



## Evaluation of a program to enhance young drivers' safety in Israel

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### ABSTRACT

Young drivers in Israel, as in other parts of the world, are involved in car crashes more than any other age group. The graduated driver licensing system in Israel requires that all new drivers be accompanied by an experienced driver whenever they drive for the first 3 months after obtaining a driving license. In an effort to make the accompanied driving phase more effective, a novel program which targets both young drivers and their parents was initiated in 2005. The program administers a personal meeting with the young driver and the accompanying parent scheduled for the beginning of the accompanied driving phase. In this meeting guidance is given regarding best practices for undertaking the accompanied driving, as well as tips for dealing with in-vehicle parent–teen dynamics. Through 2008, almost 130,000 families of young drivers have participated in the program.

In order to evaluate the effectiveness of the program, injury crash records of the young drivers who participated in the program were compared with those of all other young drivers that were licensed at the same time period. The results obtained indicate statistically significant lower crash records for young drivers that participated in the program. Limitations of the evaluation related to self-selection biases are discussed, and practical implications are suggested.

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### 1. Introduction

Young drivers worldwide are involved in car crashes more than any other age group, even after controlling for number of drivers, miles traveled and population size (e.g., Lotan and Toledo, 2007; Williams, 2003). Research shows that the first year of licensure is the most risky, with the initial months of independent driving recording highly elevated crash rates. These rates rapidly decline after approximately 6 months, and continue to decline more slowly during the following years (Simons-Morton, 2007). Several authors relate these statistics to the lower driving competence of young novice drivers, who are still in the learning process, and whose exposure to various road conditions is relatively low (e.g., Mayhew et al., 2003; Simons-Morton, 2007).

This phenomenon has received significant media and political attention and prompted various regulatory changes that affected the driver licensing system. Many jurisdictions have implemented graduated driver licensing (GDL) systems, in which young drivers undergo several stages of learning, gaining experience, and being gradually exposed to more risky driving environments. Most GDL programs consist of three phases: learner permit, provisional license, and full license. The learner permit allows holders to drive

only when accompanied by an experienced driver. The provisional license sets certain restrictions on the novice drivers. It often restricts or prohibits nighttime driving and limits the number of passengers allowed in the vehicle. In addition, during this phase the tolerance to traffic violations, in particular speeding and alcohol and drug abuse, is lower and the associated penalties higher (Hedlund, 2007; Hedlund et al., 2006; Williams and Shults, 2010).

Several evaluation studies of various GDL systems attest to its effectiveness. For example, Shope (2007) summarized results of 27 studies, concluding that they consistently show that GDL programs reduce overall crash rates of novice young drivers by 20–40%. Similarly, comparing GDL systems in various American states, Baker et al. (2007) found that the fatal crash rates of 16-year-old drivers were 38% lower and the injury crash rates were 40% lower in the states with the most restrictive GDL programs compared to states that did not implement GDL at all. Vanlaar et al. (2009) conducted meta-analysis of the GDL programs in 58 American and Canadian jurisdictions to evaluate the impact of the various components of these programs. Overall, they found compelling evidence in support of GDL, with emphasize on nighttime driving and passenger restrictions, and on driver education and training.

The GDL effectiveness in reducing the involvement of young and novice drivers in car crashes is mainly attributed to their ability to enable young drivers to gain significant practical driving experience, and, simultaneously, protect them to a large degree from the inherently high crash risk attendant to novice driver status (ECMT,

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