

CHANGES IN INJURY PATTERNS IN FRONTAL CRASHES:  
INJURIES TO DRIVERS OF VEHICLES MODEL YEAR 1993-  
1997 VS. DRIVERS OF VEHICLES 1998-2002 — AN ANALYSIS  
OF NASS/CDS DATA

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In this analysis, bivariate and multiple logistical regression analyses were used to evaluate whether there have been any changes in the frequency and severity of injuries to drivers of 1998 and newer model year vehicles and, if so, whether those changes were related to differences in driver, vehicle, or crash characteristics including airbag deployment. The cross sectional study design used NASS/CDS data for years 1993-2001. The bivariate analyses showed that there were no differences in gender, age, and crash severity distribution in model year 1998-2002 vehicles compared with model year 1993-1997 vehicles. However, model year 1998-2002 vehicles were more likely to be SUVs or minivans, have higher drivers seat belt use rates, and have lower airbag deployment rates, and their drivers sustained fewer injuries.

The logistical regression analyses showed that the driver MAIS was a function of whether the driver was in a pre-1998 or 1998 and newer vehicle, longitudinal delta V, seat belt use, vehicle type, gender, and age. The percentage of crashes with airbag deployment was significantly lower for 1998 and newer vehicles across all crash severity levels. It was concluded that drivers in frontal crashes of known severity in 1998-2002 model year vehicles sustained significantly fewer and less severe injuries than their counterparts in pre-1998 model year vehicles. This was true for all drivers, males, females, MAIS 2+ and 3+, and across crash severity; however, it does not hold true if one evaluates airbag deployment.