



BRSI

Drinking and driving ... Do we do it too much?

National behavioural survey “Driving under the influence of alcohol” 2015

Summary

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Summary

► Context and objectives

In any country, driving under the influence of alcohol is a major source of unsafety. Several Belgian and international studies show that drink driving is relatively frequent on Belgian roads. To monitor this issue, the Belgian Road Safety Institute regularly carried out national measurements of the prevalence of driving under the influence of alcohol since 2003. The objective of these measurements is also to determine the characteristics of the drivers who drink and drive and to monitor the evolution of these characteristics throughout the years. The present report presents the results of the 6th edition realised in 2015.

► Methodology

The approach consists of randomly submitting drivers to an alcohol test with the aim of obtaining a representative image of driving under the influence of alcohol. The behavioural measurements are performed in collaboration with the local and federal police services who are asked to carry out a certain number of alcohol checks following specific instructions. In order to guarantee the representativeness of the results, the place and the period of the controls were randomly selected by the BRSI. The police checks are performed in an arbitrary way (in other words, no objective or subjective criterion is applied to determine which drivers are submitted to a breath test).

The study is focused on car and van drivers. The stopped drivers are submitted to a standard alcohol test that can result in three possible results: “Safe”, “Alarm” or “Positive”. If the result is “Alarm” or “Positive” » the driver exceeds the legal limit¹ and is consequently submitted to a breath analysis to determine his exact degree of alcoholic intoxication. All the stopped drivers, whether they are under the influence of alcohol or not, are also submitted to an individual (anonymous) questionnaire prepared by the BRSI and intended to gather various information on the driver and his journey.

The main indicator used for the analyses is the percentage of drivers under the influence of alcohol (DUI) (“percent driving under the influence”»). Are considered “under influence” all drivers whose alcohol blood level is superior or equal to 0.22 mg per litre of exhaled air (EAA). The threshold of 0.35 mg/l EAA is used to identify the most intoxicated drivers.

	Alcohol concentration in the exhaled alveolar air (AAC)	Blood alcohol concentration (BAC)
S – Safe	AAC < 0.22 mg/l	BAC < 0.5 g/l
A - Alarm	0.22 mg/l ≤ AAC < 0.35 mg/l	0.5 g/l ≤ BAC < 0.8 g/l
P - Positive	AAC ≥ 0.35 mg/l	BAC ≥ 0.8 g/l

Drivers under the influence of alcohol (DUI)

In order to obtain results representative of Belgium as a whole, the data are weighted according to the length of the road network in every region, the period and the duration of the alcohol check session and the traffic volume.

The field work of this edition of the behavioural measurement took place from 20 April to 31 May 2015. 154 police units participated in the measurement (out of 202² in total) and carried out 596 police checks in total. Data were gathered from 12.372 drivers, 11.180 car drivers and 1.125 van drivers.

► Main results

In order to be able to follow up the evolution of driving under the influence of alcohol since the first edition of the measurement in 2003, and since the participation of vans in the study only dates from 2012, the analyses were made separately for car drivers and van drivers. The following paragraphs only concern car drivers. They are followed in turn by a paragraph dealing with van drivers.

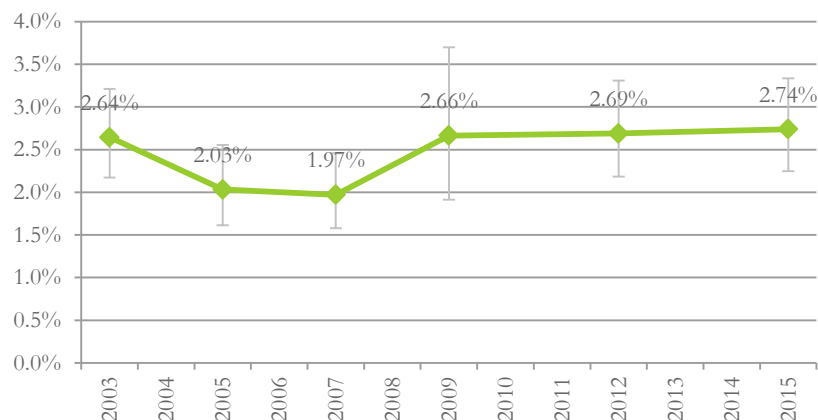
¹ In Belgium, the maximum blood alcohol level is 0.22 mg/litre of exhaled alveolar air or 0.5 g/litre of blood.

² 193 local police zones 9 road federal police units

The 2015 edition of the behavioural measurement “Driving under the influence of alcohol” reveals that 2.7% of the stopped car drivers had a blood alcohol level above to the legal limit (0.22 mg of alcohol per litre of exhaled alveolar air or 0.5 g of alcohol per litre of blood). By comparison, values of around 0.3% are observed in Finland and in Norway (countries known to perform well).

The prevalence of 2.7% is not significantly different from the prevalence observed in 2009 and 2012 (2.7% for both studies), and is even higher than the results obtained in 2007 (2.0%). Furthermore, the share of highly intoxicated drivers (more than 0.35 mg or more than 0.8 g/litre of blood) among offenders also increased (from 55% in 2007 to 69% in 2015). Half of the offenders had a blood alcohol level of nearly 1 g/litre of blood. This 6th edition of the behavioural measurement points out an alarming upward trend of driving under the influence of alcohol on Belgian roads.

Evolution of the global prevalence of driving under the influence of alcohol for car drivers



This increase of driving under influence (DUI) is particularly pronounced in the Walloon region, where the prevalence increased from 2.2% in 2007 to 3.9% in 2015. The figures are a little more stable in the Flemish region (from 1.6% to 1.9%). The south of the country already showed a higher prevalence than the north in the previous editions. The difference between both parts of the country increased further in 2015, resulting in a DUI rate two times higher in Wallonia than in Flanders.

The prevalence of DUI on weekend nights has not fundamentally changed throughout the editions of the behavioural measurement. This period is associated with the highest frequency of DUI with a rate of around 12% in 2015. This value is a lot higher than that registered in - for instance - the Netherlands (1.8%). The situation is also alarming for the week nights: the prevalence of DUI has been gradually increasing for some years, from 3.6% in 2007 to 8.8% in 2015. This period reaches values close to the values registered in weekend nights. Hence, we cannot state any longer that more car drivers drive under the influence of alcohol on weekend nights than on week nights. This means that we have to take specific preventive measures for all the nights (both during the week and during the weekend). A supplementary argument for this is that 42% of the intoxicated drivers were observed during those two periods. DUI is much less prevalent (less than 2.7%) during week and weekend days. However, these periods should not be neglected in terms of awareness-raising and enforcement: the prevalence of DUI has not decreased since the first edition of the measurement in 2003. Moreover, these periods account for 58% of all car drivers under the influence and for almost 90% of the traffic.

The general increase of DUI between 2007 and 2015 is entirely due to the male drivers. This evolution is all the more alarming since men already drove more often under influence than women in 2007. In 2015, 3.7% of men exceeded the blood alcohol level at the wheel, versus 1.0% of women. All factors being similar (person of the same age, same time slot, same origin, same driving experience and same number of passengers), the probability a man drives under the influence of alcohol is 3 times higher than for a woman. The larger propensity for men to drive under the influence of alcohol is a permanent feature in the different international studies on driving under influence but it appears that the difference between the two genders is more important in our country. Observing a high DUI rate for men is all the more prejudicial for road safety since they drive more often than women. Men remain undeniably a target group if we want to diminish drinking and driving.

As far as age is concerned, a tendency (not significant for the moment) seems to appear. It divides the drivers' community in two groups: the 40-54 age group whose DUI rate is stable in comparison with 2007 (and decreasing compared to 2003) and the other groups, the youngest (18-39 years old) and the oldest (55 years old and more) for whom DUI is increasing. The 40-54 age group was till then the group that was the most under the influence, so for this group the evolution is rather positive. We can conclude from these opposite tendencies that the prevalence of driving under influence does not now vary any more according to the age of the driver. All the categories register a DUI rate between 2.3% and 3.0%. If targeting the young drivers remains relevant because of the important increased risk of accident caused by the alcohol consumption, we must keep in mind that this age group (18-25 years old) only represents 11% of the drivers under influence, or a proportion comparable to what it represents in the entire driving population. The 26-54 age group represents 66% of the drivers under influence and the 55 and more age group 23%. International studies confirm a tendency (not significant) also present in our country: on weekend nights, contrary to the common preconception, the youngest drivers are less often under the influence than the other age groups. The 25-35 age group is the one for which the DUI rate is the highest. So, it is justified to carry out actions intended for all the age groups.

It is not easy to discern clear tendencies related to the evolution of DUI according to trip origin because the confidence intervals are often very large. A single evolution is statistically significant and is not positive: the DUI rate goes up from 3.0% in 2007 to 6.3% in 2015 for drivers who have just paid a visit to a friend or a member of their family. These drivers represent only 11% of the sample (that is to say of the traffic) but they count for a quarter of the drivers under influence. It is a new target group concerning alcohol behind the wheel. As for the previous editions, drivers coming from a restaurant, pub or club drive most often under the influence of alcohol (15%). In total, 28% of the drivers under influence registered in this behavioural measurement came from a catering establishment. Good point nevertheless: during the week, only a small share of all drivers come from these establishments (4.3% of the traffic). Finally, there are drivers coming from their home or their workplace: even though they rarely drive under the influence of alcohol (1.1%-1.2%), they nevertheless represent a large majority of the traffic (66%). As a result, the absolute number of drivers under influence in this group is rather high. In this study, 28% of the drivers under influence left their home or their workplace. Measures against alcohol behind the wheel only targeting places of entertainment would only tackle a part of the DUI issue.

Contrary to what was previously observed, the duration of the travel is no longer a significant factor for the probability to drive under influence in 2015. The tendency shows nonetheless that the longest trips remain associated with a lower prevalence of DUI. Also, as in 2012, the number of alcohol checks the drivers had been submitted to in the past was not significantly associated with the prevalence of DUI. And as in 2012, the number of passengers transported has no influence on DUI. Even transporting a child does not diminish DUI.

As in 2012, a part of the behavioural measurement was devoted to van drivers. 1.7% of them exceeded the maximum blood alcohol level. Unfortunately, the sample of van drivers was too small and resulted in too large confidence intervals. As a result, the prevalence of DUI for van drivers is not significantly different from the edition of 2012 (3.8%) and is not significantly different from that noted for car drivers. Also, few factors seem to have a significant influence on DUI. The tendencies are however similar to what was observed for cars (age, sex, region, period, origin, etc.).

► Recommendations

The results mentioned above show that several indicators have to be taken into account in order to tackle alcohol behind the wheel by focussing on particular groups, places and periods:

- The (relative) prevalence of driving under the influence: among the drivers of a specific category, what percentage exceeds the legal blood alcohol limit?
- The absolute number of drivers under the influence: given the total traffic volume, what category includes the largest absolute number of drivers under influence?
- The importance of the increased risk of accidents caused by alcohol consumption: for a same quantity of alcohol in the blood, what category of drivers is more likely to be involved in a road accident?

To decide what kind of measures must be taken in order to reduce the number of accidents and victims due to driving under the influence, we must simultaneously take three indicators into consideration: relative prevalence, absolute prevalence and impact in terms of accidents.

In order to solve the problem of DUI, the broader context of the phenomenon has to be taken into account. The following measures should be taken:

1. Reduce the problems of excessive alcohol consumption in the total population
2. Reduce the legal blood alcohol level
3. Prevent drinking and driving
4. Increase the (effective and felt) probability of being checked
5. Adopt an integrated approach

Given the results of this behavioural measurement and the present Belgian context related to the fight against driving under influence in Belgium, the BRSI concretely recommends to:

1. Provide the police zones with the means to increase the number of alcohol checks (generalisation of the use of “sampling”³).
2. Be sure that the controls not only target the risky groups, places and periods in order to guarantee objective and subjective risks of being controlled everywhere and anywhere.
3. Stimulate judges to sentence recidivist drink drivers to the use of an alcolock⁴.
4. Keep on raising awareness amongst all drivers, as driving under the influence affects all the categories of drivers. Alcohol behind the wheel cannot only be eradicated by aiming at specific populations or contexts.
5. Pay specific attention to male drivers, to drivers who have just visited family or friends and to young drivers.
6. Change the social norm through awareness-raising measures focussed at the social context.
7. Increase the quality and the availability of data on driving under the influence (results of the alcohol checks performed by the police, consistent application of the principle “Bumping is blowing”, according to which every driver involved in an accident must be submitted to an alcohol test) in order to correctly quantify driving under the influence. This would allow to evaluate the link between the blood alcohol level, the driver’s profile and the accident risk.
8. Keep on regularly evaluating the DUI prevalence on the Belgian roads by means of behavioural measurements in order to assure the recommended long term strategy is followed.

³ Small device used to carry out a quick pre-test of the presence of alcohol in the car or in the driver’s breath before using the breathalyser if needed.

⁴ The systematic use of alcolocks for the transport of people and for the recidivists was recommended by the latest General Assembly on Road Safety.



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