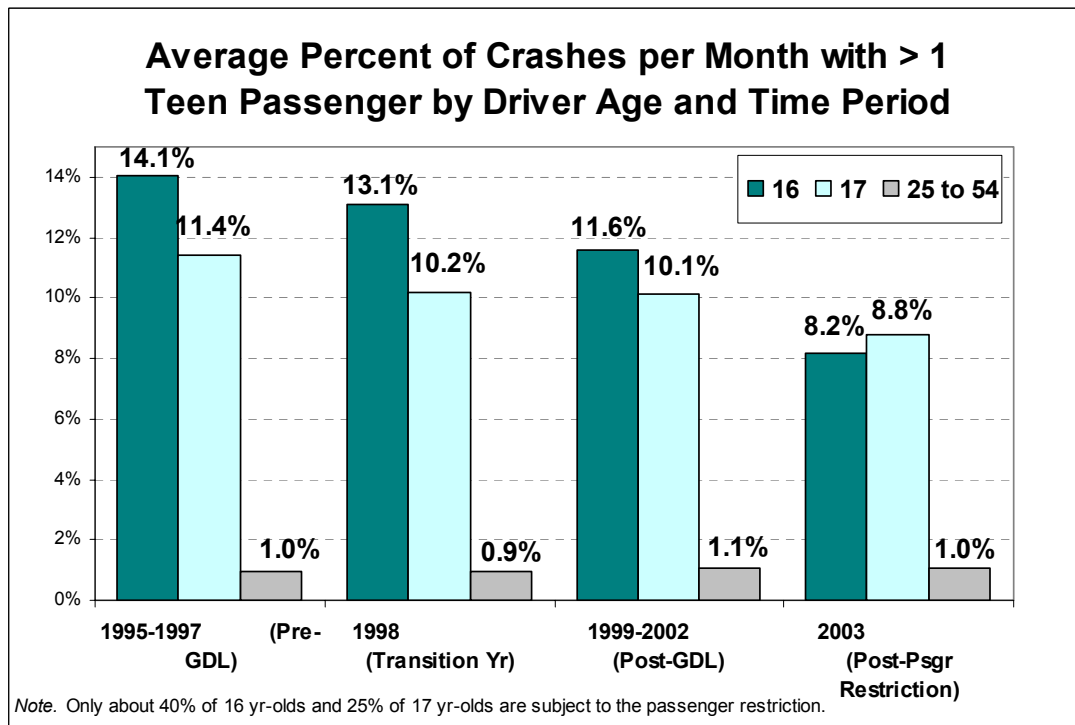


Effect of Adding a Passenger Restriction to the NC GDL System

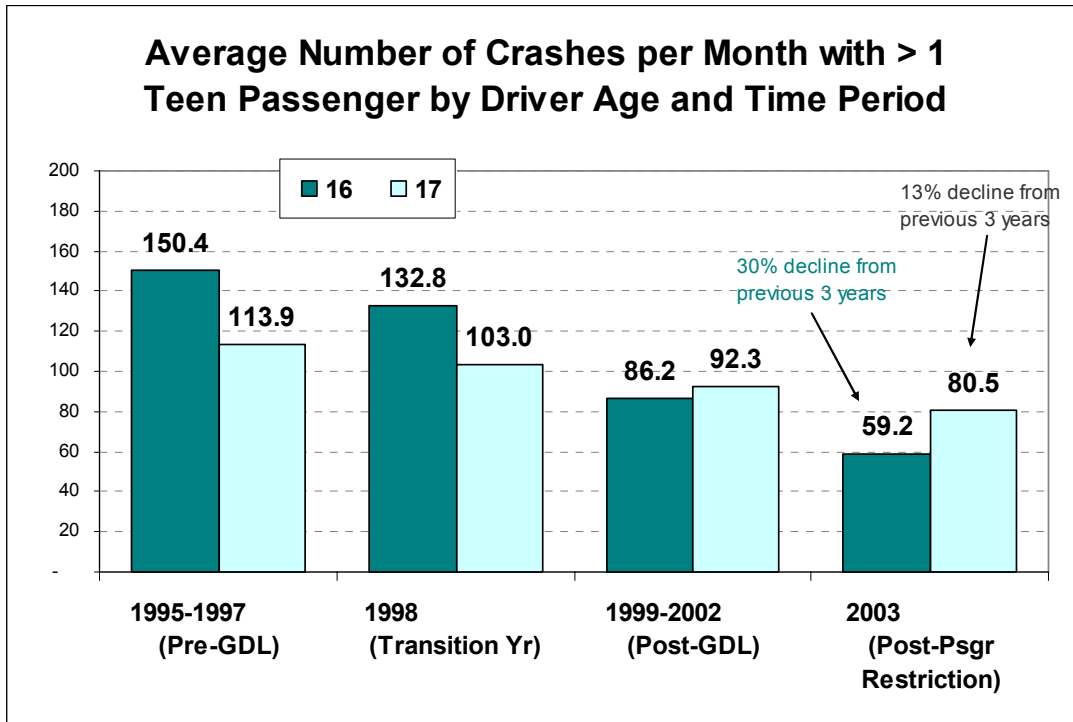
Prior to adding the passenger restriction, crashes by 16-year-old drivers had declined by 34% and crashes among 17-year-olds were down 18%. The passenger restriction added to the NC GDL program to address the fact that despite these benefits, carrying more than one teen passenger increased the likelihood of a serious (injury) crash among Level 2 (intermediate licensed) drivers by about 130%.

A number of analyses were conducted to determine whether the passenger restriction limiting Level 2 drivers to no more than one young passenger changed teens' passenger carrying behavior and reduced teen driver crashes. In brief, although Level 2 drivers do occasionally violate the passenger restriction, teen driver crashes clearly reflect beneficial effects of the new restriction. In comparison with the crash rates of drivers ages 25-54, crashes among 16 and 17 year-old drivers declined by about 5% following enactment of the passenger restriction. We cannot be sure that this decrease was the result of the passenger restriction, but by comparing with older drivers we can rule out the possibility that general factors that affect all drivers (weather, economic factors, gasoline costs, etc.) might have produced this change.

In addition to the apparent effect of the passenger restriction on crashes, there is more compelling evidence that young teen driver crashes involving multiple passengers have declined. For the 3 years before the passenger restriction was enacted, 11.6% of 16 year-old driver crashes involved more than one teen passenger. During the year after the restriction that figure declined to 8.2% (*a decline of 30%*). There was also a decrease in multi-passenger crashes among 17 year-old drivers, though it was not so great, declining from 10.1% to 8.8% (*a 13% decrease*) (see Figures below). These reductions represent more than *1,500 fewer teen passengers involved in crashes each year*.

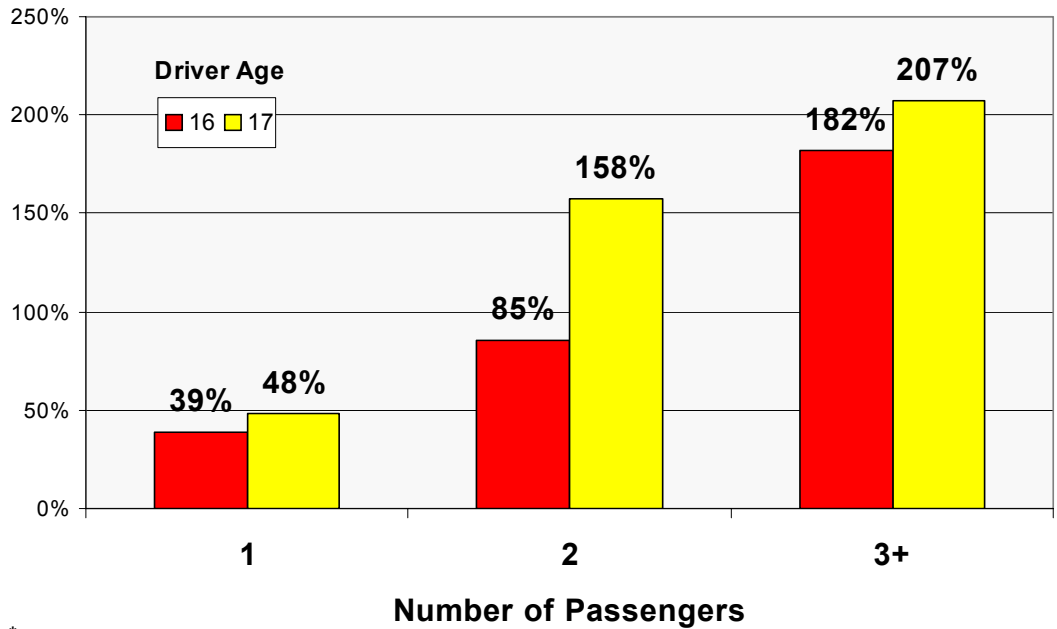


It is important to bear in mind that because, like the night driving restriction, the passenger restriction applies only for six months for the vast majority of young drivers. Consequently, at any point in time it affects only about 40% of 16 year-old drivers and 25% of 17 year-old drivers. Moreover, because the North Carolina night restriction begins at 9 p.m. a substantial proportion of passenger-related crashes had already been addressed by the early night restriction. In states where the night restriction begins later, a passenger restriction stands to produce greater effects than in North Carolina.



Below is the figure representing the increased risk of driver fatality associated with 1, 2 and 3+ passengers.

Increased Risk of Driver Death* by Number of Passengers and Driver Age, U.S., 1992 – 1997

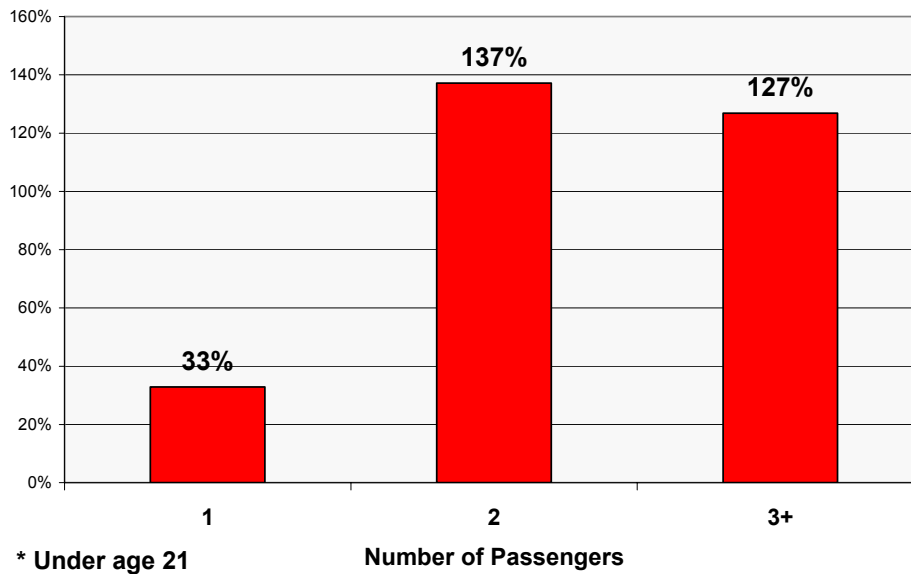


* vs. no passengers

Source: Chen et al., *JAMA*, 2000.

Below is the figure showing the increased risk of a serious (injury) crash for NC drivers with a Level 2 (Intermediate) license. Analysis was limited to this group because these are the only drivers to whom a passenger restriction would apply. Examining the effects of passengers on all teen driver crashes would have been misleading since the restriction as proposed could not affect all teens, only those with a restricted license.

Increased Crash Risk for 16 & 17 Year-old Drivers in NC with GDL Level 2 License by Number of Young* Passengers



Note that the apparent lower risk with 3 or more passengers is not statistically different from that for two passengers and is an unreliable estimate due to the very small number of crashes involving three or more passengers during the period studied. With the exception of the 3+ passenger group, these risk estimates are strikingly similar to those from the Chen et al. study.