



# Novice Drivers Summary

# 2018



## What is the problem?

Drivers aged 16 - 24 are greatly over-represented in road accident and fatalities statistics, with 2 to 3 times the risk of more experienced drivers. Hence, they pose a greater risk to themselves, their passengers and to other road users than other drivers do. Young drivers' high accident rates primarily result from immaturity, lack of experience, impairment, and lifestyles associated with their age and their gender.

## How big is the problem?

**Risk exposure:** Young and novice drivers are exposed in increased risk compared to other road user groups, since they drive more frequently in high-risk circumstances. Examples are night-time driving, speeding, carrying peer passengers and a less frequent use of seat belts and driving older cars with fewer safety features.

**Risk of accident involvement:** Young novice drivers have relatively more single-vehicle accidents (mostly due to loss of control) and head-on collisions, and are also over-represented in accidents on intersections. The increased accident risk can be attributed to the lack of driving experience and to over-confidence about their driving skills; however, the results of studies investigating why young novice drivers have such high accident rates are in most cases inconclusive.

**Size of accident injury problem:** As a share of all driver fatalities within the EU, young driver fatalities range from 18% in Denmark to 32% in Germany, while the share of this age group in the total population ranges from 8% in Denmark to 13% in Ireland. Road traffic is the largest source of premature morbidity among adolescents in developed countries and traffic accidents are the single greatest killer of those aged 15 to 24 in OECD countries, accounting for 35% of all deaths, or approximately 25.000 people annually.

## What does science say?

### Biological and social aspects

Biological research shows that at the age of 18, areas of the human brain which are responsible for the integration of information and impulse control are still developing. Even alcohol consumption in low quantities has a greater impact on young people than on experienced drivers. Furthermore, youngsters are still maturing not only in physiological terms, but also in social terms. One example is getting away from parental influence and gaining more independence. As part of this process peers become increasingly important, particularly in lifestyle related choices, and this affects both mobility and driving behaviour of young drivers.

### Lack of driving experience

Learning to drive demands a lot of practice before expert levels are reached. While vehicle handling skills are relatively easy to master, skills such as anticipation of potentially hazardous traffic situations require years of practice. The driving task is partly determined by the demands of the road environment, the presence and manoeuvres of other road users and traffic rules. However, the complexity of the driving task is also very much under the driver's control, because of personal choices of driving speeds, following distances and position. These choices may lead to either small or large safety margins and are based on self-estimates of ability to handle these traffic situations. In making these choices, inexperienced drivers in particular need to aim at large safety margins in order to compensate for their lack of experience. In reality however, young inexperienced drivers tend to choose safety margins which are too small. This phenomenon is

largely a consequence of the fact that members of this age group, and the young male in particular, tend to overestimate their skills and to underestimate the complexity of the traffic situation.

## **What are the solutions?**

A variety of measures is available which specifically target increased accident risk among novice drivers, including changes in their exposure to driving. Due to its multi-faceted nature, there is no single solution to this problem. Therefore, a package of countermeasures is required, such as the following:

### **Age of access:**

- The choice of a minimum age for solo driving can be difficult, as it may be conditioned by different local, social, or cultural circumstances.
- A higher driving age is likely to save lives by preventing young and inexperienced drivers from solo driving. On the other hand, this may motivate young people to choose even less safe modes of transport, such as motorcycles.

### **Licensing regimes:**

- Graduated driver licensing (GDL) allows learner drivers to acquire driving experience under low-risk conditions.
- Most evaluations of GDL have reported significant reductions in accidents and fatalities; however, the results show great variation of the safety effects.

### **Pre-License training:**

- Two pre-license training methods can be distinguished: formal (with an instructor) and informal (with any experienced driver).
- Well-educated instructors possessing the necessary knowledge and teaching skills are vital for a well-functioning system.

### **The Driving test:**

- A well-functioning licensing system needs a high quality testing system.
- The driving test needs to be reliable, valid and legitimate.

### **Post license measures for novice drivers:**

- Advanced training, to improve driver attitudes and skills.
- Protective measures, to reduced exposure to high-risk conditions.
- In-car monitors that reward safe driving and / or discourage risky driving

### **Enforcement:**

- Special attention should be paid to unlicensed driving.
- The following violations are particularly relevant to young drivers and should be targeted: speeding, drink-driving, drugged driving.

### **Technology based interventions:**

Promising ITS applications for young drivers are: smart card access systems preventing unlicensed or unauthorised driving, alcolocks, seat belt reminders, driving data storage units, Electronic Stability Control (ESC), Advanced Driver Assistance Systems (ADAS), Intelligent Speed Adaptation (ISA).

## Notes

### 1. Country abbreviations

	Belgium	BE		Italy	IT		Romania	RO
	Bulgaria	BG		Cyprus	CY		Slovenia	SI
	Czech Republic	CZ		Latvia	LV		Slovakia	SK
	Denmark	DK		Lithuania	LT		Finland	FI
	Germany	DE		Luxembourg	LU		Sweden	SE
	Estonia	EE		Hungary	HU		United Kingdom	UK
	Ireland	IE		Malta	MT			
	Greece	EL		Netherlands	NL		Iceland	IS
	Spain	ES		Austria	AT		Liechtenstein	LI
	France	FR		Poland	PL		Norway	NO
	Croatia	HR		Portugal	PT		Switzerland	CH

2. This 2018 edition of Traffic Safety Synthesis on Novice Drivers updates the previous versions produced within the EU co-funded research projects [SafetyNet](#) (2008) and [DaCoTA](#) (2012). This Synthesis on Novice Drivers was originally written in 2008 by Divera Twisk, [SWOV](#) and then updated in 2012 by Willem Vlakveld, [SWOV](#) and in 2015 by Jean-Pascal Assailly, [IFSTTAR](#).

3. All Traffic Safety Syntheses of the European Road Safety Observatory have been peer reviewed by the Scientific Editorial Board composed by: George Yannis, NTUA (chair), Robert Bauer, KfV, Christophe Nicodème, ERF, Klaus Machata, KfV, Eleonora Papadimitriou, NTUA, Pete Thomas, Un.Loughborough.

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5. Please refer to this Report as follows:

*European Commission, Novice Drivers, European Commission, Directorate General for Transport, February 2018.*

