

**Methods and Computations for  
Driver Death Rates by Make and  
Series: 1990-94 Models**

Michael A. Greene

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**INSURANCE INSTITUTE  
FOR HIGHWAY SAFETY**

1005 N. GLEBE RD. ARLINGTON, VA 22201-4751

PHONE 703/247-1500 FAX 703/247-1678

website <http://www.highwaysafety.org>

This document describes the methods used to compute driver fatality rates for passenger vehicles presented in *Driver Death Rates by Make and Series: 1990-94 Models* (Insurance Institute for Highway Safety, 1996) and the more detailed rates in an accompanying table. The computed rates, which summarize the driver fatality experience of passenger vehicles in the United States, are derived from the U.S. Department of Transportation's Fatal Accident Reporting System (FARS) and R.L. Polk and Company National Vehicle Population Profile (NVPP). Rates are for passenger vehicles up to five years old (1990-94 model years) during the calendar period 1991-95. Rates are presented by individual vehicle make and series. They also are aggregated by vehicle size and body style groups.

These methods are the same as those used for two previous reports on driver death rates (Insurance Institute for Highway Safety, 1994, 1995). The 1994 report included death rates for 1988-92 model passenger vehicles during the calendar period 1989-93, while the 1995 report included 1989-93 models during 1990-94.

Death rates computed in this paper are not adjusted for driver age or sex because make and series registration data by age and sex are not available. Without such adjustments, vehicle differences among size/body style groups reflect both vehicle and driver characteristics. Vehicle effects are less confounded in comparisons among vehicles within the same size/body style group because driver characteristics should be less varied within groups.

In addition to a description of the methods used to compute the death rates, this paper includes a table with detailed statistical information including the fatality and registration counts used to compute the results plus confidence limits for the overall driver death rates.

## **METHODS**

Raw driver death rates were computed by dividing reported driver deaths in FARS for each make and series by its total number of registered vehicle years. Relative driver death rates were computed by dividing the raw death rates by the average for all vehicles and then multiplying by 100.

**Data Sources:** Driver deaths for each make and series were obtained from FARS. FARS is an annual census of all fatal motor vehicle crashes that occur on public roads in the United States. A crash is defined as fatal when a vehicle occupant or pedestrian or bicyclist or motorcycle rider involved in the crash dies as a result of injuries within 30 days of the event. The file is compiled annually by the U.S. Department of Transportation from police crash reports, state files, and medical reports. Data elements included in FARS describe the location and time of the crash, the vehicle(s), and demographic characteristics of people involved.

Vehicle makes and series are identified from FARS by decoding vehicle identification numbers (VINs) using the VINDICATOR program (Highway Loss Data Institute, 1996). Series are defined as families of vehicles within a make with the same wheelbase and a degree of commonality in chassis design and body style. For example, the Honda make includes the following series: Accord two-door, Accord four-door, Accord station wagon, Civic two-door, Civic four-door, Civic Coupe, Civic Del Sol, and Prelude. No further distinctions are made within series, so, for example, the four-door Honda Accord series includes all four-door DX, LX, EX, and SE versions. These versions differ in trim, options, and engine but share a common wheelbase and design.

Vehicle series are grouped according to size and body style. Definitions follow the Technical Appendix (Highway Loss Data Institute, 1996). There are seven body style groups: four-door cars, two-door cars, sports cars, luxury cars, station wagons/passenger vans, pickup trucks, and utility vehicles. Sports models include small and midsize two-seat cars and cars with high performance features. The luxury models include relatively expensive midsize and large cars that are not classified as sports models.

Body styles are divided into size classes based on wheelbase (rounded to the nearest inch). Small cars are vehicles with wheelbases less than 100 inches. Midsize cars are 100-109 inches, and large cars are 110 inches or longer. Small utility vehicles are less than 100 inches, midsize ones are 100-120 inches, and large utility vehicles are longer than 120 inches. Size classifications for pickups are small (less than 3,500 pounds) and standard (3,500 or more pounds).

The number of registered vehicles comes from NVPP (R.L. Polk, 1996). Polk collects data from state registration files. Vehicles owned by the federal government are not included. NVPP provides counts by make, series, and model year at the same level found in decoded VINs. NVPP registration counts are a snapshot of vehicles registered as of July 1 of each year. Thus, new vehicles registered before July 1995 are included as if they were in service for the whole calendar year. Vehicles registered after July 1 are excluded. Because of this, accurate registration counts are not available for 1995 and 1996 models during calendar year 1995. The newest vehicles for which fatality rates are calculated are 1994 models.

**Computations:** Individual fatality rates and other computations are reported for all makes and series with combined registration counts of at least 100,000 for 1990-94 models during 1991-95. Fewer model years are included if a vehicle was significantly redesigned during the study period. Then death rates were computed only for the newer design. An example is the Pontiac Bonneville, which was redesigned for the 1992 model year so that reported information covers only 1992-94 models. A change

in the driver restraint system from a manual or automatic belt to an airbag qualifies as a significant design change because of the airbag's effect on the likelihood of driver fatality.

As noted above, driver death rates were computed by dividing reported deaths by registered vehicle years. Rates then are presented in relative terms by dividing by the all-passenger-vehicle death rate and then multiplying by 100. This allows each rate to be interpreted relative to the all-passenger-vehicle rate. For example, the Chevrolet Camaro's relative overall driver death rate of 297 is 297 percent of, or nearly three times, the all-passenger-vehicle rate. The Camaro experienced 55 driver deaths with 180,685 registered vehicle years. There were 3.043 deaths per 10,000 registered vehicle years. Dividing by the overall passenger vehicle death rate of 1.025 per 10,000 registered vehicle years and multiplying by 100 yields 296.686, or 297.

Overall death rates are the sum of fatality rates in single-vehicle crashes and multiple-vehicle crashes. For all cars combined, the fatality rate in multiple-vehicle fatal crashes was 0.6 deaths per 10,000 registered vehicle years, equating to a standardized value of 54, or 54 percent of the average fatality rate. The fatality rate in single-vehicle fatal crashes was 0.5 deaths per 10,000 equating to a standardized value of 46.

The confidence limit for each relative rate assumes that the number of fatalities for each vehicle series follows a Poisson distribution. There is a long history of using the Poisson distribution to model crashes (Miaou, 1994). The confidence limits are calculated according to a procedure found in Hahn and Meeker (1991). Details of the computation are in the appendix.

## **RESULTS**

The accompanying table shows wide variation in death rates among different classes of vehicles. As a group, large cars and station wagons, large and midsize luxury cars, passenger vans, and large utility vehicles have the lowest (best) rates. Groups with the highest (worst) rates are sports cars, small two-door cars, small pickups, and small utility vehicles.

Within some size/body style groups, differences among best and worst also are striking. While confidence limits are fairly wide within groups, these limits often do not overlap between the bottom and top of the group, a rough indication of statistical significance. Examples of striking differences within group include the Lexus LS 400 and four-door Acura Legend compared with the Mazda 929 in the large luxury car group.

## APPENDIX

Assume that the number of driver deaths for a vehicle of a given make/series follows a Poisson distribution with parameter  $\lambda$ . Let  $y$  be a random variable denoting that number of driver deaths in this make/series. Then the maximum likelihood estimate for  $\lambda$  is

$$\hat{\lambda} = y / n \quad (1)$$

where  $n$  denotes the number of registered vehicle years.

Two sided  $100(1 - \alpha)$  % confidence limits are given as

$$[\lambda_l, \lambda_u] = \left[ \frac{0.5\chi^2(\alpha/2; 2y)}{n}, \frac{0.5\chi^2(1 - \alpha/2; 2y + 2)}{n} \right] \quad (2)$$

where  $\chi^2(\gamma, \nu)$  is the 100  $\gamma$  th percentile of a chi-square distribution with  $\nu$  degrees of freedom, and  $[\lambda_l, \lambda_u]$  represent the lower and upper confidence limits (Hahn and Meeker, 1991).

The required confidence limits, however, are not for the death rate per vehicle. They are for the relative rate. The relation between the two is simply one of scaling. That is, defining  $r$  as the relative death rate for that make/series we have

$$r = ay / n \quad (3)$$

where  $a$  is the appropriate scaling factor. Then the confidence limits for  $r$  are

$$[r_l, r_u] = \left[ \frac{0.5a\chi^2(\alpha/2; 2y)}{n}, \frac{0.5a\chi^2(1 - \alpha/2; 2y + 2)}{n} \right] \quad (4)$$

i.e., the confidence limits for  $\hat{\lambda}$  multiplied by  $a$ . Note that  $a = 100 \sum n / \sum y$  where the sum is taken over all makes and series and all registered vehicle years.

The following example is for the Pontiac Bonneville. The point estimate for  $\lambda = 30/604,607$  (fatalities/registered vehicle years) =  $4.962 \times 10^{-5}$  or 0.496 deaths per 10,000 registrations. The 95 percent confidence limits for  $\lambda$  using equation (2) are  $3.347 \times 10^{-5}$  to  $7.083 \times 10^{-5}$  equating to 0.3 to 0.7 deaths per 10,000 registered vehicle years. The scaling factor,  $a$  is  $183,023,398 * 100 / 18778 = 974669.3$ , where 183,023,398 is the total registered vehicle years; 18,778 is the total number of driver fatalities; and 100 is to standardize at 100. Using equation (3), the point estimate for the relative rate is 48.36212. Multiplying lower and upper confidence limits by 974669.3 yields 32.63 and 69.03. These were rounded to 33 and 69 in the table around a point estimate of 48.

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	Driver Restraint System	Wheel-base (inches)	Registered Vehicle Yrs. (R.V.Y.)	Occupant Deaths		Actual Driver Deaths per 10,000 R.V.Y.				Relative Rates (100 = Avg.)		
				Driver	Other	Multiple-Vehicle	Single-Vehicle	Roll-Over	Overall	Death Rate	95% Confidence Interval	
<b>Four-Door Cars: All Large</b>			<b>10,651,236</b>	<b>867</b>	<b>522</b>	<b>0.5</b>	<b>0.3</b>	<b>0.1</b>	<b>0.8</b>	<b>79</b>	<b>74 - 85</b>	
1992-94	Pontiac Bonneville	Airbag	111	604,607	30	17	0.2	0.3	0.2	0.5	48	33 - 69
1991-94	Buick Park Avenue	Airbag	111	727,736	38	49	0.4	0.2	0.1	0.5	51	36 - 70
1993-94	Chrysler Concorde	Airbag	113	162,186	9	1	0.2	0.3	0.2	0.6	54	25 - 103
1992-94	Buick Roadmaster	Airbag	116	248,436	15	15	0.3	0.3	0.1	0.6	59	33 - 97
1992-94	Mercury Grand Marquis	Airbag	114	680,942	46	38	0.4	0.2	0.1	0.7	66	48 - 88
1993-94	Dodge Intrepid	Airbag	113	260,792	18	17	0.4	0.3	0.0	0.7	67	40 - 106
1991-94	Oldsmobile Ninety-Eight	Airbag	111	383,248	28	22	0.5	0.2	0.0	0.7	71	47 - 103
1992-94	Oldsmobile Eighty-Eight	Airbag	111	497,343	38	27	0.5	0.3	0.1	0.8	74	53 - 102
1992-94	Buick LeSabre	Airbag	111	896,296	71	36	0.6	0.2	0.1	0.8	77	60 - 97
1992-94	Ford Crown Victoria	Airbag	114	623,338	57	23	0.6	0.3	0.1	0.9	89	68 - 115
1991-94	Chevrolet Caprice	Airbag	116	921,880	92	47	0.7	0.3	0.2	1.0	97	78 - 119
<b>Four-Door Cars: All Midsize</b>			<b>45,531,045</b>	<b>4,082</b>	<b>2,273</b>	<b>0.6</b>	<b>0.3</b>	<b>0.2</b>	<b>0.9</b>	<b>87</b>	<b>85 - 90</b>	
1993-94	Mazda 626	Airbag	103	232,257	7	9	0.2	0.1	0.1	0.3	29	12 - 61
1990-94	Volkswagen Passat	Belt only	103	162,528	7	7	0.2	0.2	0.1	0.4	42	17 - 86
1992-94	Lexus ES 300	Airbag	103	214,395	10	2	0.3	0.2	0.1	0.5	45	22 - 84
1992-94	Mitsubishi Diamante	Airbag	107	152,832	8	4	0.2	0.3	0.1	0.5	51	22 - 101
1992-94	Toyota Camry	Airbag	103	1,626,757	94	55	0.3	0.3	0.1	0.6	56	46 - 69
1992-94	Saturn SL	Airbag	102	871,129	53	40	0.4	0.2	0.1	0.6	59	44 - 78
1990-94	Mercury Sable	Airbag	106	1,198,059	76	48	0.5	0.2	0.1	0.6	62	49 - 77
1992-94	Nissan Maxima	Airbag	104	478,927	31	17	0.3	0.4	0.2	0.6	63	43 - 90
1992-94	Honda Civic	Airbag	103	672,329	45	35	0.5	0.2	0.1	0.7	65	48 - 87
1994-94	Honda Accord	Airbag	107	303,234	21	7	0.4	0.3	0.1	0.7	67	42 - 103
1990-94	Ford Taurus	Airbag	106	3,675,803	255	125	0.4	0.2	0.1	0.7	68	60 - 76
1993-94	Nissan Altima	Airbag	103	403,360	32	14	0.4	0.3	0.2	0.8	77	53 - 109
1992-94	Subaru Legacy	Airbag	102	114,077	9	3	0.5	0.3	0.3	0.8	77	35 - 146
1990-94	Chevrolet Lumina	Belt only	108	2,796,572	248	111	0.6	0.3	0.2	0.9	86	76 - 98
1991-94	Chevrolet Corsica	Airbag	103	1,365,372	123	79	0.6	0.3	0.2	0.9	88	73 - 105
1990-94	Hyundai Sonata	Belt only	104	278,150	25	13	0.4	0.5	0.2	0.9	88	57 - 129
1990-94	Plymouth Acclaim	Airbag	104	1,304,271	122	74	0.6	0.3	0.1	0.9	91	76 - 109
1990-94	Dodge Spirit	Airbag	104	1,129,794	108	68	0.7	0.3	0.1	1.0	93	76 - 112
1994-94	Pontiac Grand Am	Airbag	103	135,716	15	7	0.4	0.7	0.4	1.1	108	60 - 178
1990-94	Ford Tempo	Belt only	100	2,508,108	302	147	0.8	0.4	0.2	1.2	117	104 - 131
1993-94	Buick Century	Airbag	105	339,790	42	23	1.1	0.2	0.0	1.2	120	87 - 163
1990-94	Mercury Topaz	Belt only	100	878,401	111	43	0.8	0.5	0.2	1.3	123	101 - 148
1990-94	Chrysler LeBaron	Airbag	104	378,528	49	18	1.2	0.1	0.2	1.3	126	93 - 167
1993-94	Oldsmobile Cutlass Ciera	Airbag	105	387,794	51	21	1.0	0.3	0.2	1.3	128	95 - 169
1990-94	Chevrolet Cavalier	Belt only	101	1,241,404	173	81	0.9	0.5	0.2	1.4	136	116 - 158
1990-94	Pontiac Sunbird	Belt only	101	519,608	89	47	1.1	0.6	0.3	1.7	167	134 - 205
<b>Four-Door Cars: All Small</b>			<b>13,256,156</b>	<b>1,724</b>	<b>1,034</b>	<b>0.8</b>	<b>0.5</b>	<b>0.2</b>	<b>1.3</b>	<b>127</b>	<b>121 - 133</b>	
1993-94	Toyota Corolla	Airbag	97	553,657	52	43	0.7	0.3	0.1	0.9	92	68 - 120
1990-94	Plymouth Sundance	Airbag	97	502,013	53	21	0.7	0.4	0.2	1.1	103	77 - 135
1990-94	Dodge Shadow	Airbag	97	567,481	78	38	0.8	0.5	0.2	1.4	134	106 - 167
1990-94	Hyundai Excel	Belt only	94	365,277	53	37	0.9	0.5	0.4	1.5	141	106 - 185
1993-94	Geo Prizm	Airbag	97	249,505	37	16	1.0	0.5	0.4	1.5	145	102 - 199
1990-94	Mazda Protege	Belt only	98	880,395	139	81	1.0	0.6	0.3	1.6	154	129 - 182
1990-94	Geo Metro	Belt only	93	406,850	73	48	1.3	0.5	0.4	1.8	175	137 - 220
<b>Two-Door Cars: All Large</b>			<b>2,368,448</b>	<b>197</b>	<b>87</b>	<b>0.4</b>	<b>0.4</b>	<b>0.2</b>	<b>0.8</b>	<b>81</b>	<b>70 - 93</b>	
1994-94	Ford Thunderbird	Airbag	113	117,587	7	4	0.3	0.3	0.1	0.6	58	23 - 120
<b>Two-Door Cars: All Midsize</b>			<b>12,357,024</b>	<b>1,507</b>	<b>697</b>	<b>0.6</b>	<b>0.6</b>	<b>0.4</b>	<b>1.2</b>	<b>119</b>	<b>113 - 125</b>	
1993-94	Honda Civic Coupe	Airbag	103	252,332	18	19	0.4	0.3	0.2	0.7	70	41 - 110
1993-94	Mazda MX-6	Airbag	103	108,572	8	3	0.2	0.6	0.3	0.7	72	31 - 142
1990-94	Chrysler LeBaron convertible	Airbag	101	513,495	40	22	0.4	0.4	0.3	0.8	76	54 - 103
1992-94	Honda Civic	Airbag	101	269,994	22	10	0.3	0.5	0.1	0.8	79	50 - 120
1990-94	Pontiac Sunbird convertible	Belt only	101	166,869	15	9	0.6	0.3	0.2	0.9	88	49 - 145
1990-94	Ford Tempo	Belt only	100	288,490	37	13	0.7	0.6	0.4	1.3	125	88 - 172
1992-94	Honda Prelude	Airbag	100	168,173	22	17	0.4	0.9	0.6	1.3	128	80 - 193
1990-94	Pontiac Sunbird	Belt only	101	683,807	98	46	0.8	0.6	0.3	1.4	140	113 - 170
1990-94	Chevrolet Lumina	Belt only	108	519,925	76	19	0.7	0.8	0.5	1.5	142	112 - 178
1993-94	Ford Probe	Airbag	103	307,167	45	15	0.6	0.8	0.4	1.5	143	104 - 191
1990-94	Chevrolet Cavalier	Belt only	101	2,075,632	310	147	0.9	0.6	0.4	1.5	146	130 - 163
1991-94	Chevrolet Beretta	Airbag	103	511,803	79	34	0.7	0.8	0.6	1.5	150	119 - 188
1990-94	Mercury Topaz	Belt only	100	104,154	18	11	1.0	0.8	0.5	1.7	168	100 - 266

table continues . . . .

	Driver Restraint System	Wheel-base (inches)	Registered Vehicle Yrs. (R.V.Y.)	Occupant Deaths		Actual Driver Deaths per 10,000 R.V.Y.				Relative Rates (100 = Avg.)		
				Driver	Other	Multiple-Vehicle	Single-Vehicle	Roll-Over	Overall	Death Rate	95% Confidence Interval	
<b>Two-Door Cars: All Small</b>			<b>15,613,805</b>	<b>2,382</b>	<b>1,148</b>	<b>0.8</b>	<b>0.7</b>	<b>0.4</b>	<b>1.5</b>	<b>149</b>	<b>143 -155</b>	
1993-94	Toyota Tercel	Airbag	94	198,176	15	20	0.5	0.3	0.3	0.8	74	41 -122
1992-94	Saturn SC	Airbag	99	231,240	22	13	0.5	0.4	0.2	1.0	93	58 -140
1990-94	Mitsubishi Eclipse	Belt only	97	752,239	95	52	0.5	0.7	0.3	1.3	123	100 -150
1990-94	Mazda 323	Belt only	97	253,247	36	15	0.9	0.6	0.3	1.4	139	97 -192
1990-94	Plymouth Sundance	Airbag	97	392,571	59	23	0.7	0.8	0.4	1.5	146	112 -189
1990-94	Dodge Shadow	Airbag	97	481,955	74	31	0.8	0.8	0.5	1.5	150	118 -188
1990-94	Eagle Talon	Belt only	97	281,042	45	17	0.6	1.0	0.5	1.6	156	114 -209
1990-94	Eagle Talon 4-wheel-drive	Belt only	97	129,246	21	10	0.6	1.0	0.6	1.6	158	98 -242
1990-94	Plymouth Laser	Belt only	97	472,540	77	40	0.6	1.1	0.5	1.6	159	125 -198
1990-94	Hyundai Excel	Belt only	94	587,579	106	55	0.8	1.0	0.6	1.8	176	144 -213
1990-94	Geo Metro	Belt only	89	731,430	166	74	1.5	0.8	0.6	2.3	221	189 -258
1991-94	Hyundai Scoupe	Belt only	94	206,798	52	29	1.7	0.8	0.6	2.5	245	183 -321
<b>Sports Cars: All Midsize</b>			<b>2,845,313</b>	<b>559</b>	<b>386</b>	<b>0.7</b>	<b>1.3</b>	<b>0.7</b>	<b>2.0</b>	<b>191</b>	<b>176 -208</b>	
1993-94	Chevrolet Camaro	Airbag	101	180,685	55	36	1.0	2.0	1.1	3.0	297	224 -386
<b>Sports Cars: All Small</b>			<b>2,262,084</b>	<b>325</b>	<b>128</b>	<b>0.5</b>	<b>0.9</b>	<b>0.5</b>	<b>1.4</b>	<b>140</b>	<b>125 -156</b>	
1990-94	Mazda Miata	Airbag	89	515,249	45	10	0.4	0.5	0.3	0.9	85	62 -114
1991-94	Mercury Capri	Airbag	95	167,494	16	6	0.4	0.5	0.4	1.0	93	53 -151
1991-94	Toyota MR2	Airbag	95	101,183	13	3	0.6	0.7	0.3	1.3	125	67 -214
1991-94	Dodge Stealth	Airbag	97	135,152	25	14	0.4	1.4	1.0	1.8	180	117 -266
1990-94	Chevrolet Corvette	Airbag	96	191,287	49	21	0.6	1.9	1.3	2.6	250	185 -330
<b>Luxury Cars: All Large</b>			<b>6,726,208</b>	<b>402</b>	<b>236</b>	<b>0.3</b>	<b>0.3</b>	<b>0.1</b>	<b>0.6</b>	<b>58</b>	<b>53 - 64</b>	
1990-94	Lexus LS 400	Airbag	111	496,547	16	15	0.2	0.1	0.1	0.3	31	18 - 51
1991-94	Acura Legend 4dr.	Airbag	115	421,169	15	7	0.2	0.2	0.0	0.4	35	19 - 57
1992-94	Cadillac Seville	Airbag	111	217,579	9	6	0.3	0.1	0.0	0.4	40	18 - 77
1990-94	Mercedes E Class 4dr.	Airbag	110	259,925	12	8	0.2	0.3	0.2	0.5	45	23 - 79
1990-94	Jaguar XJ	Airbag	113	147,360	7	1	0.3	0.2	0.1	0.5	46	19 - 95
1994-94	Cadillac DeVille	Airbag	114	111,494	7	5	0.4	0.3	0.1	0.6	61	25 -126
1990-94	Lincoln Town Car	Airbag	117	1,770,875	112	71	0.4	0.3	0.1	0.6	62	51 - 74
1990-94	Infiniti Q45	Airbag	113	185,106	12	2	0.1	0.6	0.5	0.6	63	33 -110
1992-94	Mazda 929	Airbag	112	121,096	19	7	0.2	1.3	0.9	1.6	153	92 -239
<b>Luxury Cars: All Midsize</b>			<b>4,306,450</b>	<b>236</b>	<b>133</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.5</b>	<b>53</b>	<b>47 - 61</b>	
1990-94	Saab 9000	Airbag	105	117,010	3	3	0.2	0.1	0.0	0.3	25	5 - 73
1990-94	Lincoln Continental	Airbag	109	707,420	33	20	0.3	0.2	0.2	0.5	45	31 - 64
1991-94	Volvo 940/960 4dr.	Airbag	109	153,078	7	4	0.2	0.3	0.1	0.5	45	18 - 92
1990-94	BMW 5-Series 4dr.	Airbag	109	260,643	14	7	0.2	0.3	0.3	0.5	52	29 - 88
1992-94	BMW 3-Series 4dr.	Airbag	106	137,824	11	4	0.3	0.5	0.3	0.8	78	39 -139
1992-94	Lexus SC 300/400	Airbag	106	120,619	10	7	0.1	0.7	0.3	0.8	81	39 -149
1992-94	Cadillac Eldorado	Airbag	108	149,230	13	7	0.4	0.5	0.3	0.9	85	45 -145
<b>Utility Vehicles: All Large</b>			<b>1,065,975</b>	<b>62</b>	<b>43</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.6</b>	<b>57</b>	<b>43 - 73</b>	
1992-94	Chevrolet Suburban 1500	Belt only	132	152,894	6	4	0.3	0.1	0.2	0.4	38	14 - 83
1992-94	Chevrolet Suburban 1500 4x4	Belt only	132	144,997	7	9	0.2	0.3	0.2	0.5	47	19 - 97
<b>Utility Vehicles: All Midsize</b>			<b>11,001,082</b>	<b>899</b>	<b>535</b>	<b>0.3</b>	<b>0.5</b>	<b>0.5</b>	<b>0.8</b>	<b>80</b>	<b>75 - 85</b>	
1991-94	Ford Explorer 4dr. 4x4	Belt only	112	1,914,263	88	69	0.2	0.3	0.3	0.5	45	36 - 55
1993-94	Jeep Gr. Cherokee 4dr. 4x4	Airbag	106	578,365	28	16	0.2	0.3	0.3	0.5	47	31 - 68
1990-94	Jeep Cherokee 4dr. 4x4	Belt only	101	1,364,456	68	58	0.2	0.2	0.2	0.5	49	38 - 62
1991-94	Ford Explorer 2dr. 4x4	Belt only	102	247,839	18	13	0.3	0.4	0.4	0.7	71	42 -112
1990-94	Nissan Pathfinder 4dr. 4x4	Belt only	104	404,106	31	23	0.2	0.5	0.5	0.8	75	51 -106
1991-94	Ford Explorer 4dr.	Belt only	112	717,011	55	26	0.3	0.5	0.3	0.8	75	56 - 97
1990-94	GMC T15 Jimmy 2dr. 4x4	Belt only	101	161,452	13	6	0.4	0.4	0.2	0.8	78	42 -134
1990-94	Jeep Cherokee 4dr.	Belt only	101	331,612	30	19	0.4	0.5	0.3	0.9	88	59 -126
1991-94	Chevrolet T10 Blazer 4dr. 4x4	Belt only	107	723,089	68	34	0.4	0.5	0.5	0.9	92	71 -116
1991-94	GMC T15 Jimmy 4dr. 4x4	Belt only	107	240,704	23	4	0.3	0.6	0.4	1.0	93	59 -140
1990-94	Chevrolet T10 Blazer 2dr. 4x4	Belt only	101	511,201	50	25	0.4	0.5	0.5	1.0	95	71 -126
1992-94	Isuzu Trooper 4dr. 4x4	Belt only	109	104,844	11	5	0.1	1.0	0.9	1.0	102	51 -183
1991-94	Ford Explorer 2dr.	Belt only	102	161,609	17	8	0.2	0.8	0.8	1.1	103	60 -164
1991-94	Oldsmobile Bravada 4dr. 4x4	Belt only	107	112,476	13	6	0.3	0.9	0.7	1.2	113	60 -193
1991-94	Isuzu Rodeo 4dr. 4x4	Belt only	109	189,850	22	10	0.4	0.7	0.8	1.2	113	71 -171
1990-94	Toyota 4Runner 4dr. 4x4	Belt only	103	651,726	86	65	0.3	1.0	1.1	1.3	129	103 -159
1991-94	Isuzu Rodeo 4dr.	Belt only	109	189,438	29	21	0.6	0.9	1.1	1.5	149	100 -214
1992-94	Chevrolet K1500 Blazer	Belt only	112	106,876	17	12	0.6	1.0	1.2	1.6	155	90 -248
1990-94	Chevrolet S10 Blazer 2dr.	Belt only	101	193,148	35	18	0.6	1.2	1.0	1.8	177	123 -246
1991-94	Chevrolet S10 Blazer 4dr.	Belt only	107	206,986	40	23	0.8	1.2	1.1	1.9	188	135 -256

table continues . . .

	Driver Restraint System	Wheel-base (inches)	Registered Vehicle Yrs. (R.V.Y.)	Occupant Deaths		Actual Driver Deaths per 10,000 R.V.Y.				Relative Rates (100 = Avg.)		
				Driver	Other	Multiple-Vehicle	Single-Vehicle	Roll-Over	Overall	Death Rate	95% Confidence Interval	
<b>Utility Vehicles: All Small</b>			<b>1,771,636</b>	<b>299</b>	<b>167</b>	<b>0.6</b>	<b>1.1</b>	<b>1.0</b>	<b>1.7</b>	<b>164</b>	<b>146 -184</b>	
1990-94	Jeep Wrangler	Belt only	93	690,053	99	56	0.4	1.0	0.9	1.4	140	114 -170
1990-94	Geo Tracker 4x4	Belt only	87	338,969	72	33	1.0	1.2	0.9	2.1	207	162 -261
1991-94	Geo Tracker	Belt only	87	122,089	34	15	1.1	1.7	1.5	2.8	271	188 -379
<b>Wagons &amp; Vans: All Large</b>			<b>12,742,877</b>	<b>584</b>	<b>627</b>	<b>0.3</b>	<b>0.2</b>	<b>0.1</b>	<b>0.5</b>	<b>45</b>	<b>41 - 48</b>	
1991-94	Chevrolet Caprice	Airbag	116	103,037	3	3	0.3	0.0	0.0	0.3	28	6 - 83
1993-94	Chevrolet Astro	Airbag	111	194,529	7	6	0.3	0.1	0.1	0.4	35	14 - 72
1991-94	Plymouth Voyager	Airbag	112	1,666,362	61	63	0.3	0.1	0.1	0.4	36	27 - 46
1991-94	Dodge Caravan	Airbag	112	2,002,533	75	88	0.3	0.1	0.1	0.4	37	29 - 46
1992-94	Toyota Previa	Airbag	113	165,043	7	4	0.4	0.0	0.1	0.4	41	17 - 85
1992-94	Ford Aerostar	Airbag	119	874,723	41	53	0.3	0.2	0.1	0.5	46	33 - 62
1991-94	Chrysler Town & Country	Airbag	119	118,711	6	1	0.4	0.1	0.3	0.5	49	18 -107
1992-94	Ford Aerostar 4-wheel-drive	Airbag	119	104,800	6	5	0.3	0.3	0.2	0.6	56	20 -121
<b>Wagons &amp; Vans: All Midsize</b>			<b>3,148,733</b>	<b>198</b>	<b>118</b>	<b>0.4</b>	<b>0.2</b>	<b>0.1</b>	<b>0.6</b>	<b>61</b>	<b>53 - 70</b>	
1990-94	Mercury Sable	Airbag	106	287,282	13	7	0.2	0.3	0.1	0.5	44	23 - 75
1990-94	Ford Taurus	Airbag	106	991,824	52	29	0.3	0.2	0.1	0.5	51	38 - 67
1992-94	Subaru Legacy 4-wheel-drive	Airbag	102	127,624	9	5	0.5	0.2	0.2	0.7	69	31 -130
1990-94	Chevrolet Cavalier	Belt only	101	248,607	29	9	0.9	0.2	0.0	1.2	114	76 -163
<b>Wagons &amp; Vans: All Small</b>			<b>1,810,962</b>	<b>191</b>	<b>133</b>	<b>0.8</b>	<b>0.3</b>	<b>0.2</b>	<b>1.1</b>	<b>103</b>	<b>89 -118</b>	
1994-94	Ford Escort	Airbag	98	105,774	11	8	0.8	0.3	0.3	1.0	101	51 -181
<b>Pickups: All Standard</b>			<b>17,879,442</b>	<b>1,997</b>	<b>637</b>	<b>0.5</b>	<b>0.7</b>	<b>0.5</b>	<b>1.1</b>	<b>109</b>	<b>104 -114</b>	
1990-94	GMC 2500 4x4	Belt only	132	166,237	9	2	0.2	0.3	0.2	0.5	53	24 -100
1990-94	Ford F-350	Belt only	133	261,238	23	13	0.4	0.5	0.4	0.9	86	54 -129
1990-94	Ford F-250 4x4	Belt only	133	739,658	66	25	0.3	0.6	0.5	0.9	87	67 -111
1990-94	Chevrolet 2500 4x4	Belt only	132	483,110	44	12	0.2	0.7	0.6	0.9	89	65 -119
1994-94	Ford F-150	Airbag	117	272,470	26	7	0.4	0.6	0.3	1.0	93	61 -136
1990-94	GMC 2500	Belt only	132	120,728	12	1	0.5	0.5	0.5	1.0	97	50 -169
1990-94	Chevrolet 3500	Belt only	132	147,181	16	1	0.5	0.5	0.4	1.1	106	61 -172
1990-94	GMC 1500 4x4	Belt only	118	497,829	60	21	0.4	0.8	0.6	1.2	117	90 -151
1990-94	GMC 1500	Belt only	118	1,023,817	125	41	0.5	0.7	0.5	1.2	119	99 -142
1990-94	Ford F-350 4x4	Belt only	133	131,058	16	6	0.2	1.0	1.0	1.2	119	68 -193
1990-94	Chevrolet 2500	Belt only	132	385,072	48	11	0.5	0.7	0.6	1.2	121	90 -161
1990-94	Chevrolet 1500	Belt only	118	3,221,605	406	162	0.5	0.7	0.4	1.3	123	111 -135
1994-94	Ford F-150 4x4	Airbag	117	129,945	18	4	0.5	0.9	1.0	1.4	135	80 -213
1990-94	Chevrolet 1500 4x4	Belt only	118	1,616,995	225	61	0.4	1.0	0.8	1.4	136	118 -155
<b>Pickups: All Small</b>			<b>11,908,812</b>	<b>1,991</b>	<b>711</b>	<b>0.7</b>	<b>0.9</b>	<b>0.7</b>	<b>1.7</b>	<b>163</b>	<b>156 -170</b>	
1993-94	Ford Ranger	Belt only	108	855,858	114	48	0.6	0.7	0.6	1.3	130	107 -156
1990-94	Toyota	Belt only	103	1,335,238	182	67	0.6	0.8	0.6	1.4	133	114 -154
1993-94	Ford Ranger 4x4	Belt only	108	192,841	27	14	0.3	1.1	1.0	1.4	136	90 -199
1990-94	Toyota 4x4	Belt only	103	1,073,799	170	72	0.5	1.1	1.1	1.6	154	132 -179
1990-94	Nissan 4x4	Belt only	104	348,435	57	25	0.7	1.0	0.9	1.6	159	121 -207
1990-94	Nissan	Belt only	104	1,362,625	226	88	0.7	0.9	0.6	1.7	162	141 -184
1990-94	Isuzu	Belt only	106	468,430	80	25	0.8	0.9	0.6	1.7	166	132 -207
1994-94	Chevrolet S10	Belt only	108	173,895	32	10	0.7	1.2	0.7	1.8	179	123 -253
1990-94	Mitsubishi	Belt only	105	255,185	54	15	0.7	1.4	0.8	2.1	206	155 -269
<b>All Passenger Vehicles</b>			<b>183,023,398</b>	<b>18,778</b>	<b>9,847</b>	<b>0.6</b>	<b>0.5</b>	<b>0.3</b>	<b>1.0</b>	<b>100</b>	<b>99 -101</b>	