Summary

Background

In order to improve road safety, The Netherlands has several (behavioural) measures that can be issued to drivers for driving under the influence or for risky driving behaviour. For those who are pulled over for drink driving the penalty can be either the Educational Measure for Alcohol and Traffic (in Dutch: Educatieve Maatregel Alcohol en verkeer [LEMA]), a light version of the EMA [LEMA] or a fitness-to-drive test (in Dutch: onderzoek geschiktheid) related to either alcohol or drugs, or for medical reasons. From December 2011 until September 2014 an Alcohol Interlock programme (in Dutch: alcoholslotprogramma [ASP]) was issued for more serious or repeat drink-driving offenders. For persons who were found guilty of risky driving behaviours the penalty can be either the Educational Measure for Behaviour and Traffic (in Dutch: Educatieve Maatregel Gedrag en Verkeer [EMG]) or a driving ability test (in Dutch: onderzoek rijvaardigheid).

The WODC has been asked by Rijkswaterstaat (an executive agency of the Ministry of Infrastructure and Water Management) to monitor recidivism by participants of these behavioural measures and to determine the effectiveness of these measures in terms of preventing recidivism. In this study, the characteristics of and recidivism by participants of the behavioural measures were investigated, as well as the effectiveness of the EMA, the ASP and the EMG in terms of relapse reduction. No effect study is being carried out into the fitness-to-drive test, since the main goal of the fitness-to-drive test is to determine whether a person meets the fitness requirements for having a driver’s license and it is therefore not a measure aimed at preventing recidivism.

This study answers the following research questions:

1. What are the background characteristics of the participant groups?
2. What is the pattern of recidivism for the participant groups?
3. Are the EMA, the ASP and the EMG effective in reducing recidivism?

Method

Data for the measurement of recidivism originates from the Research and Policy Database for Judicial Information (OBJD). The OBJD is a pseudonymous version of the Justice Documentation System (JDS), the legal registration system for criminal cases. These data originated from the information system MOVE from the Central Driving License Issuing Authority (in Dutch Centraal Bureau Rijvaardigheidsbewijzen [CBR]).

This study was carried out following the WODC Recidivism Monitor procedure. According to the Recidivism Monitor, recidivism is defined as the registration of a punishable offence (by an ex-offender) in the Judicial Documentation. There are a number of set criteria for the measurement of recidivism. In this study four criteria are applied: general recidivism, traffic recidivism, drink-driving recidivism and EMG related recidivism. General recidivism refers to when a person is convicted of any new offence. This can be a traffic offence, such as drink-driving, but can also refer to another kind of offence, for example theft or assault. Traffic recidivism refers to when a person comes back into contact with the justice system having committed a traffic offence. Traffic offences can be crimes, such as drink-driving or hit-and-run...
accidents, but can also refer to misdemeanours registered in the judicial documentation like serious speeding or driving without insurance. Behaviours that fall under the Traffic Regulations Administrative Enforcement Act (in Dutch: Wet administratiefrechtelijke handhaving verkeersvoorschriften [Wahv], also known as Wet Mulder), so-called Mulder offences, do not count when determining traffic recidivism. Examples of Mulder offences are light speed violations and ignoring a red light. Drink-driving recidivism refers to when a person is reconvicted of drink-driving. EMG related recidivism concerns behaviours which have been identified as risky as listed in the appendix to the Regulation on fitness-to-drive and driving ability tests 2011 (in Dutch: Regeling maatregelen rijvaardigheid en geschiktheid 2011). These can be both offences that are registered in the OBD and Mulder offences. For the EMG-related recidivism, it is not relevant whether such behaviour is shown only once or repeatedly within one occasion (and therefore one would again be eligible for an EMG); each new risky behaviour qualifies as an EMG-related repeat offence.

This study focuses on participants who had a measure imposed for an offence committed in 2015 at the latest. Drivers who participated in the LEMA and were pulled over due to a driving-under-influence offence in the period 2009 to 2015 were included in this study, as were participants in the EMA or a fitness-to-drive test who were pulled over due to a driving-under-influence offence in 2015. In addition, recidivism by persons who committed an ASP worthy offence between 2012 and (September) 2014 is also examined. A distinction is made between repeat offences committed during the programme and repeat offences occurring after the programme has been completed. Finally, participants who committed an EMG related offence in the period 2009 to 2015 were examined.

The impact assessments for the EMA, the ASP and the EMG were based on the most recent (full) year in which the participants’ repeat offences could be measured. For the EMA and the EMG this is 2015, for the ASP 2013. For the purpose of the impact assessments, control groups were established, consisting of persons who committed a ‘measure worthy’ offence in the same period, but for whom no notification to the CBR was made for this. ‘Measure worthy’ offences are (combinations of) offences on the basis of which one is eligible for imposing the relevant measure. According to Article 130, paragraph 1, of the Road Traffic Act 1994 (in Dutch: Wegenverkeerswet 1994 [WVW 1994]), the police must inform the CBR if there is a suspicion of poor driving fitness or driving ability. However, practice shows that, in the past, this did not always happen. This irregularity is being put to use in the current study; persons who did not receive a measure, but who would have been eligible for it as a result of the offence committed, are assigned to a control group.

By examining the influence of participation in the EMA, the ASP or the EMG on the level of drink-driving or EMG related recidivism, taking into account possible differences between the groups with regard to their backgrounds, the effectiveness of the measures in reducing recidivism in their target group can be judged. With the help of a statistical model, the influence of the composition of the research groups on the level of recidivism can be separated from the influence of participation in the measure. In this way, we can check whether participation in an EMA, an ASP or an EMG is associated with a lower recurrence, regardless of the influence of differences on measured background characteristics between the participants and the control groups.
Main findings

LEMA

- **Background characteristics.** Most LEMA participants are male (82%) and born in the Netherlands (85%). On average they were 36 years old when caught for the driving-under-influence offence that led to participation in the LEMA. About a quarter of the LEMA participants (23%) were previously convicted of drink-driving.
- **Recidivism.** Just under 7% of LEMA participants relapsed within two years with a drink-driving offence.
- **Effectiveness.** The effectiveness of the LEMA was not the subject of investigation in this report: This has previously been reported on in 2017 (Blom, Blokdijk & Weijters, 2017). The most important conclusion of the report into the effectiveness of the LEMA was that that the LEMA was not demonstrated to lead to a reduction of the drink-driving recidivism among its target group.

EMA

- **Background characteristics.** The majority of the EMA participants are also male (88%) and born in the Netherlands (85%). On average they were 38 years old when caught for the driving-under-influence offence that led to participation in the EMA. Almost half (45%) of the EMA participants had previously come into contact with the justice system for drink-driving.
- **Recidivism.** Of the EMA participants, 7% relapsed within two years with a drink-driving offence.
- **Effectiveness.** The EMA appears to contribute to the prevention of drink-driving recidivism. If the chance of recidivism by two people – one who was tried only in accordance with criminal law and one who also participated in an EMA, but who are otherwise the same on all other characteristics – is compared, within a period of two years, the chance of drink-driving recidivism by the EMA participant appears to be two percentage points lower (7% versus 9%). This difference is statistically significant.

ASP

- **Background characteristics.** ASP participants are mainly male (85%) and born in the Netherlands (84%). Furthermore, ASP participants were on average 37 years. About a third (34%) have previously been convicted of drink-driving.
- **Recidivism.** Since the ASP lasts at least two years, both recidivism during the programme and recidivism after the programme has been considered. During the programme, almost 1 in 100 participants is pulled over and reconvicted of drink-driving. The percentage of drink-driving recidivism in the first two years after completing the ASP is 4%.
- **Effectiveness.** The ASP appears to contribute to the prevention of drink-driving recidivism, not only during the programme, but also after the removal of the interlock device. If the chance of recidivism by two people – one who was tried only in accordance with criminal law and one who also participated in an ASP, but who are otherwise the same on all other characteristics – is compared, within a period of two years, the chance of drink-driving recidivism by an ASP participant appears to be four percentage points lower (4% versus 8%). This difference is statistically significant.
Fitness-to-drive test

- **Background characteristics.** Most participants in the fitness-to-drive test are male (89%), three-quarters were born in the Netherlands (75%) and on average they were 37 years old. A majority (56%) have previously been convicted of drink-driving.
- **Recidivism.** Of the participants in 2015, 8% were reconvicted for drink-driving within two years.
- **Effectiveness.** No effect study was carried out for the fitness-to-drive test, since the purpose of this measure is to determine whether someone is capable of driving a motor vehicle and not to prevent recidivism.

EMG

- **Background characteristics.** The EMG is intended for people who are pulled over for risky driving behaviour. About half of the group received an EMG for a speed violation of 50 km/h or more in built-up areas. In addition, 41% received an EMG for speeding in combination with a different type of EMG related offence. Only 9% received an EMG due to risky behaviours other than speeding. The majority of EMG participants are male (97%) and born in the Netherlands (89%), and on average they were 30 years old when they committed the EMG offence. EMG participants have an extensive history of EMG related offences: on average, 3.7 EMG related offences were committed in the five preceding years.
- **Recidivism.** Of the EMG participants, almost half (49%) is reconvicted within two years for a new EMG related offence. This percentage is much higher than in previous reports (see, for example, Blom et al., 2017). This is due to the fact that, in the current study, EMG related Mulder offences are included in calculating EMG recidivism. Previous research only included offences that were dealt with within criminal law.
- **Effectiveness.** Given the existing registration systems and the information available for this research, it was only possible to carry out an effect study for EMG participants who had an EMG imposed as a result of a speed violation within the built-up area of 50 km/h or more. A valid control group could not be established for the other groups of EMG participants. The effect measurement shows that the EMG for this group of speed offenders does not appear to be effective in preventing EMG related recidivism. The reconviction rate of the experimental group did not statistically significantly differ from the reconviction rate of the control group.

Limitations and recommendations

There are a number of limitations that we have encountered in this study that should be mentioned. For example, it was not possible to establish a control group based on random assignment. Therefore, control groups were established that were as similar as possible to the groups that had participated in the measures in question. Persons who committed a ‘measure worthy’ offence, but for whom no notification was made to the CBR, were selected for the control groups. The question remains whether those who were not referred to the CBR are a selective group. However, there is no indication of regional differences in notifications by the police to the CBR (Blom, Blokdijk & Weijters, 2017). Furthermore, we controlled for differences in measured background characteristics, including offence history,
between the groups. This did not lead to an adjustment of the conclusions of our study.

To establish the control groups, information was required that was recorded in various (sometimes overlapping) information systems. Problems arose due to data about the offence for which someone was eligible for participating in a certain measure, either not being sufficiently detailed or requiring a lot of manual processing. Improvements in the way in which data is recorded would ensure questions relating to traffic offences can be more comprehensively answered in the future.

The question of the effectiveness of the EMG could have been more comprehensively answered if more detailed information relevant to the study had been available. In the current study it was only possible to establish a control group for drivers who committed a speeding violation of at least 50 km/h within built-up areas (or at least 31 km/h in the case of mopeds or road works). This means that the results of the effect measurement only apply to drivers who participated in the EMG as a result of such a speeding violation. In this study, no statement could be made about the effectiveness of the EMG for perpetrators of (combinations of) other EMG related offences.

When determining the effectiveness of the EMG, the effect on the prevention of EMG related recidivism was considered. For the calculation of EMG related recidivism, Mulder offences by EMG participants are linked to their traffic penalty cases registered in the OBJD. Liability in Mulder Act offences lies with the vehicle owner rather than the driver. This means that the administrative sanction, if the identity of the driver cannot be established immediately, is imposed on the vehicle owner. Even under criminal law, if the driver remains unknown, the vehicle owner can be held liable. This means that in the current investigation, the EMG related recidivism does not necessarily give a picture of the EMG related offences committed by persons in the research group, but of the offences committed with a vehicle in their name and for which they are responsible. Equally, it is also possible for traffic violations committed by persons in the investigation group to be credited to someone else, if the vehicle with which the violation was committed was not registered in their name. A nuance in this regard is that robustness analyses that only looked at cases where the suspect was pulled over (i.e., where the identity of the driver was known) showed the same result, namely, that the EMG showed no effect on recidivism. This study investigated the effectiveness of the various measures with recidivism as the outcome measure. A major reason for introducing the traffic behaviour measures was to improve road safety and to prevent accidents. It is therefore advisable to conduct research into the effectiveness of the various traffic behaviour measures with road accidents as the outcome measure.

**Conclusion**

It is encouraging that the EMA and the ASP seem to contribute to the prevention of drink-driving. It is particularly interesting that in this study the ASP shows a positive effect on the occurrence of drink-driving after completing the programme. Previous international overview studies on the effect of alcohol interlock programmes showed that the effect of such programmes seemed to be limited mainly to the period that the interlock device was in place. After the removal of the interlock device, the effect often seemed to fade away.

All in all, the results of the current study seem to indicate that the imposition of an educational measure or an alcohol interlock programme are useful sanctions when it comes to reducing driving-under-influence recidivism in the Netherlands.