Evaluation of the interlock programme for DUI offenders in Finland

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Abstract

Background
Finland started a trial with alcohol interlocks for DUI offenders in 2005. The positive experiences of the three-year trial led to an Act that allows the offenders to choose an interlock in their vehicle instead of facing a driving ban.

Aims
The aim of the evaluation study was to find out how the process of interlock-monitored driving rights is working and how effective it is in preventing DUI, as well as to get direct feedback from the drivers.

Methods
The study includes a questionnaire to all the drivers taking part in the permanent interlock program since July 2008 (N=1569), an analysis of the DUI offences of the drivers before, during and after the interlock period, an analysis of their interlock log data (read out every 60 days) and interviews with the relevant authorities within the process. The period of the evaluation study was July 2008 – June 2012.

Results
Alcohol interlocks used in the controlled driving rights have prevented at least 12 000 instances of driving while intoxicated since July 2008. The recidivism rate of interlock users is significantly smaller (5.7%) than that of all persons convicted of driving while intoxicated (around 30%), also after removing the device from the vehicle. 64% of the interlock driving licence holders told that the interlock affected the use of alcohol for them. Out of these drivers 19% had stopped drinking for good and 44% drink less nowadays, as the interlock has supported them in the process. 31% of the drivers told that they have kept or are going to keep the interlock in their vehicle even after having completed their mandatory period with it.

Discussion and conclusions
Despite the positive feedback and promising results on DUI prevention, several shortcomings were identified in the process of alcohol interlock-controlled driving rights in Finland. It is crucial to eliminate these shortcomings to make alcohol interlock use more common, with the positive effects on traffic safety it entails.

Introduction
In Finland during the years 2007–2011 yearly on average 79 people died and 900 were injured in road traffic accidents related to driving while intoxicated. These figures represent a quarter of all road traffic accident casualties and one tenth of all injuries sustained in road traffic accidents.

An alcohol interlock is a piece of equipment that measures the alcohol content of a driver's exhalation, and prevents starting of the vehicle if the permitted limit is exceeded. This study examined the effectiveness and impact of alcohol interlock-controlled driving rights. In
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Finland, alcohol interlock-controlled driving rights were taken into permanent use on 1 July 2008, based on the positive experiences gained during a three-year trial.

A driver caught drinking under the influence of alcohol (≥ 0.5 %), may apply for an interlock driving licence from the police, instead of being imposed a driving ban. Before the interlock driving licence is issued, the driver needs to visit a doctor or another health care professional to discuss the intoxicant use, its effects on health and also the treatment possibilities for substance use.

The court decides the length of the interlock supervision period for each driver that applies for the interlock driving licence. The minimum length is one year, the maximum is three years. The obligation to drive a vehicle equipped with an interlock is marked with national code 111 on the driving licence.

In addition to the initial breath sample to start the vehicle, the device asks for random re-tests throughout the drive. The driver has up until 6 minutes to give the breath sample for a re-test. Furthermore, the driver needs to take the interlock to a read-out of the log data every 60 days. The licence administration of the police follows up the data.

Materials

Surveys
All the holders of an interlock driving licence (N=1569) were sent a survey by mail. E-mail surveys were sent to a few police departments and district courts and also to all interlock importers. Additionally one physician specialized in treating so-called problem drinkers was interviewed.

Log data analysis
The interlock log data was analysed out of one interlock model, which has about 86% share of the market in Finland. As there is no common register for the log data yet, the form of the data that is stored of the three interlock models is not uniform. That is why this study, with limited resources for data handling, included only the most common interlock model for log data analysis.

Violations data
All the DUI violations of the interlock driving licence holders were analysed before, during and after their use of the interlock. The violations data was extracted from the Driving Licence Register under the Finnish Traffic Information System.

The population

The average age of the interlock driving licence holders was 51 years. The youngest driver was 20 years old, the oldest 82. 84% of the drivers were male. One third of the drivers were workers on their employment status.

24 of these drivers had died since they were issued an interlock driving licence. Alcohol-related causes of death (37.5%) and suicides (16.7%) were much more prevalent among persons with interlock driving licence than in the general population (alcohol-related causes 3.7% and suicides 1.8%).

The survey for interlock driving licence holders
The response rate on the survey was 45.5% (685) of the Finnish-speaking drivers and 29.3% (19) of the Swedish-speaking drivers (total 704 drivers).

Persons convicted of driving while intoxicated perceived the alcohol interlock in varying ways. At one end of the spectrum, the alcohol interlock was viewed as a problem, a nuisance in everyday life and a shameful reminder of driving while intoxicated. At the other extreme, the alcohol interlock was considered a helper, an aid in life management and a safe travel companion, which prevented further mishaps. A tenth of all drivers concealed the existence of the alcohol interlock from everyone but their own family, and a few drivers even concealed it from their families.

*Effects on alcohol consumption*

However, the answers from the interlock users showed promising results on alcohol consumption. The majority of respondents (64%) said that the alcohol interlock had affected their alcohol use. Most drivers stated that they had reduced drinking. The respondents drank less or less often, or switched stronger drinks for milder. Several drivers said that the alcohol interlock had made them stop drinking before driving.

One-tenth of the respondents explained they had stopped drinking altogether, and that the alcohol interlock had motivated them in this decision. The alcohol interlock process also had a therapeutic, helping effect on some drivers, as they received professional and peer support.

![How did the alcohol interlock affect alcohol use?](image)

One third (31%) of the drivers told that they have kept or are going to keep the interlock in their vehicle even after having completed their mandatory period with it. Out of all the respondents 63% stated that interlock is very necessary and 25% that it is quite necessary for all DUI offenders.

*Best things about using an interlock*

The interlock users were also asked to share the best and worst things about using an interlock. Keeping one's driving rights was felt to be the largest benefit of alcohol interlock-controlled driving rights (95% of all the respondents). As it was possible to choose several
options, more than half (58%) of the drivers also appreciated the certainty that they would not accidentally set out intoxicated. One-third of the drivers kept their jobs thanks to the alcohol interlock. The emphasis on traffic safety was also valued (28%).

Free-form answers listed getting sober as a benefit of the alcohol interlock, as well as the fact that the interlock “teaches one to think” and reminds of “the dangers of the drink”. Some drivers viewed the alcohol interlock as a friend and travel companion: “I drive a Renault and I've named the alcohol interlock Pierre. Pierre tells me when it’s safe to drive. Above all, the alcohol interlock is a health instrument and a friend.”

Worst things about using an interlock
The drivers perceived waiting for the device to warm up (59% of all the respondents) and the expenses (57%) as the worst aspects of using an alcohol interlock. Almost half (54%) of the respondents considered exhaling while driving to be unpleasant, and many felt it to be a safety hazard, especially in a tight spot. The interval of re-exhalations was felt to be too frequent and, conversely, the restart interval too short. Exhaling in public was felt to be awkward by 43% of the respondents. Many also described the attitude of outsiders as suspicious or negative.

Recidivism
More than half of the drivers had been convicted of driving while intoxicated several times before applying for an alcohol interlock-controlled right to drive.

Of all the drivers, 3.3% were caught driving while intoxicated during their period of alcohol interlock-controlled driving rights (most likely with another vehicle, not fitted with an interlock). After the end of the interlock supervision period, 2.5% of the drivers were caught driving while intoxicated.

Thus, a total of 5.7% of the drivers were caught driving while intoxicated during and/or after their period of alcohol interlock-controlled driving rights. The recidivism rate of alcohol interlock users seems to be significantly smaller than that of all persons convicted of driving while intoxicated. Generally the recidivism rate in Finland is around 30%.

Log data
The interlock log data was analysed out of 1505 interlocks used by the DUI offenders. Based on the log data, interlocks used in controlled driving rights have prevented at least 12 000 instances of driving while intoxicated (≥ 0.5‰) since July 2008 in Finland. Overall the interlocks have prevented over 40 000 times a driver who had “had a few” (≥ 0.2‰) to start a vehicle for driving (the number includes also the cases with ≥ 0.5‰).

Most of the rejected initial exhalations did happen on Monday mornings. However, all the mornings were well represented, as well as the afternoons (12–18 o’clock) on Saturdays and Sundays.
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Figure 2. Rejected initial exhalations by weekday and time of day.

Recommendations

There are several development recommendations formulated as an outcome of the evaluation study. Most of the recommendations focus on the process of the national interlock program for the Finnish DUI offenders: 1) Driving bans ordered for driving while intoxicated should be lengthened to equal the length of the probationary period of controlled driving rights, and also to make to interlock driving licence more appealing to the offenders; 2) A normal driving licence should be restored to the driver only once the alcohol interlock's log data is found to contain no rejected exhalations in the past six months; 3) A health care professional should evaluate each individual's need for discussion sessions, e.g. from one to three sessions; and 4) A short driving ban before receiving alcohol interlock-controlled driving rights should be considered for all persons caught driving while intoxicated.

Furthermore, the outcomes of the study speak for 1) More communication on alcohol interlocks and alcohol interlock-controlled driving rights; 2) Clarifying instructions drawn up on alcohol interlock-controlled driving rights for district courts, police departments and health care professionals; 3) A log data register defined and maintained by the authorities to store the decoded log data of all alcohol interlock manufacturers or their representatives in a uniform format; and 4) Device manufacturers and importers improving the user instructions of alcohol interlocks and continuing technical development to alleviate problems related to, e.g. exhalations and warming up.

Conclusion

Alcohol interlocks used in controlled driving rights have prevented several thousand (12 000) instances of driving while intoxicated since July 2008. The recidivism rate of alcohol interlock users is significantly smaller than that of all persons convicted of driving while intoxicated. 64% of the interlock driving licence holders told that the interlock affected the use of alcohol for them. One-tenth had stopped drinking altogether. One third of the interlock users are keeping the device in their vehicle even after the supervision period is completed.
To sum up, the experiences and feedback on the use of interlocks, and their effectiveness on DUI prevention, traffic safety and also on harmful alcohol consumption is very promising. However, several shortcomings were identified in the process of alcohol interlock-controlled driving rights. It is crucial to eliminate these shortcomings to make alcohol interlock use more common, with the positive effects on traffic safety it entails.

References