

## Injury Claims Highest For Subcompact Imports

Imported subcompacts continue to have the "worst" record of claims — this time for personal injuries in crashes — while American-made intermediates, especially 4-door models and station wagons, hold the best overall record for fewest crash-related injury claims, the Highway Loss Data Institute (HLDI) has reported.

In a survey of medical claim frequencies for injuries to occupants of 1977 through 1979 automobile models, the car with the worst experience was the Datsun 200 SX, with an overall relative claim frequency rate 71 percent higher than average and the highest frequency of claims exceeding \$500. The Japanese-built Plymouth Arrow followed, with the highest frequency of claims exceeding \$250. (See Table 1.)

### Volvo Plans Air Bags In 4,000 1982 Cars

A Volvo source at the Eighth International Technical Conference on Experimental Safety Vehicles in Wolfsburg, Germany, has told *Status Report*: "During 1982 we shall be offering air bags in certain cars on the American market, and we shall have passive belts the following year."

Volvo will install air bags as standard equipment in about 4,000 top-of-the-line cars in 1982. In subsequent years, air bags will probably be offered in a larger number of cars, the company said.

One of Volvo's motives in reaching this decision is to be fully competitive with other higher-priced European cars. Earlier this year, Mercedes-Benz announced that it will equip all of its 1982-model cars sold in the United States with full front-seat air bag systems (see *Status Report*, Vol. 15, No. 5, March 26, 1980). In addition, another European manufacturer, BMW, will likely offer air bags in some cars beginning in 1982 or 1983, although no official announcement has been made.

(Cont'd on page 6)

Earlier this month, HLDI reported that imported subcompacts had the worst collision loss record among 1980 models. (See *Status Report*, Vol. 15, No. 15, Oct. 9, 1980.)

The results clearly showed a "pattern of declining claim frequencies with increasing car size . . .," HLDI said, although there were wide variations between cars in each size and body style group. For example, among regular 2-door subcompacts, the AMC Pacer and Volkswagen Dasher had a relative claim frequency of about 90 while the Plymouth Arrow and Datsun 200 SX had a relative claim frequency of about 170 — an almost twofold difference in injury claim frequency. Among regular 4-door compacts, the relative claim frequency also varied greatly, from the best — the Buick Century, Pontiac Phoenix, Audi 5000, and Pontiac LeMans — with relative injury claim frequencies of about 80, contrasted to the Datsun 810, which had a much higher relative frequency, 131. (The value 100 represents the average of all models combined.)

Out of the 24 cars with the best injury claims records, all were manufactured in the United States and 16 were built by General Motors, HLDI reported. (See Table 2.)

(Cont'd on page 8)

## Parents Rate Infant Restraints On Convenience Features

Although much has been learned in recent years about how infant restraints perform in crashes, little information has been available on how easy — or difficult — the various models are to use. According to a new study, that information is needed to help parents avoid buying a restraint that seems attractive in the store, but later proves to have design features that discourage actual use, or that lead to improper and ineffective use.

Conducted by Kathleen Weber of the University of Michigan's Highway Safety Research Institute, the study details problems encountered in using infant restraints, and judges their various design features in terms of parental convenience and infant comfort. The study explains inconvenient or uncomfortable designs can lead to non-use or misuse, even when parents are highly motivated to protect their children with restraints.

### Parents Compare Various Models

To carry out the study, which was funded by the Insurance Institute for Highway Safety, parents of babies were given four different restraint models. These were tried out over the period beginning with the child's birth and extending through its third month of life. The parents who volunteered for the project, characterized as "highly motivated to protect their children from possible crash injury," were questioned about their experiences with each restraint, and at the end of the study were asked to pick one to keep. A total of 27 families participated.

The study evaluated seven infant restraints, six of them convertible designs that can be used by older children. Restraints were selected to produce a diversity of design features and for their "known safe performance in the infant mode in dynamic tests," the study said. They were the Bobby-Mac Deluxe, Century Trav-L-Guard 448N, Cosco Safe & Easy 313, GM Infant Love Seat, Kantwet Care Seat 988, Peterson Safe-T-Seat 78, and the Peterson Safety Shell 75.

The study's findings included the following:

- Three out of four parents preferred five-point to two-point harnesses in the restraints tested, because they thought they were safer and that it was easier to strap babies in with them.
- Parents clearly preferred convertible designs to infant-only designs because they eliminated the expense of buying a new restraint. However, Weber said that rear-facing convertibles "did not fit in the back of most small cars nor in front bench seats when the driver was short," and that this size problem is a significant factor contributing to non-use or misuse of those restraints.
- Parents developed a "strong preference" for restraints that can be left anchored to the vehicle with the lap belt at all times. They are easier to use correctly than those where the lap belt, in addition to the restraint harness, must be refastened for each trip.
- The more reclined restraints were thought to be more comfortable than the more upright ones. Restraints with multiple reclining angles were preferred and could be rotated to fit into some small cars, Weber said.
- Tethers, which come with some convertible restraints to help anchor them in the forward-facing position, "were generally considered a nuisance." Aware that tethers must be used with these restraints if they are to work properly, most parents at the end of the study chose designs without them, Weber said.
- Of three different buckle designs represented, a large push-button buckle made by Indiana Mills and used at the time of the study on the Cosco Safe & Easy 313 was by far the favorite (at present this buckle is available only on the Cosco Safe & Easy 203, but will probably be used on other restraints next year).

- More than half of the parents chose to keep the Century Trav-L-Guard. It was the most popular choice because it appeared to be sturdy and safe, was the largest restraint among the seven, and generally lacked negative design features, the study said.

Copies of the study, "Survey of Infant Restraint Usability," by Kathleen Weber, October 1980, may be obtained from the Insurance Institute for Highway Safety, Watergate 600, Washington, D.C. 20037.

## **Child Restraint Legislation Enacted In California**

California recently became the third state, following Tennessee and Rhode Island, to enact child restraint legislation. While the California bill (AB 1198) stops short of specifying that children must be restrained in motor vehicles, it does reflect the increasing concern of legislators with the 200 children who are killed and 20,000 who are injured every year as motor vehicle passengers in that state.

Under the new law, the Secretary of California's Business and Transportation Agency will conduct an information campaign in 1981 "for the purpose of educating the public about the importance of using seat restraints for infants and children under 15 years of age who are passengers in motor vehicles." After one year of this campaign, law enforcement officers will be authorized (but not required) to warn drivers transporting unrestrained children about the hazards of this practice. Officers may also "advise and urge the utilization of seat restraints that are available in the vehicle, and may further note that, for children under five years of age, even greater protection could be provided by acquiring and properly using a separate, federally approved child restraint." These measures may be taken only if, after a car has been stopped, the officer observes unrestrained children under 15 years old in the vehicle. The legislation also calls for a study of the effects of this program on child restraint usage in California.

### Relies on Voluntary Usage

The law differs from previously enacted child restraint legislation in that it relies on *voluntary* use of restraints by adults instead of direct enforcement. In Tennessee, parents are required to put their own children who are three years old or younger in restraints. As an alternative, the law permits adults to hold children in arms. Studies conducted by the Insurance Institute for Highway Safety indicate that the use of special child seats has increased in Tennessee from 8 percent to 29 percent since this law went into force in 1978. (See *Status Report*, Vol. 15, No. 10, June 25, 1980.)

In Rhode Island, a 1980 law requires all persons transporting children three years old or younger in the front seat of a motor vehicle to properly secure them in child restraints. On-lap travel in the front seat is not permitted, and failure to comply with the law is considered a moving violation resulting in a \$15 fine. (See *Status Report*, Vol. 15, No. 8, May 20, 1980.)

In addition to these laws, child restraint legislation is being considered in at least 32 other states. The Institute has looked comprehensively at the problem of child death and injury in highway crashes, and believes the following to be the elements of a desirable child restraint law:

- Children under one year old should be required to be transported in an approved infant carrier.
- Children who can sit up unassisted should be required to use special restraints or car seat belts.
- Child passengers should be required to be in the back seat, unless there are not enough seating positions with restraints in the rear.
- Children should be prohibited from being transported on the laps of other passengers.

*(Cont'd on next page)*

- Children should be prohibited from being transported in the cargo areas of motor vehicles.

For further information about all aspects of protecting children in motor vehicles, see the Institute's 20-page publication, *Children in Crashes*, which is described in this issue of *Status Report*.

## **Institute Focuses On Children In Motor Vehicle Crashes**

More than 90 percent of children in the United States ride in motor vehicles without the protection of available car seat belts or child restraints. Every year, 1,400 children die as motor vehicle occupants. The highest death rate is in the first year of life, especially during the first six months of life.

A new, 20-page publication about this national public health tragedy, *Children in Crashes*, is now available from the Insurance Institute for Highway Safety.

The publication includes a description of the special problems for children in motor vehicles — on-lap travel, hazards in the passenger compartment, etc. Three photo sequences, excerpted from an Institute film, show what happens when unrestrained children are involved in crashes. Guidelines for protecting children in motor vehicles are set forth; these include avoiding on-lap travel, placing children in restraint systems, and improving car design to eliminate hazards in the passenger compartment. Also reported is the status of federal regulations concerning child restraints, and information about existing and proposed state child restraint laws. The Institute suggests six elements of an effective child restraint law in *Children in Crashes*.

Of particular interest in this publication is a report on the recent Institute-sponsored study to determine how well child restraints currently in use perform in actual crashes. (See *Status Report*, Vol. 15, No. 13, Aug. 14, 1980.) Based on investigations of 16 serious crashes, the study said that while the restraints performed well in frontal impacts, they were far less effective in side impacts. Post-crash photos of child restraints in heavily damaged vehicles are included, along with a description of the injuries (if any) suffered by the restrained children and other occupants.

A final report in *Children in Crashes* concerns the finding that children do not have to be in a crash to be hurt in a motor vehicle. Many children are killed or injured every year in noncrash incidents such as sud-

### ***Child Restraint Announcements Available For TV***

“Holding your baby in your lap in a car is an act of kindness that can kill.” That is the message conveyed in one of two 30-second public service announcements which the Insurance Institute for Highway Safety is releasing to the top 100 TV markets in this country and to all English-speaking TV stations in Canada. The first videotaped announcement, “Kindness Can Kill,” which will be released November 6 at a preview in New York, urges parents to transport infants in specially designed restraint systems, not on their laps. The second, “Saving a Child’s Life,” to be released early next year, demonstrates how dangerous it is for children of all ages to ride in a car unrestrained.

A limited number of two-inch videotape copies of the announcements are available for local TV station use. For further information, write or call Communications Department, Insurance Institute for Highway Safety, Watergate 600, Washington, D.C. 20037, telephone 202-333-0770.

den stops, swerves, turns, and falls from the occupant compartments of moving vehicles. Like crash fatalities and injuries, these incidents could be reduced by placing children in suitable restraint systems.

Copies of the publication, *Children in Crashes*, may be obtained from the Communications Department, Insurance Institute for Highway Safety, Watergate 600, Washington, D.C., 20037. In addition, a five-minute, silent, 16mm film, *Children and Infants in Car Crashes: Restrained and Unrestrained*, is available for loan, without cost, on a first-come, first-served basis, and for sale (\$80) from the Communications Department. Super 8 cassettes (Fairchild or MPO) are available for sale (\$80); ¾-inch videotape cassettes cost \$40.

## **RSV Technology Is Seen Ready For The Marketplace**

The U.S. has proven the economic and technological feasibility of producing automobiles that are fuel efficient and environmentally sound while providing vast improvements in crash protection, an Insurance Institute for Highway Safety spokesman has told an international conference in Wolfsburg, Germany.

The next thing to do is get them into the marketplace.

“Cars embodying crash protection features shown to be entirely feasible by the research safety vehicle (RSV) generally aren’t for sale in the showrooms of America, nor do most Americans realize they could be,” Ben Kelley, senior vice president of the Institute, told the audience during the Eighth International Technical Conference on Experimental Safety Vehicles. “Until the crash-protection and other safety characteristics of the RSV begin to show up in new cars for sale rather than in just a handful of experimental vehicles scattered around the world, the program will be of no direct benefit to the health of American motorists.”

### **The Alternative Would Be Costly**

Whether or not that goal is met, Kelley said, depends on automakers, the government, and the car-buying public. But if the safety features don’t find their way into new cars, Kelley warned, pointing to an upward trend in small car fatalities, “the public health results will be horrendous.”

Consumer education is one link, Kelley said, to building demand for safer cars. He pointed out that polls and studies have revealed great consumer interest in purchasing cars with RSV-level crash protection, “once they understand the nature of the protection and the injury problems it will ameliorate.”

The Department of Transportation’s budget for RSV research, development, and production is relatively small, \$30 million, Kelley noted. But a single public service announcement released last November aimed at informing the public about the program has generated more than 8,000 phone inquiries. Last year alone, General Motors spent \$323 million on advertising, Kelley said, pointing to the tremendous influence auto companies exert over “information, misinformation, and public opinion.” That influence could be harnessed to build public demand for safety items such as air bags.

### **An Opportunity For Foreign Auto Makers**

Still, it’s unlikely U.S. auto producers will push the concept, Kelley said, based on past resistance to marketing safety features. That could leave a technological and marketing gap that, once again, may be met by foreign manufacturers.

“Few Americans would be surprised,” Kelley observed, “if the first popular-priced cars with air bags as an aggressively-advertised option came not from Detroit but Japan.”

Already, Mercedes-Benz, BMW, and Volvo have announced plans to provide air bags on some models for sale in the U.S. as early as 1982. (See accompanying article, this issue.)

*(Cont’d on next page)*

“For the first time in its history, the U.S. industry is undergoing a top-to-bottom reshaping of its plant, its manufacturing methods, and its products,” Kelley said. “Tens of billions of dollars of private and public money will be invested over the next few years in a concentrated effort to make the American car fully competitive.” While in this process of modifying long-standing auto designs, Kelley said, it makes “good business sense” to incorporate the “highest achievable levels of crash protection” for the people who will be traveling in them for decades to come.

Copies of the paper, “RSV, Safety, and the New Car Marketplace,” by Ben Kelley, may be obtained by writing the Insurance Institute for Highway Safety, Suite 300, Watergate 600, Washington, D.C. 20037.

## ***Study Indicates Informed Car Buyers Interested In Safety***

Even though considerations such as price and fuel economy dominate car buyers' priorities, a market research study indicates safety becomes a concern for consumers when they learn of the features that could be available.

In a series of 23 panel group surveys known as “focus panels” in the jargon of market research, researchers probed consumer attitudes and opinions toward safety and the Minicars Research Safety Vehicle (RSV). One of the prototypes of the safety vehicles developed under contract with the National Highway Traffic Safety Administration (NHTSA), the Minicars RSV is designed to combine sporty features with low damageability, high fuel economy, environmental safety, and protection for occupants in high-speed impacts and rollover crashes by utilizing air bags and other crash management technology.

Overall, the consumers surveyed did not initially cite safety as a consideration in car buying. But following receipt of information on the RSV program, including a Minicars commercial with actor Lorne Greene, and data on auto crashes and injuries, most of the panelists said they would be willing to pay between \$300 to \$1,500 for a “safety package” of features on a new car. And 26 percent (many of them parents) said they would be interested in buying the RSV if it were on the market in the next 30 days.

Commenting on the desirability of safety features, one panelist was quoted: “Until now, car manufacturers haven't been building cars to be safe and advertising it. So consumers are naive about auto safety compared to fuel economy, styling, and comfort. Once safety is introduced and consumers get involved, then the marketplace will dictate the level of safety consumers want.”

The report, “Consumer Acceptance of RSV Features,” Vols. I & II, by Naomi H. Henderson and Kristin N. Curran, is available through the National Technical Information Service, Springfield, Va. 22161.

## ***Volvo Plans Air Bags In 4,000 1982 Cars (Cont'd from page 1)***

Volvo officials told *Status Report* that, although they believe the existing three-point active belt system is the best available crash protection *when used*, they have not developed a three-point passive belt which they believe will be as effective. However, Volvo hopes to have such a belt available by 1983.

Under the National Highway Traffic Safety Administration's current automatic restraint standard (FMVSS 208), neither air bags nor automatic belts would be required in any Volvo or BMW models in 1982. Only one Mercedes-Benz body style would be covered by the standard, which requires automatic restraints (air bags or passive belts) in large cars beginning in 1982, medium cars in 1983, and in all cars beginning in 1984. The new restraint legislation now being considered in Congress would not affect Volvo, Mercedes-Benz, or BMW. (See *Status Report*, Vol. 15, No. 15, Oct. 9, 1980.) The European auto manufacturers' plans to offer air bags voluntarily, before federal requirements force them to do so, are in sharp contrast to the actions of U.S. companies, which have long opposed federal automatic restraint regulations.

## **A Good Idea Must Not Be Given Up**

The words above in German are the heading of a recent advertisement by Mercedes-Benz in a number of West German newspapers declaring the auto maker's confidence in the air bag as a lifesaving device. Mercedes said it will have the automatic restraint systems available by the end of this year, and it already had announced plans to make the air bag standard equipment in all 1982 models sold in the United States. (See *Status Report*, Vol. 15, No. 5, March 26, 1980.)

"A good idea must not be given up," the ad said. "Especially not, if it can save human lives. A good example of that is the air bag. Fifteen years ago this idea was already in the air. However, the experts could not make up their minds whether it was a good idea or not.

"We wanted to find out. Now we are 15 years older, 10 million marks poorer, richer in experience and have the first air bag safety system in the world ready for series production. It works automatically. For no human being can react in a crash in 1/30th of a second."

The Mercedes advertisement explained that air bag performance had been tested in thousands of crashes, and that driving tests have proved their reliability. "So the air bag is safe," the ad concludes. "In connection with the safety belts and the fully automatic belt pretensioning device, also developed by us, functioning in 1/50th of a second and protecting the front-seat passenger, the air bag is the best safety system in the world. Above all, it is there to protect chest and head of the human being in an accident . . . ."

## **Fifty MPH Crash Protection Urged**

The federal government should begin rulemaking to require automatic crash protection for auto occupants in frontal crashes of up to 50 mph, Ralph Nader has told the National Highway Traffic Safety Administration (NHTSA).

The reasons for such a move are twofold, the public interest lawyer said in a petition to upgrade the current 30 mph frontal barrier crash test requirements of Federal Motor Vehicle Safety Standard 208.

First, the technology is already available to provide that level of protection, even in small cars, Nader pointed out. Second, the need to conserve fuel is forcing smaller, more vulnerable cars onto the road, along with increasingly large trucks. That kind of traffic mix renders the current 30 mph standard both technologically and socially obsolete — especially for small car occupants — Nader said.

Citing the agency's own research, along with crash tests by General Motors and the results of real-world crashes of air bag-equipped cars; Nader argued that air bags, along with technological advancements which can now limit passenger compartment intrusion at the higher speeds, make it feasible to provide automatic protection in frontal crashes of up to 40 mph as early as 1984 and 50 mph by 1986.

In a letter to Joan Claybrook, NHTSA's head, Nader said the agency should have begun rulemaking earlier, in order to preclude "even the most exaggerated lead time excuses of the auto industry."

**Injury Claims Highest For Subcompact Imports (Cont'd from page 1)**

Claim frequency results were calculated for all medical claims and for medical claims exceeding \$250, \$500, and \$1,000, using data supplied by nine insurers.

The only compacts or subcompacts to make the “best” list were station wagons: the American Motors Pacer and the Oldsmobile Cutlass. The list is composed of all cars with at least one claim frequency result 30 percent or more *below* the average of all cars, while the “worst” list is comprised of 22 series with at least one claim frequency result 30 percent or more *above* the average claim frequency for all cars.

The Oldsmobile Toronado, with an overall claim frequency rate that was 43 percent lower than average, had the best injury claims record, followed by the Chrysler Newport.

TABLE 1  
1977-1979 MODELS WITH THE WORST LOSS EXPERIENCE  
RELATIVE INJURY CLAIM FREQUENCIES — PERSONAL INJURY PROTECTION COVERAGES

MODEL YEARS	MAKE & SERIES	BODY STYLE	CAR SIZE	EXPOSURE	RELATIVE CLAIM FREQUENCIES BY SIZE OF CLAIM			
					ALL	> \$250	> \$500	> \$1000
1977-1979	Datsun 200 SX	2-Dr.	SC	15,504	<b>171</b>	<b>161</b>	<b>156</b>	
1977-1979	Plymouth Arrow	2-Dr.	SC	14,796	<b>169</b>	<b>180</b>		
1977-1978	Datsun F-10	2-Dr.	SC	8,532	<b>157</b>			
1977-1979	Dodge Colt	2-Dr.	SC	14,838	<b>151</b>	<b>158</b>		
1977-1979	Mayda GLC	*	SC	18,095	<b>149</b>	<b>149</b>	<b>137</b>	
1977-1979	Dodge Colt	4-Dr.	SC	5,281	<b>146</b>			
1977-1978	Datsun F-10	S.W.	SC	5,897	<b>144</b>			
1977-1979	Datsun B-210	*	SC	88,100	<b>144</b>	<b>145</b>	<b>141</b>	<b>135</b>
1979	Ford Mustang	2-Dr.	SC	31,599	<b>141</b>	<b>137</b>	<b>140</b>	123
1977-1979	Subaru DL	2-Dr.	SC	9,764	<b>140</b>			
1978-1979	Ford Fiesta	2-Dr.	SC	15,540	<b>138</b>	<b>147</b>	<b>136</b>	
1977-1979	Honda Civic	2-Dr.	SC	59,142	<b>137</b>	<b>140</b>	<b>137</b>	<b>131</b>
1977-1979	Toyota Corolla	*	SC	107,664	<b>135</b>	128	128	128
1979	Mercury Capri	2-Dr.	SC	8,961	<b>135</b>			
1977	Chevrolet Vega	2-Dr.	SC	13,069	<b>135</b>	<b>139</b>		
1977-1979	Mercury Bobcat	2-Dr.	SC	11,667	<b>134</b>	127		
1977	Pontiac Astre	2-Dr.	SC	6,274	<b>132</b>			
1977-1979	Datsun 810	4-Dr.	C	5,193	<b>131</b>			
1979	Plymouth Horizon	2-Dr.	SC	5,984	<b>131</b>			
1977-1979	Honda Civic	S.W.	SC	11,267	123	<b>154</b>		
1977-1978	Toyota Corona	*	SC	10,316	111	<b>130</b>		
1977-1979	Cadillac DeVille—2-dr.	Spec.	FS	70,423	89	112	125	<b>133</b>

Results are standardized to the distribution:

<u>Youthful Operator</u>	<u>No Youthful Operator</u>
15%	85%

Minimum exposure requirements for reporting:

All claims	5,000 vehicle years
Claims > \$250	10,000 vehicle years
Claims > \$500	15,000 vehicle years
Claims > \$1,000	25,000 vehicle years

Those results at least 30 percent *above* the all-vehicle results (100) are shown in bold print.

\*Body style is not determined from Vehicle Identification Number.

A separate review of the 1977-79 injury claim frequencies for vans, pickup trucks, and utility vehicles found that, overall, pickups had the lowest claim frequency and utility vehicles the highest. (See graph, page 10.) However, there were wide variations among the various makes and models of each category.

Utility vehicles had the widest variation in injury claims frequency, with the Chevy C10/K10 Suburban having an overall claim frequency that was 32 percent below the overall average. Echoing earlier studies (see Status Report, Vol. 15, No. 7, May 6, 1980), the AMC Jeep CJ-5 and CJ-7 injury claims were disproportionately higher than other utility vehicles. The CJ-5 Jeep was rated the worst, with an overall injury claim frequency 130 percent above the average. The CJ-5 also had a relative claim frequency of 279, 179 percent higher than average, for claims exceeding \$250, the highest result ever reported by HLDI in that claim size category, the research group said. (Cont'd on next page)

TABLE 2  
1977-1979 MODELS WITH THE BEST LOSS EXPERIENCE  
RELATIVE INJURY CLAIM FREQUENCIES - PERSONAL INJURY PROTECTION COVERAGES

MODEL YEARS	MAKE & SERIES	BODY STYLE	CAR SIZE	EXPOSURE	RELATIVE CLAIM FREQUENCIES BY SIZE OF CLAIM			
					ALL	> \$250	> \$500	> \$1000
1977-1978	Oldsmobile Toronado	Spec.	FS	10,147	<b>57</b>	<b>53</b>		
1977-1978	Chrysler Newport	4-Dr.	FS	16,935	<b>58</b>	<b>68</b>	75	
1977-1979	Buick Estate	S.W.	I	11,172	<b>62</b>			
1977	Oldsmobile Custom Cruiser	S.W.	I	7,954	<b>62</b>			
1977	Buick Century	S.W.	I	5,132	<b>62</b>			
1977-1979	Oldsmobile Ninety Eight	4-Dr.	I	42,635	<b>66</b>	74	82	79
1977	Oldsmobile Cutlass	S.W.	I	10,594	<b>66</b>	<b>60</b>		
1977-1979	Mercury Cougar	4-Dr.	I	9,856	<b>68</b>			
1977-1979	Oldsmobile Delta 88	4-Dr.	I	75,550	<b>68</b>	<b>66</b>	<b>69</b>	76
1977-1979	Chevrolet Caprice	S.W.	I	29,116	<b>68</b>	<b>64</b>	<b>63</b>	<b>69</b>
1977-1979	Lincoln Continental--4-dr.	Spec.	FS	24,845	<b>68</b>	90	91	
1978-1979	Oldsmobile Cutlass	S.W.	C	13,204	<b>69</b>	73		
1978-1979	Chrysler LeBaron	S.W.	I	5,113	<b>69</b>			
1977-1978	Chrysler New Yorker	2-Dr.	FS	6,063	<b>70</b>			
1977-1979	Buick LeSabre	4-Dr.	I	60,533	73	<b>69</b>	<b>68</b>	<b>70</b>
1977-1979	Pontiac Catalina	4-Dr.	I	20,975	73	77	<b>68</b>	
1977-1979	Chevrolet Impala	S.W.	I	31,116	74	<b>66</b>	<b>67</b>	<b>63</b>
1977-1979	Cadillac Seville	Spec.	I	15,865	74	71	<b>65</b>	
1977-1979	American Pacer	S.W.	SC	14,073	75	<b>68</b>		
1977-1979	Pontiac Catalina	S.W.	I	12,190	75	<b>63</b>		
1977-1979	Pontiac Bonneville	2-Dr.	I	21,454	76	<b>70</b>	73	
1977-1979	Plymouth Volare	S.W.	I	64,299	79	<b>70</b>	72	<b>69</b>
1977	Buick Century	4-Dr.	I	15,478	82	78	<b>68</b>	
1977-1979	Plymouth Volare	4-Dr.	I	46,556	87	78	75	<b>69</b>

Results are standardized to the distribution:

Youthful Operator	No Youthful Operator
15%	85%

Minimum exposure requirements for reporting:

All claims	5,000 vehicle years
Claims > \$250	10,000 vehicle years
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Those results at least 30 percent below the all-vehicle results (100) are shown in bold print.

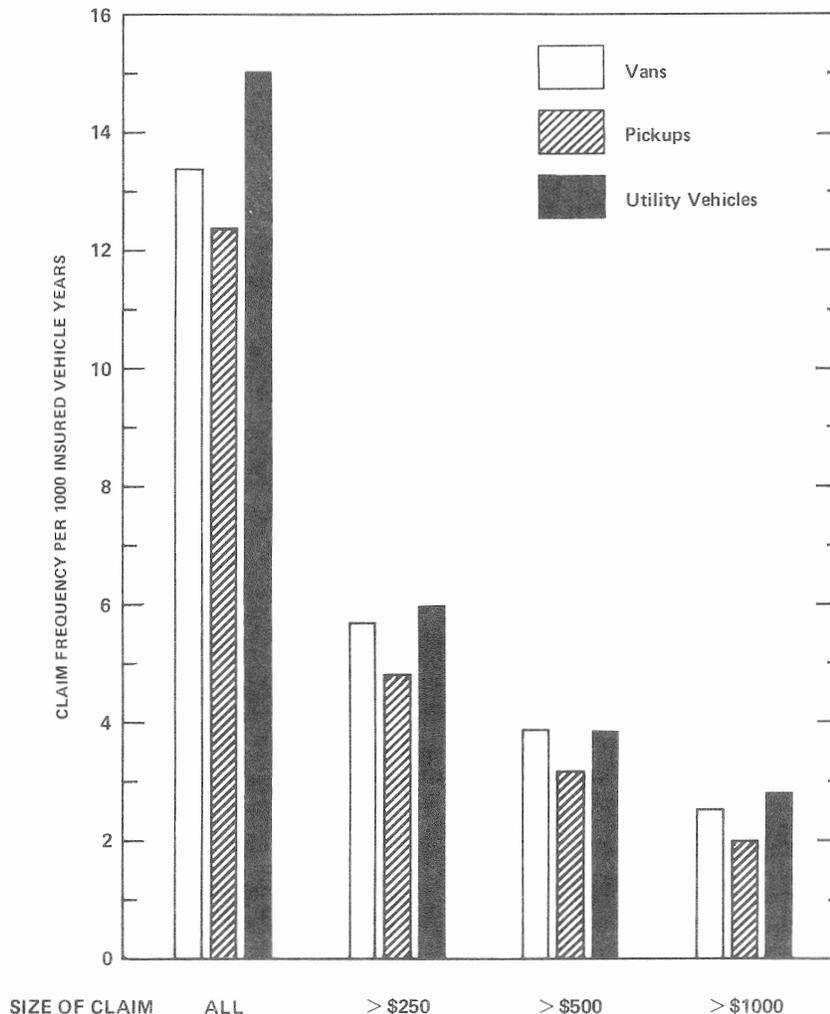
Among vans, Volkswagen's Kombi/Campmobile injury claim frequency was 24 percent above the average, while the Chevrolet G20 Sportvan had the best record, 18 percent below average for all claims and 23 percent below average for claims exceeding \$250.

The variation among pickup trucks was also striking, with the Toyota standard bed having an overall claim frequency 46 percent above the average and its frequency for claims exceeding \$250, 40 percent above average.

Pickups with the best records were the Dodge D200/W200, with an overall relative claim frequency 32 percent below average, and the GMC C2500/K2500, 30 percent below average.

Copies of the reports, "Automobile Insurance Losses, Personal Injury Protection Coverages for 1977, 1978, and 1979 Models" (HLDI I 79-1) and "Automobile Insurance Losses, Personal Injury Protection Coverages for 1977, 1978, and 1979 Vans, Pickup Trucks, and Utility Vehicles" (HLDI V79-2), may be requested from the Highway Loss Data Institute, Watergate 600, Washington, D.C. 20037.

**1977-1979 vans, pickups, utility vehicles  
claim frequencies by size of claim —  
personal injury protection coverages**



## **Mandatory Performance Standards Urged For Traffic Barriers**

Highway barriers should meet mandatory performance standards, including actual crash tests, the National Transportation Safety Board has told the Federal Highway Administration (FHWA).

In a report on the effectiveness of barriers used around the country, the board said, "Evidence from both accident investigation and recent crash testing clearly indicates that current traffic barriers do not safely contain and redirect the range of vehicles which use the roadway," although research shows such designs are available.

Barriers are used on bridges and high-volume roads to prevent straying vehicles from crossing into on-coming traffic lanes or running off the road. Although some designs, such as the New Jersey barrier, are prescribed by FHWA for installation on federal-aid projects, the states have been slow to improve existing facilities now equipped with substandard barriers. The FHWA has been reluctant to require crash testing of barrier designs because of state opposition based on costs.

Mandatory standards have been urged by the safety board since 1972, James King, board chairman, told FHWA officials, primarily because many states have failed to meet what are essentially optional guidelines. (See *Status Report*, Vol. 12, No. 12, July 26, 1977.)

Crash testing has revealed apparent incompatibilities between some barrier designs and some vehicles, the safety board reported, with some school buses and front-wheel-drive subcompact cars which can "snag" on the barriers, causing the front axle and wheels to be torn off.

### ***Executives Say Small Cars Worth The Risk; Public Disagrees***

Corporate executives and other key decision makers are far more likely than the general public to believe that savings associated with smaller cars are worth the higher risk of fatal crashes, a Louis Harris survey has found.

Commissioned by Marsh and McLennan, Inc., an insurance firm, the survey included the following question: "Smaller cars are more likely to be involved in auto accidents that result in fatalities but are less expensive and more energy efficient. As far as you are concerned, is the higher risk of fatal accident worth the savings associated with small cars?"

Of 400 corporate executives interviewed, 83 percent said "yes," compared to 45 percent of the 1,487 members of the general public questioned, the survey said. Public opinion also differed sharply with that of other key decision-making groups. The survey reported that 72 percent of 47 federal regulators questioned said yes, as did 74 percent of 47 members of Congress or their aides, and 75 percent of 102 investors and lenders questioned.

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## the highway loss reduction **Status Report**

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