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SWOV Fact sheet

Accompanied driving

Summary

Accompanied driving means that a novice driver is only allowed to drive when accompanied by an experienced driver. Different variants of this measure have already been introduced in several countries. The period of accompanied driving can take place before or after the driving test. In the Netherlands the latter option was chosen: young people can take driving lessons from the age of 16.5 and take the driving test and get the licence when they are 17, but until they are 18 years old they can only drive accompanied by an adult. The driving experience that is gained under guidance is expected to lead to a lower crash risk for young drivers compared to when they start driving independently. In General, positive road safety effects are found. But this is not the case everywhere: some countries have found no or even adverse effects. At present it is not possible to conclusively determine whether accompanied driving has a positive or a negative effect on road safety in Netherlands.

What is accompanied driving?

Accompanied driving means that for a certain period a novice driver is only allowed to drive a car when accompanied by an experienced driver before being allowed to drive independently. There are many different variants of accompanied driving. Within Europe two main variants can be distinguished: accompanied driving *without* having passed the driving test, and accompanied driving as a follow-up to having passed the driving test (an 'experience module'). The Netherlands have chosen the latter variant.

Why accompanied driving?

Driving experience that is gained during the period of accompanied driving is expected to result in young novice drivers being involved in fewer crashes when they start driving independently. Their limited driving experience is one of the reasons that young, novice drivers are often involved in crashes: they are involved in about 20% of all serious crashes in the Netherlands, while they make up only 8% of the driving licence holders. Accompanied driving gives novice drivers driving experience under relatively safe conditions before they become independent road users. Lack of experience, though, is not the only cause of their high crash rate. SWOV Fact sheet [Young novice drivers](#) discusses these causes in detail.

How is accompanied driving organised in the Netherlands?

On 1 November 2011 the accompanied driving experiment started in the Netherlands and was called 2toDrive. The experiment will continue until 1 November 2017. In the experiment youngsters can begin their driver training and take the theory test from the age of 16.5. After having passed the theory test they can take the driving test from the age of 17. The validity of the theory certificate B has been lengthened from 12 to 18 months. After passing the driving test and having obtained the driving licence, young drivers are only allowed on the road when accompanied by an experienced driver, their coach, until they are 18 years old. During this accompanied driving period they are only allowed to drive in the Netherlands. Meanwhile it remains possible to pass the driving test from the age of 18 and to drive independently immediately after.

What is the role of the coach/mentor?

The coach/mentor's role is to advise, to supervise the way the driving task is carried out, and to assess when traffic's complexity surpasses the driver's skills. The coach/mentor does *not* give instructions. A number of countries support the supervisors with courses and manuals. In England, manuals like *Driving Standards Agency's Official Guide to Accompanying L-drivers* have been written to ensure accompanied driving being in line with the professional instruction. The *Helping L Drivers* website (www.helpingldrivers.com) supplies the coach/mentor with free information.

However, not every experienced driver will be a good coach/mentor. An Israeli study, for example, showed that risky driving of young males corresponds with risky driving of their parents (Taubman -

Ben-Ari, et al., 2014). Therefore it is appropriate that the Netherlands, like most countries, require the coach/mentor to meet certain standards. They must, for instance, be of impeccable conduct, and they are not allowed to be under the influence of psycho-toxic substances while supervising.

How many youngsters participate in 2toDrive to get their driving licence?

Since the introduction, about one third of the young people in the Netherlands has chosen to obtain their driving licence with the 2toDrive method (Schagen et al. 2015). In March 2015, the hundred-thousandth 17-year-old passed the driving test. It is striking that 17-year-olds pass their theoretical and practical exam faster than older candidates. In 2014, the average success rate of the 2toDrive-participants was 55.7%. For the driving test this is 7.2 percentage points higher than the success rate of the other candidates (CBR, 2015). It is not clear what causes this difference in success rate.

Why do youngsters participate in 2toDrive?

The two main reasons for young people to participate in 2toDrive are that it is then possible to drive independently immediately after their 18th birthday and that they like driving a car before then (Schagen et al., 2013). The reason that it makes them a more confident driver takes third place and the fact that they become a safer driver takes fourth place. The main reasons for young people *not* to participate are that there is still time enough to get a driving license later, that it is too expensive at present and that they do not yet consider it necessary to drive a car.

What safety effect does 2toDrive have in the Netherlands?

It is currently not possible to conclusively determine whether 2toDrive has a positive or a negative road safety effect in the Netherlands. An extensive questionnaire study among 30,000 2toDrive participants and young people who got their licence in the traditional way, is not conclusive (Schagen et al. 2015). The crash rate (the number of crashes per kilometre travelled) of the 2toDrive-respondents was considerably lower than that of respondents who got their licence in the traditional way. However, the individual differences in distance travelled were so considerable, that it could not be ruled out that the difference in crash rate between the two groups of drivers was based on chance.

The effect of 2toDrive on traffic violations was also not straightforward. When corrected for the number of months as an independent driver, 2toDrive participants report significantly more speeding tickets than drivers who got their licence in the traditional way. When corrected for the total difference in kilometres travelled, another pattern becomes visible: 2toDrive participants report about 16% fewer speeding tickets per kilometre travelled. Unfortunately it was not possible to test this difference 'per kilometre travelled' on significance.

A good picture of the road safety effect of 2toDrive in the Netherlands would require investigating the actual (registered) crashes and offences of all 2toDrive participants and of those who got their licence in the traditional way. This cannot be done for offences, because fines are mainly given on registration and can therefore not be attributed to individuals. For crashes such a picture can in principle be obtained if we can add information about having passed the driving test (before or after the 18th birthday) to the actual (registered) crashes. Due to, among other things, reasons of privacy, this has not been done so far.

Which factors determine the effectiveness of accompanied driving?

International evaluation studies indicate that the effects of accompanied driving greatly depend on:

- the number of hours spent on accompanied driving;
- the variation in journeys and the conditions;
- the qualities of the supervisor.

In addition, the absolute effectiveness in a country, of course, depends on the percentage of beginners who choose accompanied driving.

A questionnaire study (Schagen & De Craen, 2014) showed that Dutch youngsters take the accompanied driving phase seriously. They actually practice and most 2toDrive participants do this regularly and on different locations (on the highway, in the big city) and in different conditions (with rain, fog, in the dark). This means that the conditions for effective accompanied driving have been met: young novice drivers gaining experience under guidance, and therefore relatively safe, in different conditions before participating in traffic independently.

What is the minimum of accompanied driving hours that is necessary?

As international research shows that the effectiveness of the measure depends strongly on the number of accompanied driving hours, the question is how many hours is the necessary minimum. Sagberg (2000; in OECD & ECMT, 2006) concludes on the basis of a comparison between the Norwegian and Swedish data that the minimum accompanied driving distance travelled is between 5,000 and 7,000 kilometres. In Australia, various states aim at beginners having around 100 to 120 hours of accompanied driving (Senserrick & Williams, 2015). In the Australian state New South Wales, the crash rate of young drivers declined considerably after the introduction of a minimum of 120 hours of accompanied driving. However, the introduction of the measure went hand in hand with all sorts of other initiatives; it is therefore not possible to link the decline to this measure.

How (un)safe is the accompanied driving period?

We expect that accompanied driving will prove to be safer than driving independently immediately after having passed the driving test. Recent American research indicates that young novice drivers take fewer risks in the presence of their mother than when driving solo (Telzer et al., 2015). Only Sweden is known to have crash data of the period of accompanied driving. This data shows that the number of crashes 'per person' during the accompanied driving period is 33 times lower than when driving independently after having passed the driving test (Gregersen et al., 2003). As Sweden has approximately three times more independent driving than accompanied driving, the risk of a crash *per kilometre* is about ten times lower for accompanied driving than for independent driving. An important difference between the Netherlands and Sweden is that Dutch novice drivers first get a full basic training before the accompanied driving period whereas a basic training is not mandatory in Sweden.

How can the effects of accompanied driving be evaluated?

Evaluating a measure like accompanied driving is very difficult. This is, among other things, due to the effect of *self-selection*; a phenomenon that occurs when people themselves can choose whether they "take part" in a measure or not. Should a difference be found between participants in the measure and a reference group, this may not so much be caused by the effectiveness of the measure, but rather to the characteristics of the group itself. To get insight in the effect of self-selection a pre-measurement is necessary. Unfortunately, in the case of accompanied driving it is not possible to carry out pre- and post-measurements on crash involvement with the same group of participants. After all, they are beginners who have no history as a driver. Therefore, in these types of studies the development of the crash involvement in the first years after obtaining the driving licence of the group who participated in accompanied driving, is compared to that of beginners in the period before the measure was introduced, a *reference group*. Another possibility to check for self-selection is by collecting background information on the participants. If the accompanied driving group is found to differ significantly from the total group, it is clear that the results cannot be generalized to all young drivers. Apart from the presence of a reference group and a pre-measurement, the value of the results from evaluation studies also depends on the proportion of beginners that choose to participate in accompanied driving. A more detailed description of the evaluation of these measures is given in the SWOV Fact sheet [Necessity, contents and evaluation of traffic education](#).

How effective is the measure internationally?

In general – particularly for the variant that is used in the Netherlands – positive road safety effects are found (e.g. in Sweden and Germany). However, this is not the case in all countries; in some countries, no or even adverse effects have been found (e.g. in Norway and France).

Positive results accompanied driving in countries other than the Netherlands

In 2005, Germany introduced a variant of accompanied driving, which is similar to the Dutch 2toDrive. This option allows youngsters to start their driver training when they are 16.5 years old. They may get the licence from their 17th birthday by passing a standard driving test; this is followed by the period until their 18th birthday, in which they can only drive when accompanied by an experienced driver. A German evaluation studied both the effect on self-reported crashes and on registered crashes. In addition to data of people who participated in the study on a voluntary basis, data of people who had not registered for the study was also used (Schade & Heinzmann, 2011). Several effect analyses tend towards a positive effect: the effect estimates for the reduction of offences as a result of the measure ranged from at least -15% to -30%; the effect estimates for the reduction of the number of crashes ranged from -15% to -30%.

In 1999, Austria introduced the possibility to acquire a full driving licence at the age of 17, under the conditions that a training was followed consisting of 26 theory lessons and twelve practical lessons, and a minimum number of 3,000 kilometres was driven accompanied. The evaluation showed that the programme was particularly effective during the first 2,500 kilometres. Although these results are promising, it cannot be excluded that self-selection has played a role because the conclusion is based on a small group (8%) of the beginners' population.

Sweden uses a different variant, in which youngsters can opt for accompanied driving to prepare for the driving test. In 1993, Sweden lowered the minimum age for accompanied driving from 17.5 to 16 years old, leaving the age at which it was allowed to take part in traffic independently at 18 years old. This increased the number of accompanied driving hours from an average of 47.9 hours to an average of 117.6 hours per person. 45-50% of the youngsters made use of the possibility to start with accompanied driving at a younger age than 17.5. It was investigated whether this increase in training hours resulted in fewer crashes. Because many beginners choose this variant, the results apply to a relatively large group of beginners.

The study showed that over a period of two years the crash rate for the group that opted for accompanied driving decreased by 40% (Gregersen et al., 2000). The effect of self-selection may have played a role because these young novice drivers generally were of a higher socio-economic class. After correction for this possibility, the reduction in crash rate was still large (35%). This is a considerable effect, much larger than the effects achieved with, for example, changes in the driver training or introduction of a demerit points system. It is even more remarkable that this large effect was, of all countries, achieved in Sweden, because Sweden is already one of the European countries with the highest road safety level. In a country that already has a very high road safety level, because of the many measures that have been taken, it is even harder to achieve more safety gains.

Finally, evidence of the efficacy of accompanied driving can be found in the effects of the American and Australian systems for a 'graduated driving licence', part of which being accompanied driving (see also SWOV Fact sheet [Graduated driver licensing](#)). Australian research shows that young people with more hours of accompanied driving (prior to the driving test) pass the driving test more easily (Senserrick & Williams, 2015). Evaluation studies of graduated licencing systems show a positive effect on crash involvement (Shope, 2007; Russell et al., 2011; Masts et al., 2011). It is that accompanied driving is believed to be responsible for part of that effect. However, the exact extent cannot be determined because the influence of accompanied driving cannot be investigated separate from the other components of the graduated licensing systems. Furthermore, Williams et al. (2012) conclude that the biggest safety gains are made because youngsters are less exposed to traffic risks in a graduated driver licencing system. As soon as they're allowed to drive independently, it appears to be hardly any difference between the situations with and without a graduated driving license.

Negative accompanied driving results in countries other than the Netherlands

The experiences in Norway and France are less positive. Just like Sweden, Norway lowered the minimum age for starting a driver training from 17 to 16 years old, under condition of accompanied driving until the age of 18 years old. This extension of the period of accompanied driving was found to have virtually no effect, because it did not actually lead to more accompanied driving (Sagberg, 2000; & ECMT in OECD, 2006). It was found, however, that those who had done much accompanied driving had a lower crash rate (Sagberg, 2002; & ECMT in OECD, 2006). This conclusion requires caution because in this case self-selection may also play a role: cautious beginners may travel more kilometres while driving accompanied.

Although based on evaluation studies it was initially concluded that in France accompanied driving had a positive effect on road safety, the most recent research reports adverse effects (Page et al., 2004). In this optional training variant, 16-year-olds first follow a twenty hour professional driver training, after which they drive accompanied for at least 3,000 kilometres until they are 18 years old. The coach/mentor is also required to take some lessons at a driving school. Page et al. used insurance data of injury crashes involving drivers who had participated in accompanied driving from the age of 16, and compared this with data of beginners who had had a traditional training from 18 years old. Unexpectedly the group that had participated in accompanied driving was more frequently involved in crashes than the traditionally trained group. The authors give a number of possible explanations. For example, the journeys that were driven may have contained insufficient learning moments, the novice driver would be too dependent on the coach/mentor, and the number of hours of

accompanied driving may have been too little. Bad traffic behaviour of the coach/mentor could be an important factor.

Which other measures are necessary for young novice drivers?

Accompanied driving ensures that beginners have more experience once they drive independently. However, during the first period of driving independently it will be necessary to limit exposure to the most dangerous traffic situations. This can be done by using protective measures such as a ban on the use of alcohol, on transporting passengers and on driving during the weekend nights. As driving experience increases, such measures may be lifted one by one. In this way, the driving license becomes a graduated driving license, by which the driver gradually gains access to more complex and more dangerous traffic situations – see SWOV Fact sheet [Graduated driver licensing](#) for more information.

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