



Encouraging compliance with graduated driver licensing restrictions

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Abstract

Problem: Although graduated driver licensing (GDL) programs have reduced the high crash rates for 16- and 17-year-old drivers, research suggests that some teenagers fail to comply with restrictions on nighttime driving and carrying passengers. **Method:** A program to encourage compliance with GDL restrictions and seat belt requirements was implemented in Guilford County, North Carolina. The program combined increased enforcement with a multi-faceted publicity campaign drawing attention to the enforcement activity. A comparison community was studied to assess whether changes over time could be reasonably attributed to the program. **Results:** Several measures indicate that greater enforcement did occur in the intervention community and that teenagers perceived the increase. However, self-reported data and direct observations of young drivers in the intervention and comparison communities showed the program resulted in only modest changes in compliance with GDL restrictions. **Discussion:** The program put in place the mechanisms known to produce changes in driver behavior, but these may have been insufficient to alter the behavior of the minority of teenagers (and parents) who were not already complying with restrictions. However, the modest changes in young driver behavior plus the clear changes in both actual and perceived enforcement suggest that high visibility enforcement programs merit further use and evaluation in other communities, particularly those where compliance with GDL provisions is lower than in Guilford County.

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1. Introduction

Graduated driver licensing (GDL) systems are designed to reduce crash risk while novice drivers gain needed experience. The keystone of graduated licensing is the intermediate level license, which allows a novice to drive without an adult in the vehicle while restricting driving to less risky conditions. Although research clearly points to the effectiveness of GDL systems in reducing the crash rates for beginning drivers (Hedlund & Compton, 2004; Shope & Molnar, 2003), several recent studies suggest that teenagers often do not comply with the two central protective restrictions: limits on nighttime driving and the number of young passengers permitted. Studies conducted in New

Zealand, Nova Scotia, and California have found that as many as 50% of young drivers report violating nighttime restrictions and up to 80% acknowledge at least occasionally violating passenger restrictions (Begg, Langley, Reeder, & Chalmers, 1995; Mayhew, Simpson, Ferguson, & Williams, 1998; Williams, Nelson, & Leaf, 2002). To the extent that teenagers do not comply with these restrictions, the safety benefits of GDL systems are reduced.

North Carolina has seen a substantial reduction in crashes among young drivers since GDL was introduced in 1997. An analysis of 10 years of crash data, which includes more than 5 years post-GDL, shows that crash rates have declined by 34% for 16-year-old drivers and by 18% for 17-year-old drivers following GDL (Foss, Masten, & Goodwin, 2005). Although compliance with restrictions appears to be higher in North Carolina than in other jurisdictions such as California (Williams et al., 2002), a recent study found that

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23% of teenagers in North Carolina reported violating the nighttime restriction (either with or without their parents' knowledge) and 34% reported violating the passenger restriction (Goodwin & Foss, 2004). Moreover, police enforcement of restrictions appeared limited; discussions with law enforcement officers revealed that many officers were not familiar with the details of North Carolina's GDL system and enforcement of restrictions did not seem to be a high priority. Without enforcement, teenagers may begin to believe that GDL restrictions are not taken seriously and compliance can be expected to decline further.

North Carolina is also one of the few states in the United States that has a seat belt provision as part of its GDL system. All occupants in a vehicle driven by a GDL driver must be properly restrained or the driver can be cited. Compliance with seat belt laws is a particular concern with respect to young drivers; research consistently shows that seat belt use is somewhat lower among young drivers than adult drivers. For example, observations of seat belt use at 12 high schools in the northeastern United States found that 56% of teenage drivers used seat belts when arriving at evening football games compared with 74% of adult drivers (Williams, McCartt, & Geary, 2003). Because teenage drivers have a substantially higher crash risk than adult drivers, failure to use seat belts makes them (and their passengers) especially vulnerable to injury or death. Increasing seat belt use among teenage drivers, as well as increasing compliance with other provisions of GDL such as nighttime and passenger restrictions, is important for ensuring the safety of young drivers, their passengers, and other road users.

Highly visible law enforcement is one approach for encouraging young drivers to adhere to the constraints placed on their licenses. Enforcement campaigns that include substantial publicity have been successfully employed to increase seat belt use (Williams, Reinfurt, & Wells, 1996; Williams & Wells, 2004) and reduce alcohol-impaired driving (Lacey, Jones, & Smith, 1999; Wells, Preusser, & Williams, 1992). The present study examined the effect on young driver behavior of an enforcement program to encourage compliance with GDL restrictions and seat belt provisions.

2. Method

2.1. North Carolina GDL System

North Carolina's three-tiered GDL system was implemented on December 1, 1997. The second, "intermediate" license stage begins after 12 months of supervised driving and no earlier than age 16. License holders in the intermediate stage may not drive without supervision from 9 p.m. until 5 a.m. (except when driving to or from work). No more than one passenger younger than 21 is allowed unless a supervising driver is in the vehicle. There is an exception for passengers who are members of the license holder's immediate family; however, if young family

members are present, no other young passengers are permitted. North Carolina's GDL system also includes a seat belt provision requiring everyone in the vehicle of a GDL driver (all drivers younger than 18) to be properly restrained. If anyone is not wearing a seat belt, the driver can be cited. Although there are fines for young drivers convicted of moving violations, seat belt violations, and GDL violations, an additional penalty is that the intermediate license period is extended for 6 months from the date of the violation. Thus, drivers younger than 18 who are convicted of any driving or GDL violation are delayed from advancing to the next licensing level.

2.2. "Ticket Today=License Delay" program

2.2.1. Background

Based on discussions with law enforcement personnel, Guilford County North Carolina was selected as the location for the GDL enforcement program. Law enforcement agencies in Guilford County expressed a strong interest in the program. Moreover, some areas in Guilford County were experiencing considerable problems with teenage "cruising" on weekend nights that they hoped the program could address. Support for the program also was strong within the Guilford County school system. Guilford County's population, at just over 400,000 residents, also was deemed advantageous. The county has a substantial number of young drivers but is small enough that a community-wide effort was feasible. Finally, further analysis of the data reported by Goodwin and Foss (2004) suggested that the frequency of self-reported violations of the nighttime and passenger restrictions in Guilford County was similar to statewide violation rates. Wake and Harnett counties in North Carolina were selected as a comparison community for this study. They have a combined population of approximately 700,000 residents. These counties are in a separate media market from Guilford County and are roughly 100 miles distant.

The program was dubbed "Ticket Today=License Delay" to draw attention to the fact that GDL license holders who violate seat belt, traffic, or GDL regulations will experience a delay in advancing to the next licensing level (which removes the nighttime and passenger restrictions for intermediate level drivers). The logo, the program name superimposed on a North Carolina intermediate level license, was included on all program materials. The program officially began with a press conference on August 23, 2004 and ended on December 31, 2004.

2.2.2. Law enforcement activity

Four law enforcement agencies in the intervention community (local police and sheriff's departments and the local troop of the State Highway Patrol), representing nearly all uniformed officers in the county, participated in the program. During the summer of 2004, each of these agencies trained officers on GDL and the program. Typically this was incorporated into routine "in service" training. To assist with

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