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SWOV Fact sheet

Graduated driver licensing

Summary

Young novice drivers have a very high risk of being involved in a road crash. In the United States (US), Canada, Australia and New Zealand this problem has been tackled by first letting learner drivers gain driving experience under safe conditions before allowing them to take the driving test. The more driving experience learner drivers have gained, the more they are allowed to drive under less safe conditions. In these countries this so-called 'graduated driver licensing' system has resulted in a considerable decline in the number of crashes involving young novice drivers. However, the decline cannot so much be attributed to having gained experience under protective conditions which makes them a better driver, but rather to the fact that it takes longer before they, as young novice drivers, are exposed to hazardous traffic conditions. In the Netherlands, the first steps towards a graduated driving licence have been taken with the introduction of accompanied driving (2toDrive) and the beginner's licence (a lower alcohol limit and a demerit points system). Between the phases of accompanied driving and the beginner's licence, the graduated licensing system has an intermediate phase in which solo driving is allowed with restrictions: no driving when it is dark and no driving with peers as passengers. Such an intermediate phase does not exist in the Netherlands or in most other European countries.

Background and content

The crash rate of young novice drivers is very high. See SWOV Fact sheet [Young novice drivers](#) for the causes. Worldwide, attempts were made to reduce the high risk of crashes of young novice drivers by improving the driver training leading up to the driving test. In the US, Canada, Australia and New Zealand, however, a different course was taken during the late 1980s and early 1990s. Reason to do so was the evaluation of the 'DeKalb County' project that took place in the US during the early 1980s. This study indicated that the risk of learners who had not been taught by a driving instructor and had just learned to drive with the help of their parents, equalled the risk of learners who had had a professional driver training (Lund, Williams & Zador, 1986). This prompted the countries mentioned above to no longer trying to find the solution in the quality of the basic driver training, but in gaining experience in driving under safe conditions. As driving experience increases, driving under conditions that have proved to be unsafe for young novice drivers is gradually allowed. Such a system is called 'graduated driver licensing'.

This fact sheet will discuss graduated driver licensing and the road safety effects of (parts of) the system that were observed in countries that introduced the system. New developments in this area and the applicability of a graduated driver licensing system in Europe, and, more specifically, in the Netherlands are also investigated.

What does a graduated driver licensing system consist of?

A graduated licence usually consists of three phases.

1. **The learner phase.** In this phase only accompanied driving is allowed (see SWOV Fact sheet [Accompanied driving](#)). The supervisor is usually one of the parents. Generally, supervisor and learner must keep a logbook of the operations that the learner has carried out, together with an assessment of how well they were done. Often the number of kilometres driven must also be recorded. Some versions of the graduated driving licence do not require taking lessons from an accredited driving school before or during this phase of accompanied driving; other versions do. The duration of the learner period varies from six months to one year.
2. **The intermediate phase.** Nearly all types of graduated licensing systems have a test before the learner can move on to the intermediate phase. During the intermediate phase the learner may drive independently, but only under circumstances in which the risk of a crash is small. In this phase even the smallest amount of alcohol is usually prohibited when driving. Often driving in the dark and driving with passengers in the same age group are also forbidden. The duration of the intermediate phase can differ considerably. It lasts from three months to a year in the US, but in Australia the intermediate phase has a duration of three years. The intermediate period can be

lengthened if an offence has been committed and/or a crash has been caused. Sometimes another test must be taken to conclude the intermediate phase; this test focuses on the higher order skills like hazard perception.

3. **The beginner's licence phase.** In this phase it is allowed to drive without supervision and without restrictions, but stricter rules apply than for experienced motorists (e.g. lower alcohol limit or a stricter demerit points system). It is also possible to demote the learner to the intermediate phase after having committed a traffic offence.

What are the European experiences with graduated driver licensing?

Not a single European country has a graduated driver licence that consists of three phases. However, an increasing number of countries introduce the learner phase in which driving is only permitted when an experienced older supervisor is present. In the Netherlands the learner phase was introduced in November 2011 and was named 2toDrive. (2toDrive; see SWOV Fact sheet [Accompanied driving](#)). The intermediate phase which usually includes a ban on driving with age peers as passengers and a ban on driving in the dark has so far not been introduced in any European country. The United Kingdom, however, is preparing to do this. The intermediate phase not having been introduced in Europe may be connected with the age limit. In most European countries the driving test cannot be taken until the age of 18. In the US, Australia and New Zealand, however the age limit is 16, or even lower. To make the intermediate phase into a success, the parents' cooperation and supervision is required. This is much easier for parents whose children are 16 or younger, than for those whose children are 18. An increasing number of European countries, including the Netherlands, is introducing the third phase: the beginner's licence. In the Netherlands, the beginner's licence has a simple demerit points system (see SWOV Fact sheet [Demerit points systems](#)) and a lower alcohol limit during the first five years after licensing. Some countries other than the Netherlands have decided on a brief additional training of the higher order skills to conclude the beginner's licence phase (see SWOV Fact sheet [Post-licence training for novice drivers](#)). In countries that have adopted the graduated licence (US, Australia and New Zealand) the third phase, that of the beginner's licence has often not yet been developed, or the restrictions have been included in the intermediate phase.

What is the road safety effect of a graduated driver licensing system?

Countries and states that have introduced a complete graduated licensing system have seen a 15.5% to 22% decline in the number of serious crashes (fatalities and/or serious road injuries) involving 16 year-olds. The decline is less steep for 17 year-olds: between 6% and 9% (Williams, Tefft & Grabowski, 2012).

Which components of a graduated driver licensing system are effective and which are not?

Senserrick & Whelan (2003) carried out a literature study of the individual components of a graduated driver licensing system. In their report, they have listed all effect studies of specific components by item.

The components that will certainly work are:

- long learning phase with accompanied driving, in any case longer than 6 months;
- not being allowed to drive at night during the intermediate phase;
- not being allowed to drive with peers during the intermediate phase. This has a smaller effect than the driving-at-night prohibition because this measure leads to more exposure (they each drive separately);
- total alcohol prohibition (also for the supervisor) during the entire period (including the third phase: the beginner's driving licence).

Components that will probably work are:

- raising the age at which the intermediate phase can be started;
- lengthening the intermediate phase to a minimum of one year, and preferably longer;
- lengthening the phase the learner is in after having been caught committing an offence;
- stricter demerit points systems for both the intermediate and beginner's licence phases.

Not expected to work are:

- shortening the phases if the learner takes official driving lessons or follows road safety courses;
- official driver training by professional driving instructors as a total replacement of accompanied driving.

The age for commencing accompanied driving can be around 16 without having a negative road safety effect (see SWOV Fact sheet [Accompanied driving](#)). However, the age limit for driving independently (with restrictions) should be as high as possible.

What are the new developments in relation with graduated driver licensing systems?

Parents have an important influence on the effect of the graduated driver licensing system. It is usually a parent that accompanies a learner in the learner phase and it are often the parents who can see to it that their children do not drive in the dark and do not drive with peers in the intermediate phase. Adherence to the restrictions in the intermediate phase is difficult to enforce by the police. It is therefore important that parents support these rules of a graduated driver licensing system and effectively ensure that their children adhere. Increasingly, contracts between children and parents are drawn up in the US to ensure commitment to the graduated driver licensing programme. This is done in the so-called 'checkpoints programme' (Hartos, Nissen & Simons-Morton, 2001). In such a contract parents promise, for example, how often in a week they will be supervisor and the children promise, for example, to adhere to the restrictions of the intermediate stage. Such contracts make it easier to comply with the programme of the graduated driver licensing system and less offences are committed in the learner phase and the intermediate phase, but the risk of crashes, however, does not decrease as a result in the period immediately after the graduated driver licensing (Simons-Morton et al., 2006).

In countries with a graduated driver licensing system there is little attention for driving lessons that are taught by a certified driving instructor, because the risk of a crash was not found to decrease in the period after obtaining the licence. In recent years, however, both in the US and in Australia new interest arose in the formal driving course (Beanland et al., 2013; Blomberg & Fisher, 2012). This renewed interest was prompted by the fact that although there are fewer crashes during the period of the graduated driver licensing, there is no or hardly any decrease in the first years after licensing. This means that in the end, the graduated driver licensing system does not produce safer drivers. However, new proposals aimed at better integration of the traditional driver training and the graduated driver licensing system use different kinds of driving lessons than the traditional ones that are taught at present (Beanland et al., 2013; Blomberg & Fisher, 2012). The traditional driving lessons mainly focus on controlling the vehicle and applying traffic rules. The new driving lessons, however, should mainly focus on teaching higher order skills like hazard perception, risk awareness, and being capable of making a realistic assessment of one's own skills (see SWOV Fact sheets [Training hazard perception](#) and [State awareness, risk awareness and calibration](#)).

What are the possibilities of applying a graduated driver licensing system in the Netherlands?

The start of the experiment 2toDrive in November 2011 was in fact the introduction in the Netherlands of the learner phase of a graduated driver licensing system (see SWOV Fact sheet [Accompanied driving](#)). It differs from graduated driver licensing in that one first has to pass the driving test before accompanied driving can start. Most countries allow accompanied driving before the driving test is passed. The beginner's licence in the Netherlands is actually similar to the third phase of a graduated driver licensing system. Contrary to many other countries, the Netherlands do not close off this phase with an advanced driver training that focuses on higher order skills (see SWOV Fact sheet [Post-licence training for novice drivers](#)). The only phase that is entirely absent in the Netherlands is the intermediary phase with restrictions. This is also the case in all other European countries. As was said earlier, this is probably related with the fact that European countries use a higher age limit at which independent driving is allowed. In Europe the age for independent driving usually is 18, whereas countries with full graduated driver licensing systems had an age limit of 16 and sometimes even lower before the system was introduced. It is easier for parents to supervise compliance with the restrictions when a child is 16 than when it is 18. Furthermore, it remains to be seen whether not being allowed to drive with age peers has an equally strong effect on 18-year-olds as on 16-year-olds.

Conclusion

In countries where independent driving was allowed at a young age, the introduction of a graduated driver licensing system resulted in considerable reductions of the numbers of crashes involving 16 and 17 year-old drivers. This is mainly due to the fact that in such a system young drivers have less exposure to traffic hazards, in the first phase of accompanied driving as well as in the intermediate phase in which they are not allowed to drive under conditions that are more hazardous for young drivers. Graduated driver licensing systems have probably had little effect on the risk of crashes in the period following the intermediate phase. This has prompted renewed interest in traditional driver training. However, this does not involve learning basic skills, but hazard perception, risk perception,

risk acceptance, and self-assessment. The introduction of accompanied driving and the beginner's licence in the Netherlands have resulted in the adoption of many characteristics of the graduated driver licensing system.

**Publications and sources
(SWOV reports have an English Summary)**

Beanland, V., Goode, N., Salmon, P.M. & Lenné, M.G. (2013). [Is there a case for driver training? A review of the efficacy of pre- and post-licence driver training.](#) In: Safety Science, vol. 51, nr. 1, p. 127-137.

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Lund, A.K., Williams, A.F. & Zador, P. (1986). [High school driver education: Further evaluation of the Dekalb County study.](#) In: Accident Analysis & Prevention, vol. 18, nr. 4, p. 349-357.

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Simons-Morton, B.G., Hartos, J., Leaf, W.A. & Preusser, D.F. (2006). [The effect on teen driving outcomes of the checkpoints program in a state-wide trial.](#) In: Accident Analysis & Prevention, vol. 38, p. 907-912.

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