	0	1	0.00%	1	0	1	50.00%
			96	0	1	2	33.33%	3	0	0	100.00%
			97	4	0	0	100.00%	1	0	0	100.00%
			98	2	0	1	66.67%	2	0	0	100.00%
			94	1	0	2	33.33%	1	0	0	100.00%
		M	95	1	0	0	100.00%	1	0	1	50.00%
			96	2	0	3	40.00%	2	0	1	66.67%
			97	0	0	0	0.00%	2	0	1	66.67%
			98	0	1	2	33.33%	4	0	1	80.00%
			94	3	0	2	60.00%	2	0	0	100.00%
	Right rear	F	95	2	0	0	100.00%	4	0	0	100.00%
			96	4	1	1	83.33%	4	0	1	80.00%
			97	3	0	2	60.00%	4	1	1	83.33%
			98	3	0	1	75.00%	2	1	0	100.00%
			94	2	0	0	100.00%	2	1	2	60.00%
M		95	4	0	1	80.00%	3	0	1	75.00%	
		96	1	2	1	75.00%	5	1	1	85.71%	
		97	0	0	0	0.00%	5	2	0	100.00%	
		98	1	0	0	100.00%	0	1	1	50.00%	
		94	1	0	1	50.00%	2	0	0	100.00%	
5-9 yr	Driver/Errors	F	95	1	0	1	50.00%	0	0	0	0.00%
			96	4	0	0	100.00%	0	0	0	0.00%
			97	0	1	0	100.00%	1	0	0	100.00%
			98	0	0	0	0.00%	1	0	0	100.00%
			94	1	0	0	100.00%	1	0	0	100.00%
		M	95	1	0	1	50.00%	0	0	0	0.00%
			96	0	0	0	0.00%	2	0	0	100.00%
			97	1	0	0	100.00%	1	0	0	100.00%
			98	1	0	0	100.00%	1	0	0	100.00%

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
			98	1	0	0	100.00%	4	0	0	100.00%
	Center front	F	94	2	0	3	40.00%	1	0	2	33.33%
			95	3	0	5	37.50%	2	0	3	40.00%
			96	3	0	1	75.00%	4	0	3	57.14%
			97	0	0	2	0.00%	8	0	4	66.67%
			98	1	0	1	50.00%	1	0	0	100.00%
		M	94	5	0	3	62.50%	2	0	1	66.67%
			95	3	0	4	42.86%	4	1	3	62.50%
			96	4	0	3	57.14%	5	0	3	62.50%
			97	2	0	4	33.33%	3	0	2	60.00%
			98	3	0	4	42.86%	3	0	1	75.00%
	Right front	F	94	27	0	13	67.50%	35	0	9	79.55%
			95	33	1	15	69.39%	40	0	5	88.89%
			96	37	0	6	86.05%	24	0	5	82.76%
			97	20	0	10	66.67%	20	0	5	80.00%
			98	34	0	14	70.83%	28	0	7	80.00%
		M	94	28	0	25	52.83%	26	0	9	74.29%
			95	38	1	19	67.24%	40	0	10	80.00%
			96	33	0	12	73.33%	31	0	9	77.50%
			97	26	0	11	70.27%	36	0	1	97.30%
			98	28	0	13	68.29%	23	0	1	95.83%
	Left rear	F	94	12	1	8	61.91%	14	0	6	70.00%
			95	16	0	11	59.26%	19	0	4	82.61%
			96	17	0	6	73.91%	12	0	8	60.00%
			97	18	0	7	72.00%	24	0	5	82.76%
			98	21	0	5	80.77%	18	0	3	85.71%
		M	94	11	0	8	57.90%	14	1	3	83.33%
			95	17	0	10	62.96%	18	0	1	94.74%
			96	12	0	2	85.71%	12	1	7	65.00%
			97	12	0	9	57.14%	10	1	4	73.33%
			98	16	0	7	69.57%	18	0	3	85.71%
	Center rear	F	94	4	0	8	33.33%	10	0	2	83.33%
			95	7	0	5	58.33%	9	0	1	90.00%
			96	5	0	4	55.56%	9	2	5	68.75%
			97	8	0	2	80.00%	2	0	3	40.00%
			98	9	0	1	90.00%	9	0	2	81.82%
		M	94	4	0	2	66.67%	6	0	11	35.29%
			95	3	0	7	30.00%	8	0	4	66.67%
			96	4	0	4	50.00%	7	1	3	72.73%
			97	5	1	2	75.00%	7	0	5	58.33%
			98	10	1	2	84.62%	10	0	4	71.43%

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
	Right rear	F	94	8	0	8	50.00%	16	0	6	72.73%
			95	16	0	4	80.00%	23	2	7	78.13%
			96	16	0	5	76.19%	16	0	4	80.00%
			97	10	0	7	58.82%	15	1	4	80.00%
			98	17	0	4	80.95%	18	0	6	75.00%
		M	94	23	0	12	65.71%	15	0	8	65.22%
			95	11	0	11	50.00%	22	1	2	92.00%
			96	16	0	4	80.00%	22	0	9	70.97%
			97	4	1	7	41.67%	12	0	2	85.71%
			98	20	0	3	86.96%	18	1	5	79.17%
10-15 yr	Driver/Errors	F	94	6	0	12	33.33%	20	0	5	80.00%
			95	14	0	13	51.85%	11	0	5	68.75%
			96	9	0	6	60.00%	14	0	0	100.00%
			97	11	0	8	57.90%	11	0	2	84.62%
			98	7	0	4	63.64%	18	0	2	90.00%
		M	94	15	0	18	45.46%	16	0	9	64.00%
			95	11	0	17	39.29%	15	0	8	65.22%
			96	9	0	12	42.86%	13	0	6	68.42%
			97	7	1	10	44.44%	13	1	6	70.00%
			98	13	0	8	61.90%	17	0	6	73.91%
	Center front	F	94	5	0	9	35.71%	3	0	4	42.86%
			95	4	0	11	26.67%	4	0	5	44.44%
			96	2	0	16	11.11%	3	0	8	27.27%
			97	5	0	4	55.56%	3	0	3	50.00%
			98	2	0	2	50.00%	3	0	4	42.86%
		M	94	1	0	10	9.09%	4	0	4	50.00%
			95	2	0	10	16.67%	5	0	6	45.46%
			96	2	0	4	33.33%	3	0	6	33.33%
			97	2	0	9	18.18%	3	0	5	37.50%
			98	3	0	2	60.00%	4	0	3	57.14%
	Right front	F	94	100	1	71	58.72%	68	1	40	63.30%
			95	119	0	62	65.75%	72	0	20	78.26%
			96	89	0	51	63.57%	74	0	18	80.44%
			97	80	0	57	58.39%	53	0	16	76.81%
98			65	0	45	59.09%	56	0	8	87.50%	
M		94	73	0	70	51.05%	63	0	30	67.74%	
		95	64	0	67	48.86%	59	0	24	71.08%	
		96	75	0	46	61.98%	73	0	21	77.66%	
		97	49	0	22	69.01%	57	1	17	77.33%	
		98	47	0	50	48.45%	58	0	17	77.33%	
Left rear	F	94	31	0	23	57.41%	18	0	22	45.00%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
			95	15	0	24	38.46%	27	0	11	71.05%
			96	18	0	20	47.37%	14	0	19	42.42%
			97	10	0	16	38.46%	20	0	8	71.43%
			98	21	0	9	70.00%	17	0	7	70.83%
			94	14	0	13	51.85%	15	0	15	50.00%
		M	95	10	0	18	35.71%	19	0	11	63.33%
			96	19	0	15	55.88%	28	0	15	65.12%
			97	12	0	5	70.59%	19	0	6	76.00%
			98	8	0	17	32.00%	14	0	10	58.33%
			94	7	0	19	26.92%	4	0	11	26.67%
	Center rear	F	95	4	0	9	30.77%	8	0	8	50.00%
			96	3	0	9	25.00%	6	0	8	42.86%
			97	5	0	19	20.83%	7	0	9	43.75%
			98	9	0	3	75.00%	5	0	8	38.46%
			94	2	0	11	15.39%	4	0	10	28.57%
		M	95	4	0	8	33.33%	5	0	4	55.56%
			96	3	0	9	25.00%	4	0	4	50.00%
			97	7	0	7	50.00%	2	0	4	33.33%
			98	6	0	10	37.50%	2	0	2	50.00%
			94	28	0	32	46.67%	20	1	31	40.39%
Right rear	F	95	26	0	25	50.98%	21	0	15	58.33%	
		96	25	0	17	59.52%	26	0	15	63.42%	
		97	14	0	18	43.75%	22	0	14	61.11%	
		98	20	0	14	58.82%	23	0	13	63.89%	
		94	22	0	20	52.38%	18	0	17	51.43%	
	M	95	21	0	15	58.33%	24	0	3	88.89%	
		96	20	0	13	60.61%	29	0	12	70.73%	
		97	16	0	11	59.26%	16	1	12	58.62%	
		98	17	0	11	60.71%	20	0	9	68.97%	
		16-20 yr	Driver/Errors	F	94	526	1	252	67.65%	570	0
95	581				1	258	69.29%	571	0	80	87.71%
96	590				0	191	75.54%	558	0	56	90.88%
97	529				0	170	75.68%	517	0	63	89.14%
98	459				0	186	71.16%	508	0	48	91.37%
M	94			497	0	452	52.37%	925	0	224	80.51%
	95			507	0	414	55.05%	1004	0	202	83.25%
	96			525	1	351	59.98%	896	0	155	85.25%
	97			411	0	328	55.62%	935	0	153	85.94%
	98			440	0	319	57.97%	826	0	125	86.86%
Center front	F	94	7	0	15	31.82%	4	0	7	36.36%	
		95	10	0	11	47.62%	8	0	6	57.14%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
			96	6	0	12	33.33%	3	0	9	25.00%
			97	7	0	8	46.67%	4	0	2	66.67%
			98	7	0	7	50.00%	5	0	6	45.46%
			94	4	0	11	26.67%	4	0	11	26.67%
			95	1	0	7	12.50%	2	1	8	27.27%
			96	2	0	11	15.39%	6	0	2	75.00%
			97	2	0	7	22.22%	3	0	5	37.50%
			98	1	0	12	7.69%	3	0	1	75.00%
			Right front	F	94	196	0	161	54.90%	90	0
	95	160			1	133	54.76%	124	0	42	74.70%
	96	196			0	122	61.64%	89	0	30	74.79%
	97	147			0	111	56.98%	66	0	34	66.00%
	98	145			0	98	59.67%	75	0	34	68.81%
	M	94		107	0	188	36.27%	101	0	70	59.06%
		95		107	0	159	40.23%	109	0	57	65.66%
		96		125	0	156	44.48%	108	0	69	61.02%
		97		102	0	122	45.54%	92	0	48	65.71%
	Left rear	F	94	10	0	26	27.78%	8	0	17	32.00%
95			16	0	15	51.61%	11	0	12	47.83%	
96			13	0	23	36.11%	10	0	8	55.56%	
97			9	0	17	34.62%	9	0	10	47.37%	
98			12	0	13	48.00%	10	0	10	50.00%	
M		94	5	1	24	20.00%	14	0	26	35.00%	
		95	12	0	26	31.58%	7	0	24	22.58%	
		96	8	0	24	25.00%	15	0	28	34.88%	
		97	5	0	20	20.00%	7	1	17	32.00%	
Center rear	F	94	3	0	16	15.79%	5	0	9	35.71%	
		95	2	0	20	9.09%	2	0	4	33.33%	
		96	5	0	14	26.32%	2	0	7	22.22%	
		97	3	0	15	16.67%	4	0	2	66.67%	
		98	8	0	11	42.11%	6	0	3	66.67%	
	M	94	2	0	19	9.52%	3	0	10	23.08%	
		95	2	0	12	14.29%	0	0	12	0.00%	
		96	5	0	11	31.25%	1	1	5	28.57%	
		97	5	0	5	50.00%	1	0	6	14.29%	
Right rear	F	94	15	0	42	26.32%	8	0	18	30.77%	
		95	20	0	26	43.48%	11	0	21	34.38%	
		96	13	0	20	39.39%	9	0	13	40.91%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants				
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use	
			97	10	0	19	34.48%	17	0	15	53.13%	
			98	11	0	19	36.67%	17	0	16	51.52%	
			M	94	15	0	51	22.73%	7	0	23	23.33%
				95	10	0	37	21.28%	19	0	28	40.43%
				96	11	0	41	21.15%	18	0	26	40.91%
				97	6	0	25	19.36%	12	0	21	36.36%
				98	10	0	21	32.26%	15	0	22	40.54%
				94	1047	2	437	70.59%	1081	0	128	89.41%
21-34 yr	Driver/Errors	F	95	1125	0	384	74.55%	1119	0	101	91.72%	
			96	1049	0	344	75.31%	1026	0	99	91.20%	
			97	944	0	313	75.10%	1027	0	101	91.05%	
			98	818	1	291	73.78%	887	0	78	91.92%	
		M	94	968	1	884	52.29%	2139	0	413	83.82%	
			95	984	2	867	53.21%	2084	0	382	84.51%	
			96	956	0	714	57.25%	1953	0	267	87.97%	
			97	770	0	692	52.67%	1724	0	261	86.85%	
98	694	0	644	51.87%	1671	0	235	87.67%				
Center front	F	94	5	0	9	35.71%	6	0	6	50.00%		
		95	6	0	10	37.50%	4	0	3	57.14%		
		96	11	0	5	68.75%	3	0	2	60.00%		
		97	3	0	7	30.00%	5	0	4	55.56%		
		98	3	0	6	33.33%	2	0	2	50.00%		
	M	94	5	0	17	22.73%	2	0	6	25.00%		
		95	4	0	10	28.57%	5	0	9	35.71%		
		96	1	0	9	10.00%	6	0	7	46.15%		
		97	1	0	6	14.29%	1	0	5	16.67%		
		98	2	0	3	40.00%	5	0	5	50.00%		
		Right front	F	94	239	0	205	53.83%	104	0	47	68.87%
				95	268	0	171	61.05%	146	0	43	77.25%
96	222			1	149	59.95%	151	0	36	80.75%		
97	184			0	105	63.67%	97	0	29	76.98%		
98	189			0	95	66.55%	105	0	27	79.55%		
M	94	155	0	215	41.89%	105	1	99	51.71%			
	95	167	0	216	43.60%	108	0	86	55.67%			
	96	169	0	165	50.60%	127	0	63	66.84%			
	97	122	0	136	47.29%	102	0	48	68.00%			
	98	112	0	150	42.75%	99	0	58	63.06%			
Left rear	F	94	11	0	15	42.31%	9	0	4	69.23%		
		95	12	0	25	32.43%	9	0	15	37.50%		
		96	13	0	10	56.52%	9	0	8	52.94%		
		97	1	0	9	10.00%	7	0	11	38.89%		

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
		M	98	6	0	12	33.33%	5	0	6	45.46%
			94	10	0	30	25.00%	5	0	18	21.74%
			95	6	0	13	31.58%	7	0	7	50.00%
			96	9	0	27	25.00%	7	0	9	43.75%
			97	1	1	13	13.33%	6	0	11	35.29%
			98	5	0	15	25.00%	6	0	7	46.15%
			94	3	0	12	20.00%	3	1	5	44.44%
			95	5	0	7	41.67%	1	0	4	20.00%
			96	0	0	4	0.00%	0	0	4	0.00%
			97	0	0	6	0.00%	0	0	0	0.00%
	98	2	0	2	50.00%	0	0	1	0.00%		
	94	4	0	11	26.67%	3	0	8	27.27%		
	95	0	0	13	0.00%	1	0	8	11.11%		
	96	0	0	10	0.00%	1	0	5	16.67%		
	97	2	0	13	13.33%	2	0	4	33.33%		
	98	2	0	9	18.18%	0	0	7	0.00%		
	94	6	0	19	24.00%	7	0	12	36.84%		
	95	10	0	23	30.30%	12	0	6	66.67%		
	96	6	0	16	27.27%	6	0	13	31.58%		
	97	9	0	12	42.86%	9	0	7	56.25%		
	98	7	0	15	31.82%	3	0	7	30.00%		
	94	16	0	34	32.00%	11	0	15	42.31%		
	95	14	0	27	34.15%	8	0	15	34.78%		
	96	10	0	23	30.30%	7	0	19	26.92%		
97	8	1	20	31.03%	8	0	10	44.44%			
98	4	0	18	18.18%	7	0	13	35.00%			
35-54 yr	Driver/Errors	F	94	1083	0	261	80.58%	1029	1	67	93.89%
			95	1165	1	290	80.08%	1102	0	65	94.43%
			96	1116	2	249	81.79%	1045	0	70	93.72%
			97	1041	0	221	82.49%	992	0	47	95.48%
			98	989	0	201	83.11%	982	0	52	94.97%
		M	94	849	1	601	58.58%	1962	0	208	90.42%
			95	891	0	587	60.28%	2046	0	237	89.62%
			96	957	0	490	66.14%	1934	0	198	90.71%
			97	871	0	457	65.59%	1812	1	143	92.69%
			98	835	0	405	67.34%	1785	0	138	92.82%
	Center front	F	94	3	0	6	33.33%	2	0	1	66.67%
			95	5	0	4	55.56%	6	0	2	75.00%
			96	3	0	6	33.33%	1	0	2	33.33%
			97	7	0	4	63.64%	1	0	2	33.33%
			98	5	0	4	55.56%	2	0	1	66.67%

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
	Right front	M	94	2	0	4	33.33%	3	0	0	100.00%
			95	4	0	3	57.14%	4	0	3	57.14%
			96	2	0	3	40.00%	2	0	2	50.00%
			97	0	0	3	0.00%	1	0	0	100.00%
			98	0	0	3	0.00%	1	0	2	33.33%
		F	94	265	0	110	70.67%	121	0	25	82.88%
			95	273	1	119	69.72%	147	0	33	81.67%
			96	265	0	87	75.28%	135	0	11	92.47%
			97	222	0	67	76.82%	112	0	14	88.89%
			98	201	0	80	71.53%	110	0	19	85.27%
	M	94	99	0	80	55.31%	65	0	24	73.03%	
		95	101	0	78	56.43%	71	0	32	68.93%	
		96	93	0	101	47.94%	72	0	20	78.26%	
		97	76	0	60	55.88%	51	1	16	76.47%	
		98	92	0	63	59.35%	56	0	23	70.89%	
	Left rear	F	94	8	0	9	47.06%	8	0	2	80.00%
			95	8	0	15	34.78%	12	0	4	75.00%
			96	6	0	6	50.00%	7	0	2	77.78%
			97	11	0	7	61.11%	6	0	2	75.00%
			98	7	0	7	50.00%	8	0	6	57.14%
		M	94	8	0	9	47.06%	2	0	4	33.33%
			95	3	0	10	23.08%	4	0	7	36.36%
			96	4	0	2	66.67%	4	0	4	50.00%
			97	4	0	3	57.14%	4	0	0	100.00%
			98	1	0	7	12.50%	4	0	4	50.00%
	Center rear	F	94	3	0	1	75.00%	3	0	5	37.50%
			95	2	0	6	25.00%	2	0	2	50.00%
			96	2	1	3	50.00%	1	0	3	25.00%
			97	1	0	1	50.00%	1	0	2	33.33%
			98	0	0	5	0.00%	4	0	1	80.00%
M		94	0	0	1	0.00%	1	0	1	50.00%	
		95	1	0	6	14.29%	1	0	0	100.00%	
		96	1	0	4	20.00%	0	0	1	0.00%	
		97	0	0	3	0.00%	1	0	1	50.00%	
		98	0	0	5	0.00%	2	0	1	66.67%	
Right rear	F	94	15	0	17	46.88%	9	0	9	50.00%	
		95	13	0	11	54.17%	10	0	5	66.67%	
		96	17	1	15	54.55%	9	0	3	75.00%	
		97	9	0	4	69.23%	12	0	9	57.14%	
		98	8	0	6	57.14%	7	0	7	50.00%	
	M	94	4	0	9	30.77%	4	0	9	30.77%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
55-64 yr			95	3	0	11	21.43%	4	0	9	30.77%
			96	3	0	8	27.27%	8	0	4	66.67%
			97	6	1	12	36.84%	4	1	2	71.43%
			98	5	0	4	55.56%	6	0	5	54.55%
			94	211	0	45	82.42%	210	0	7	96.77%
	Driver/Errors	F	95	221	0	48	82.16%	219	0	11	95.22%
			96	234	0	30	88.64%	203	0	5	97.60%
			97	222	0	34	86.72%	187	0	8	95.90%
			98	240	0	36	86.96%	184	0	2	98.93%
			94	187	1	103	64.61%	461	0	36	92.76%
	M	95	203	0	103	66.34%	475	0	39	92.41%	
		96	197	0	89	68.88%	413	0	31	93.02%	
		97	204	0	78	72.34%	386	0	38	91.04%	
		98	213	0	78	73.20%	386	0	22	94.61%	
	Center front	F	94	2	0	1	66.67%	0	0	0	0.00%
			95	4	0	0	100.00%	0	0	0	0.00%
			96	1	0	0	100.00%	1	0	1	50.00%
			97	2	0	0	100.00%	2	0	0	100.00%
			98	0	0	0	0.00%	1	0	0	100.00%
		M	94	0	0	1	0.00%	1	0	0	100.00%
95			1	0	1	50.00%	1	0	1	50.00%	
96			1	0	0	100.00%	1	0	0	100.00%	
97			1	0	0	100.00%	0	0	0	0.00%	
Right front	F	94	101	0	26	79.53%	55	0	2	96.49%	
		95	118	0	36	76.62%	48	0	3	94.12%	
		96	89	0	26	77.39%	41	0	3	93.18%	
		97	57	0	12	82.61%	49	0	1	98.00%	
		98	70	0	21	76.92%	40	0	1	97.56%	
	M	94	28	0	14	66.67%	15	0	5	75.00%	
		95	25	0	10	71.43%	12	0	0	100.00%	
		96	31	0	10	75.61%	14	0	2	87.50%	
		97	18	1	6	76.00%	11	0	1	91.67%	
Left rear	F	98	19	0	5	79.17%	9	0	0	100.00%	
		94	7	0	2	77.78%	1	0	2	33.33%	
		95	5	0	1	83.33%	6	0	1	85.71%	
		96	1	0	5	16.67%	4	0	0	100.00%	
		97	2	1	1	75.00%	3	0	1	75.00%	
	98	3	0	2	60.00%	1	0	0	100.00%		
	M	94	2	0	0	100.00%	1	0	1	50.00%	
95	3	0	0	100.00%	1	0	0	100.00%			

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
	Center rear	F	96	1	0	4	20.00%	1	0	0	100.00%
			97	0	0	1	0.00%	0	0	0	0.00%
			98	1	0	0	100.00%	0	0	0	0.00%
		94	0	0	1	0.00%	0	0	2	0.00%	
		95	1	0	2	33.33%	1	0	0	100.00%	
		96	1	0	2	33.33%	0	0	0	0.00%	
		97	1	0	0	100.00%	0	0	1	0.00%	
		98	0	0	1	0.00%	0	0	0	0.00%	
		94	1	0	1	50.00%	0	0	0	0.00%	
	95	0	0	1	0.00%	0	0	0	0.00%		
	96	0	0	1	0.00%	0	0	0	0.00%		
	97	0	0	2	0.00%	0	0	0	0.00%		
	98	2	0	0	100.00%	0	0	0	0.00%		
	94	7	0	5	58.33%	2	0	2	50.00%		
	95	5	0	6	45.46%	2	0	1	66.67%		
	96	3	0	3	50.00%	5	0	1	83.33%		
	97	4	0	2	66.67%	3	0	0	100.00%		
	98	3	0	3	50.00%	0	0	0	0.00%		
94	1	0	1	50.00%	0	0	1	0.00%			
95	1	0	0	100.00%	2	0	0	100.00%			
96	0	0	0	0.00%	3	0	0	100.00%			
97	2	0	2	50.00%	0	0	0	0.00%			
98	0	0	4	0.00%	1	0	4	20.00%			
65-69 yr	Driver/Errors	F	94	92	0	23	80.00%	88	0	2	97.78%
			95	107	0	18	85.60%	73	0	4	94.81%
			96	102	0	15	87.18%	77	0	3	96.25%
			97	85	0	18	82.52%	75	0	4	94.94%
			98	85	0	8	91.40%	57	0	3	95.00%
		M	94	96	0	29	76.80%	186	0	16	92.08%
			95	107	0	41	72.30%	189	0	9	95.46%
			96	85	0	33	72.03%	161	0	10	94.15%
			97	79	0	37	68.10%	151	0	11	93.21%
	98	84	0	38	68.85%	141	0	9	94.00%		
	Center front	F	94	1	0	0	100.00%	0	0	0	0.00%
			96	2	0	0	100.00%	3	0	0	100.00%
			98	0	0	0	0.00%	0	0	0	0.00%
	M	98	0	0	0	0.00%	0	0	0	0.00%	
	Right front	F	94	58	0	11	84.06%	23	0	4	85.19%
			95	57	0	11	83.82%	23	0	2	92.00%
			96	55	0	11	83.33%	20	0	1	95.24%
			97	36	0	6	85.71%	22	0	0	100.00%

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
		M	98	40	0	3	93.02%	15	0	0	100.00%
			94	12	0	4	75.00%	5	0	5	50.00%
			95	4	0	4	50.00%	8	0	1	88.89%
			96	12	0	0	100.00%	3	0	2	60.00%
			97	10	0	0	100.00%	1	0	2	33.33%
			98	7	0	6	53.85%	3	0	1	75.00%
	Left rear	F	94	1	0	2	33.33%	3	0	1	75.00%
			95	2	0	3	40.00%	1	0	1	50.00%
			96	1	0	3	25.00%	2	0	2	50.00%
			97	0	0	1	0.00%	0	0	0	0.00%
		98	2	0	2	50.00%	0	0	0	0.00%	
		M	94	1	0	0	100.00%	1	0	0	100.00%
			95	2	0	2	50.00%	0	0	0	0.00%
			96	0	0	1	0.00%	0	0	0	0.00%
	97		1	0	0	100.00%	0	0	0	0.00%	
	98	0	0	0	0.00%	1	0	1	50.00%		
	Center rear	F	94	0	0	0	0.00%	1	0	0	100.00%
			95	0	0	1	0.00%	0	0	0	0.00%
			97	0	0	1	0.00%	0	0	1	0.00%
		98	1	0	0	100.00%	0	0	0	0.00%	
		M	96	0	0	0	0.00%	1	0	0	100.00%
			98	0	0	0	0.00%	0	0	0	0.00%
	Right rear	F	94	0	0	3	0.00%	1	0	4	20.00%
			95	3	0	2	60.00%	0	0	0	0.00%
			96	6	0	0	100.00%	0	0	0	0.00%
			97	1	0	1	50.00%	4	0	0	100.00%
		98	6	0	1	85.71%	0	0	0	0.00%	
		M	94	1	0	0	100.00%	0	0	0	0.00%
95			1	0	0	100.00%	0	0	1	0.00%	
98			2	0	2	50.00%	0	0	0	0.00%	
70-74 yr	Driver/Errors	F	94	109	0	20	84.50%	81	0	1	98.78%
			95	115	0	16	87.79%	61	0	2	96.83%
			96	88	0	10	89.80%	74	0	4	94.87%
			97	88	0	16	84.62%	59	0	3	95.16%
			98	92	0	17	84.40%	48	0	3	94.12%
		M	94	74	0	30	71.15%	126	0	4	96.92%
			95	86	0	35	71.07%	145	0	11	92.95%
			96	90	0	31	74.38%	143	0	8	94.70%
			97	85	0	29	74.56%	104	0	9	92.04%
			98	63	0	23	73.26%	123	0	6	95.35%
	Center front	F	94	0	0	1	0.00%	0	0	0	0.00%

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
			95	2	0	0	100.00%	0	0	1	0.00%
			97	1	0	0	100.00%	0	0	0	0.00%
			98	1	0	0	100.00%	0	0	0	0.00%
			M 98	0	0	0	0.00%	0	0	0	0.00%
	Right front	F	94	50	0	11	81.97%	11	0	1	91.67%
			95	51	0	11	82.26%	27	0	1	96.43%
			96	45	0	4	91.84%	17	0	0	100.00%
			97	36	0	4	90.00%	23	0	2	92.00%
		98	54	0	13	80.60%	20	0	1	95.24%	
		M	94	12	0	2	85.71%	11	0	3	78.57%
			95	13	0	8	61.91%	4	0	0	100.00%
			96	13	0	4	76.47%	6	0	0	100.00%
	97		5	0	4	55.56%	7	0	1	87.50%	
	98	11	0	0	100.00%	3	0	0	100.00%		
	Left rear	F	94	3	0	2	60.00%	0	0	1	0.00%
			95	2	0	1	66.67%	0	0	0	0.00%
			96	1	0	1	50.00%	1	0	0	100.00%
			97	0	0	2	0.00%	0	0	0	0.00%
		98	1	0	0	100.00%	0	0	0	0.00%	
		M	94	0	0	0	0.00%	1	0	0	100.00%
			95	1	0	0	100.00%	0	0	0	0.00%
			96	0	0	0	0.00%	0	0	0	0.00%
	98		0	0	0	0.00%	0	0	0	0.00%	
	Center rear	F	94	0	0	1	0.00%	0	0	0	0.00%
			95	0	0	1	0.00%	1	0	0	100.00%
			98	0	0	0	0.00%	0	0	0	0.00%
		M	94	1	0	0	100.00%	0	0	0	0.00%
	98	0	0	0	0.00%	0	0	0	0.00%		
	Right rear	F	94	1	0	2	33.33%	2	0	0	100.00%
			95	3	0	4	42.86%	2	0	3	40.00%
96			3	0	4	42.86%	2	0	0	100.00%	
97			1	0	1	50.00%	1	0	0	100.00%	
98		4	0	3	57.14%	0	0	0	0.00%		
M		95	1	0	0	100.00%	0	1	0	100.00%	
		96	0	0	1	0.00%	0	0	0	0.00%	
		97	0	0	0	0.00%	0	0	1	0.00%	
	98	0	0	0	0.00%	0	0	1	0.00%		
75-79 yr	Driver/Errors	F	94	89	0	14	86.41%	44	0	3	93.62%
			95	101	0	19	84.17%	40	0	1	97.56%
			96	102	0	13	88.70%	52	0	5	91.23%
			97	89	0	14	86.41%	55	0	0	100.00%
			98	99	0	11	90.00%	58	0	0	100.00%
		M	94	54	0	42	56.25%	108	0	4	96.43%

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
			95	95	0	24	79.83%	88	0	8	91.67%
			96	78	0	20	79.59%	103	0	6	94.50%
			97	74	0	21	77.90%	94	0	9	91.26%
			98	79	1	19	80.81%	96	0	4	96.00%
			94	3	0	1	75.00%	1	0	0	100.00%
	Center front	F	95	1	0	0	100.00%	0	0	0	0.00%
			96	3	0	0	100.00%	0	0	1	0.00%
			98	1	0	0	100.00%	0	0	0	0.00%
			94	0	0	0	0.00%	1	0	0	100.00%
		M	96	1	0	0	100.00%	0	0	0	0.00%
			98	0	0	0	0.00%	0	0	0	0.00%
	Right front	F	94	51	0	12	80.95%	9	0	3	75.00%
			95	50	0	10	83.33%	12	0	1	92.31%
			96	48	0	13	78.69%	13	0	0	100.00%
			97	46	0	8	85.19%	13	0	0	100.00%
			98	45	0	8	84.91%	12	0	0	100.00%
		M	94	8	0	2	80.00%	0	0	0	0.00%
			95	13	0	3	81.25%	7	0	0	100.00%
			96	11	0	3	78.57%	4	0	0	100.00%
			97	6	0	5	54.55%	5	0	1	83.33%
			98	6	0	0	100.00%	3	0	1	75.00%
	Left rear	F	94	2	0	1	66.67%	1	0	1	50.00%
			95	0	0	0	0.00%	3	0	0	100.00%
			96	0	0	0	0.00%	1	0	0	100.00%
			97	0	0	1	0.00%	1	0	0	100.00%
			98	0	0	1	0.00%	0	0	0	0.00%
		M	96	1	0	0	100.00%	0	0	0	0.00%
			98	1	0	0	100.00%	1	0	1	50.00%
Center rear	F	94	0	0	1	0.00%	0	0	0	0.00%	
		95	1	0	0	100.00%	1	0	0	100.00%	
		98	1	0	0	100.00%	0	0	0	0.00%	
	M	98	0	0	0	0.00%	0	0	0	0.00%	
Right rear	F	94	1	0	3	25.00%	2	0	2	50.00%	
		95	4	0	3	57.14%	2	0	1	66.67%	
		96	0	0	1	0.00%	1	0	0	100.00%	
		97	1	0	2	33.33%	0	0	1	0.00%	
		98	2	0	1	66.67%	1	0	0	100.00%	
	M	94	1	0	0	100.00%	0	0	1	0.00%	
		95	0	0	0	0.00%	1	0	0	100.00%	
		96	1	0	0	100.00%	0	0	0	0.00%	
		97	2	0	0	100.00%	0	0	0	0.00%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants				
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use	
80-84 yr	Driver/Errors	F	98	0	0	0	0.00%	0	0	0	0.00%	
			94	47	0	18	72.31%	27	0	2	93.10%	
			95	41	0	17	70.69%	23	0	1	95.83%	
			96	69	0	6	92.00%	34	0	3	91.89%	
			97	64	0	10	86.49%	27	0	0	100.00%	
			98	72	0	12	85.71%	36	0	0	100.00%	
			M	94	54	0	18	75.00%	62	0	5	92.54%
				95	46	0	18	71.88%	74	0	11	87.06%
		96		64	0	23	73.56%	51	0	4	92.73%	
		97		57	0	14	80.28%	44	0	4	91.67%	
		98		43	0	13	76.79%	52	0	3	94.55%	
		Center front	F	94	1	0	1	50.00%	0	0	0	0.00%
				95	1	0	0	100.00%	0	0	0	0.00%
	97			2	0	0	100.00%	0	0	0	0.00%	
	98			1	0	0	100.00%	0	0	0	0.00%	
	M		95	1	0	0	100.00%	0	0	0	0.00%	
			96	0	0	1	0.00%	0	0	0	0.00%	
			98	0	0	1	0.00%	0	0	0	0.00%	
	Right front	F	94	24	0	8	75.00%	6	0	0	100.00%	
			95	28	0	8	77.78%	12	0	1	92.31%	
			96	34	0	10	77.27%	10	0	0	100.00%	
			97	16	0	4	80.00%	15	0	0	100.00%	
			98	20	0	6	76.92%	4	0	1	80.00%	
		M	94	9	0	1	90.00%	4	0	0	100.00%	
			95	4	0	5	44.44%	4	0	0	100.00%	
			96	10	0	2	83.33%	4	0	1	80.00%	
			97	6	0	3	66.67%	0	0	0	0.00%	
			98	7	0	1	87.50%	1	0	0	100.00%	
	Left rear	F	94	2	0	0	100.00%	1	0	0	100.00%	
			95	3	0	0	100.00%	1	0	1	50.00%	
			96	2	0	0	100.00%	0	0	0	0.00%	
			97	3	0	0	100.00%	1	0	0	100.00%	
98			1	0	1	100.00%	2	0	0	100.00%		
M		95	0	0	0	0.00%	1	0	0	100.00%		
		96	0	0	0	0.00%	0	0	1	0.00%		
		98	0	0	1	0.00%	1	0	0	100.00%		
Center rear	F	97	1	0	0	100.00%	0	0	0	0.00%		
		98	2	0	0	100.00%	0	0	0	0.00%		
	M	96	0	0	1	0.00%	0	0	0	0.00%		
		98	0	0	0	0.00%	0	0	0	0.00%		
Right rear	F	94	1	0	0	100.00%	2	0	0	100.00%		

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants			
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use
				95	1	0	1	50.00%	1	0	1
96	2	0	1	66.67%	1	0	0	100.00%			
97	3	0	0	100.00%	0	0	0	0.00%			
98	0	0	2	0.00%	0	0	0	0.00%			
M	94	0	0	1	0.00%	0	0	0	0.00%		
	96	1	0	1	50.00%	0	0	0	0.00%		
	97	0	0	1	0.00%	0	0	0	0.00%		
	98	0	0	0	0.00%	0	0	0	0.00%		
85-89 yr	Driver/Errors	F	94	25	0	6	80.65%	6	0	1	85.71%
			95	24	0	8	75.00%	13	0	0	100.00%
			96	16	0	6	72.73%	5	0	0	100.00%
			97	23	0	6	79.31%	13	0	0	100.00%
		98	22	0	4	84.62%	7	0	1	87.50%	
		M	94	19	0	15	55.88%	20	0	4	83.33%
			95	19	0	12	61.29%	26	0	1	96.30%
			96	22	0	9	70.97%	21	0	1	95.46%
	97		27	0	9	75.00%	23	0	1	95.83%	
	98	27	0	11	71.05%	20	0	2	90.91%		
	Center front	F	96	0	0	1	0.00%	0	0	0	0.00%
			97	1	0	0	100.00%	0	0	0	0.00%
			98	0	0	0	0.00%	0	0	0	0.00%
	M	98	0	0	0	0.00%	0	0	0	0.00%	
	Right front	F	94	16	0	2	88.89%	0	0	1	0.00%
			95	12	0	0	100.00%	6	0	0	100.00%
96			16	0	6	72.73%	4	0	0	100.00%	
97			16	0	6	72.73%	4	0	0	100.00%	
98			12	0	4	75.00%	4	0	0	100.00%	
M		94	3	0	2	60.00%	4	0	0	100.00%	
		95	3	0	3	50.00%	1	0	0	100.00%	
		96	3	0	2	60.00%	0	0	0	0.00%	
		97	5	0	4	55.56%	1	0	1	50.00%	
		98	6	0	2	75.00%	3	0	0	100.00%	
Left rear	F	94	0	0	1	0.00%	0	0	1	0.00%	
		95	1	0	0	100.00%	1	0	0	100.00%	
		96	0	0	0	0.00%	1	0	0	100.00%	
		97	0	0	0	0.00%	0	0	1	0.00%	
		98	0	0	0	0.00%	1	0	0	100.00%	
Center rear	F	98	1	0	0	100.00%	0	0	0	0.00%	
	M	98	0	0	0	0.00%	0	0	0	0.00%	
Right rear	F	94	1	0	0	100.00%	0	0	0	0.00%	

**Belt Use Among Persons Involved in Fatal or Serious Injury Crashes
by Occupant Age, Sex, Injury, Seat Position, and Year**

Age	Occupant Position	Sex	Year	KA Injured Occupants				Not KA Injured Occupants					
				Belt Used	CRD Used	Belt Not Used	% Belt Use	Belt Used	CRD Used	Belt Not Used	% Belt Use		
			95	0	0	1	0.00%	0	0	0	0.00%		
			96	0	0	1	0.00%	0	0	0	0.00%		
			97	2	0	3	40.00%	0	0	1	0.00%		
			98	0	0	0	0.00%	0	0	0	0.00%		
		M	94	0	0	1	0.00%	0	0	0	0.00%		
			98	0	0	0	0.00%	0	0	0	0.00%		
			94	3	0	2	60.00%	2	0	0	100.00%		
			95	4	0	1	80.00%	1	0	1	50.00%		
			96	5	0	0	100.00%	2	0	0	100.00%		
90 + yr	Driver/Errors	F	97	7	0	0	100.00%	1	0	0	100.00%		
			98	9	0	1	90.00%	4	0	0	100.00%		
			94	4	0	2	66.67%	5	0	1	83.33%		
			95	3	0	1	75.00%	12	0	0	100.00%		
			96	8	0	5	61.54%	7	0	1	87.50%		
	M	97	3	0	2	60.00%	11	0	0	100.00%			
		98	8	0	3	72.73%	5	0	0	100.00%			
		Center front	F	96	0	0	0	0.00%	1	0	0	100.00%	
				98	0	0	1	0.00%	0	0	0	0.00%	
		Right front	F		98	0	0	0	0.00%	0	0	0	0.00%
94	4				0	2	66.67%	1	0	0	100.00%		
95	9				0	0	100.00%	1	0	0	100.00%		
96	6				0	4	60.00%	2	0	0	100.00%		
97	7				0	3	70.00%	1	0	0	100.00%		
M			98	4	0	2	66.67%	0	0	0	0.00%		
			94	3	0	3	50.00%	1	0	0	100.00%		
			95	1	0	1	50.00%	1	0	0	100.00%		
			96	2	0	0	100.00%	3	0	0	100.00%		
			97	3	0	1	75.00%	1	0	0	100.00%		
			98	1	0	0	100.00%	0	0	0	0.00%		
			Left rear	F	96	1	0	0	100.00%	0	0	0	0.00%
					97	1	0	1	50.00%	1	0	0	100.00%
98	0	0			2	0.00%	0	0	0	0.00%			
Center rear	M	98	0	0	0	0.00%	0	0	0	0.00%			
		98	0	0	0	0.00%	0	0	0	0.00%			
Right rear	F	94	0	0	1	0.00%	0	0	0	0.00%			
		96	1	0	1	50.00%	0	0	0	0.00%			
		98	0	0	0	0.00%	0	0	0	0.00%			
	M	95	0	0	1	0.00%	0	0	1	0.00%			
98		0	0	0	0.00%	0	0	0	0.00%				

