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## **AUTO INSURANCE LOSSES DRIVEN BY REPAIR COSTS, CAR SIZE, URBANIZATION**

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1005 N. Glebe Rd.  
Arlington, VA  
(703) 247-1500

As expensive as motor vehicle crash injuries are — they cost U.S. society about \$4 billion annually in direct medical expenses alone — relatively minor collisions account for most of the direct costs of crashes. About 33 million cars are involved in crashes every year, with vehicle damage totaling more than \$27 billion.

The Highway Loss Data Institute publishes extensive information on the frequency and cost of injury and physical damage losses for which insurance claims are filed. HLDI isn't in the business of insurance, nor does it publish information about insurance rates or premiums, but it does gather and publish detailed information about the injury, collision, and theft insurance losses of recent-model vehicles.

For example, HLDI reported a decade ago that the average frequency of collision coverage claims for all 1976 model cars was 10.1 per 100 insured vehicle years. For 1986 models, the corresponding figure was 10.4. Thus, we know from HLDI data that the frequency of insurance collision claims isn't changing appreciably. Nor have crashes become more severe since the 1970s. If they had, we could expect that the frequency of claims for personal injuries would have increased, too, but it hasn't changed very much. The average frequency of no-fault Personal Injury Protection coverage claims was 21.1 per 1,000 insured vehicle years in 1976 and 22.4 in 1986.

What has changed dramatically is the *cost* of insurance claims, the cost of repairing the damage to people and property from crashes. Average loss payments for vehicle repairs were almost three times as high in 1986 as they were a decade earlier, up from \$637 in 1976 to nearly \$1,800 in 1986. HLDI doesn't compute comparable averages for no-fault injury claims because the upper limits on payouts for injuries vary substantially from state to state, making such computations difficult to interpret. However, we do know that medical costs, like vehicle repair costs, have risen dramatically since 1976.

### **Variations by Type of Car**

Insurance losses are affected by a number of factors, important among which are the vehicles themselves, particularly their size. Small cars consistently have more injury and collision claims than large cars. This has been true for every year that HLDI has published insurance claim information. Specialty models of all sizes,

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The Insurance Institute for Highway Safety and the Highway Loss Data Institute are independent, nonprofit public service organizations that identify, develop, and evaluate ways to reduce the losses — deaths, injuries, and property damage — resulting from crashes on the nation's highways. Their work is wholly supported by the American Insurance Highway Safety Association, the American Insurers Highway Safety Alliance, the National Association of Independent Insurers Safety Association, and a number of individual insurance companies.

especially European luxury and semi-luxury cars, also have high collision losses. and, because small cars and sports/specialty models represent a growing share of the nation's new-car market, they have a larger overall effect on insurance losses than they did 10 years ago.

For example, among 1976 models, small cars represented only 20 percent of the insured cars in HLDI's data files. Sports and specialty cars represented 10 percent. By the 1986 model year, small cars had gained in popularity, representing 32 percent of the cars in HLDI's files. Sports and specialty models increased from 10 percent of the HLDI file in 1976 to 15 percent in 1986.

This national trend toward smaller cars and sports/specialty models is affecting insurance costs for motorists in some states more than others. California, for example, has a much greater proportion of insured small cars (44 percent of the fleet) than does the rest of the United States (32 percent). California also has more insured sports/specialty cars than the rest of the country (22 percent in California; 15 percent for the rest of the country). These factors contribute greatly to the higher-than-average losses — hence, more expensive insurance — for many motorists in California compared to much of the rest of the United States.

### Geographic Variations

Another factor that determines insurance losses, besides vehicle size and type, is the location where the vehicle is often driven. Although very severe crashes — those involving death or serious injury — are more likely to occur in rural areas than in urban ones, the situation is reversed for less serious, run-of-the-mill crashes. These occur much more often in urban areas where traffic volumes are high. So insurance losses vary, depending on the degree of urbanization and, hence, the frequency of motor vehicle crashes.

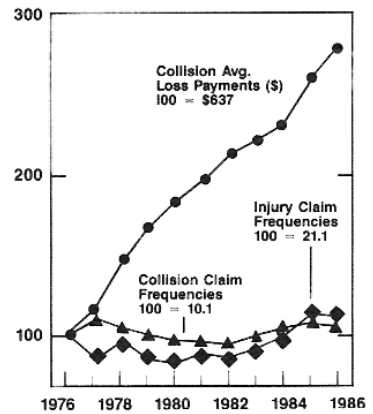
As population density increases, injury and collision claims rise, too. (See charts to the right for insurance losses in relation to population density, as defined by the U.S. Department of Agriculture.) Collision claim frequencies rise along with increasing urbanization. The costs of claims (collision payments per insured car per year) do, too. Medical payment claims for personal injuries are also much more frequent in urban areas, compared to rural ones.

These kinds of differences, together with the high losses associated with certain car sizes and types, mean that owners of small sports cars who live in big cities, for example, are much more likely than owners of large station wagons in rural areas to be involved in insurance claims for injuries and vehicle damage. Such differences translate directly into higher consumer costs for insuring small sports cars in urban areas.

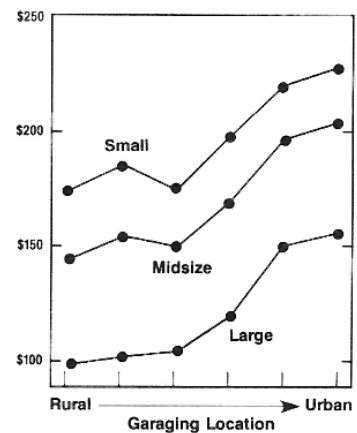
In New Jersey, the split is about the same. Very few cars are garaged in rural areas, while 85 percent are in densely populated cities and suburbs. In fact New Jersey and California, along with Maryland, are the most urban states in the HLDI file. On the other hand, more than 80 percent of all cars in South Dakota and Wyoming are located and driven mostly in rural areas.

Collision and no-fault injury claim frequencies haven't changed much in recent years. Neither has injury or vehicle damage severity. For this good news, we can thank long-term highway loss reduction programs. However, because of growing traffic volumes, especially in our cities, as well as the growing popularity of small cars and sports and luxury models, the prospect of continued stability in injury and collision claim frequencies isn't so bright.

**Relative Insurance Losses  
1976-86 Model Years**



**Collision Coverage, Average Loss Payments Per Insured Vehicle Year  
1985-87 Cars**



**Personal Injury Protection  
Claim Frequencies  
1985-87 Cars**

