



Doctors for Road Safety

A Position Paper on Drink-driving in Malta

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Executive Summary

1. The World Health Organization considers drink-driving (driving under the influence of alcohol) to be one of the key risk factors for road traffic deaths. Around 25% of all road fatalities in Europe are alcohol related. The risk of crash involvement is almost twice (1.83 times) greater at a BAC of 0.05 g/dl than at a BAC of zero.
2. Road fatalities in Malta have increased by 46% over the period 2010-2017 as opposed to the average 20% decrease across the EU. The consistency of a recent downward trend in road fatalities in Malta remains to be ascertained.
3. While the legal limit of blood alcohol concentrations in drivers has been revised downwards to comply with EU levels, Maltese law still allows loopholes whereby drivers under the influence of alcohol may evade prosecution.
4. Local data on the effects of drink-driving on road accidents is sparse. Roadside alcohol breathalyser testing by the Malta Police reveals a high level of positive tests (64-78%) out of those tested on 'reasonable suspicion' of driving under the influence of alcohol. The total number of tests done per year remains however still low compared to EU.
5. The Malta Road Safety Strategy 2014 and the National Alcohol Policy 2018-2023 have come up with important recommendations to address drink-driving, some of which have been implemented. Other very valid recommendations have not been implemented yet.
6. Doctors for Road Safety outlines policy recommendations and proposals to address the identified issues. These include increased enforcement of drink-driving legislation, retraining of law enforcement officers in related procedures, testing of blood alcohol levels in all road traffic accidents with police involvement where there is bodily injury, and improved collection of data on drink-driving that feeds into policy-making. Doctors for Road Safety also advises caution around the use of commercial personal breathalysers.

The role of alcohol in road traffic accidents

The latest edition of the WHO Global Status Report on Road Safety indicates that there were 1.35 million road traffic deaths worldwide in 2018, with road traffic accidents being the primary cause of death for children and young adults aged 5-29 years¹.

Numerous studies have shown that drinking is a major factor for mortality in road traffic accidents²⁻⁴. The World Health Organization considers drink-driving to be one of the key risk factors for road traffic deaths¹.

The extent to which alcohol contributes to road traffic crashes varies between countries and direct comparisons are difficult to make. In many high-income countries about 20% of fatally injured drivers have excess alcohol in their blood (i.e. above the legal limit). Studies in low-income countries have shown alcohol to be present in between 33% and 69% of fatally injured drivers (WHO, 2004). Around 25% of all road fatalities in Europe are alcohol related (European Road Safety Observatory, 2015).

A case-control study known as the Grand Rapids study carried out in 1964⁵, concluded that drivers who had consumed alcohol had a higher risk of involvement in crashes than those with a zero blood alcohol concentration (BAC) and that this risk increased rapidly with increasing BAC. These results provided the basis for the future setting of legal blood alcohol limits and breath content limits in many countries around the world, typically at 0.08 g/dl⁶.

In 1981, an Australian study found that the risk of crash involvement was 1.83 times greater at a BAC of 0.05 g/dl than at a BAC of zero⁷, emphasizing the fact that even BAC levels that are legally permissible in some countries are associated with a significantly higher likelihood of road traffic accidents. Similarly, re-analysis of the Grand Rapids data by Hurst, Harte and Frith in 1994 also concluded that the risks associated with lower BAC levels were greater than originally thought⁸. This information, together with findings from behavioural and experimental studies⁹, provided a justification for many countries to further reduce their legal BAC limits to 0.05 g/dl.

The effects of alcohol on the body

Concentrations of blood alcohol above 0.053g/dl produce an uncritical euphoric state and an increased sense of security. Drivers are more likely to drive fast and recklessly and to overtake carelessly. Speed is incorrectly assessed when under the influence of alcohol¹⁰. Recognition and detection of objects in motion are weaker. The time delay between identifying an event and executing an operation is longer, resulting in delayed reaction times on the road¹⁰. At higher blood alcohol concentrations, deterioration in cognitive ability, coordination, muscle control and balance result in significant impairment of crucial aspects of safe driving including vehicular control, ability to maintain lane position and attention to driving task¹¹.

The tables below show the approximate alcohol level in the blood after drinking alcohol, depending on body weight (not taking into account other factors such as food consumption, medical conditions, medications and genetics which also influence blood alcohol levels). They indicate that even after one or two drinks, blood alcohol concentration may reach levels at which driving skills are impaired. This is the basis for Doctors for Road Safety’s stance that there is no ‘safe’ amount of alcohol that can be consumed if one is driving.

MALE: Approximate Blood Alcohol Concentration – BAC (mg/dl)									
Body Weight	45	54	64	73	82	91	100	109	Kg
0 drinks	0	0	0	0	0	0	0	0	SAFE
1 drink	40	30	30	20	20	20	20	20	IMPAIRED
2 drinks	80	60	50	50	40	40	30	30	UNSAFE ! Criminal Penalties
3 drinks	110	90	80	70	60	60	50	50	
4 drinks	150	120	110	90	80	80	70	60	
5 drinks	190	160	130	120	110	90	90	80	
Subtract 10mg/dl for each 40 minutes elapsed since starting drinking									

FEMALE: Approximate Blood Alcohol Concentration – BAC (mg/dl)									
Body Weight	45	54	64	73	82	91	100	109	Kg
0 drinks	0	0	0	0	0	0	0	0	SAFE
1 drink	50	40	30	30	30	20	20	20	IMPAIRED
2 drinks	90	80	70	60	50	50	40	40	UNSAFE ! Criminal Penalties
3 drinks	140	110	110	90	80	70	60	60	
4 drinks	180	150	130	110	110	90	80	80	
5 drinks	230	190	160	140	130	110	110	90	
Subtract 10mg/dl for each 40 minutes elapsed since starting drinking									

Figure 1 – Approximate Blood Alcohol Concentration according to body weight and number of drinks consumed.
Source: Understanding Blood Alcohol Content’, St. John’s University, Minnesota¹²

Disclaimer: These are average values. It is not possible to know the BAC exactly in each case because of the various factors described above. Thus use these charts with caution or if necessary seek appropriate help.

Based on: **1 drink = 350 ml beer (5% alcohol) = 235 ml strong beer (7% alcohol) = 150 ml wine (12% alcohol) = 45 ml spirits - 1 shot (40% alcohol)**

Local road traffic accident statistics

The overall trends for of grievous injuries and fatalities from road traffic accidents in Malta show no signs of declining (Fig. 2; Fig. 3), despite a commitment by the authorities in the Road Safety Strategy 2014-2024 to achieve a “50% reduction in fatalities” and a “30% reduction in grievous injuries” by 2024. Malta was the only EU country which reported an *increase* in road fatalities between 2010 and 2017 (an increase of 46%, in contrast with the EU average of a *decrease* of road fatalities by 20%)¹⁷.

More recent data issued by the European Commission in June 2020, showed that while deaths on EU roads decreased by an average of 23% over the last decade, only Malta and the Netherlands registered an increase in deaths on their roads in 2019 as compared to 2010¹⁸. One has yet to see if the downward trend in road fatalities over the more recent years in Malta remains consistent (there have been already 11 fatalities in the first three quarters of 2020).

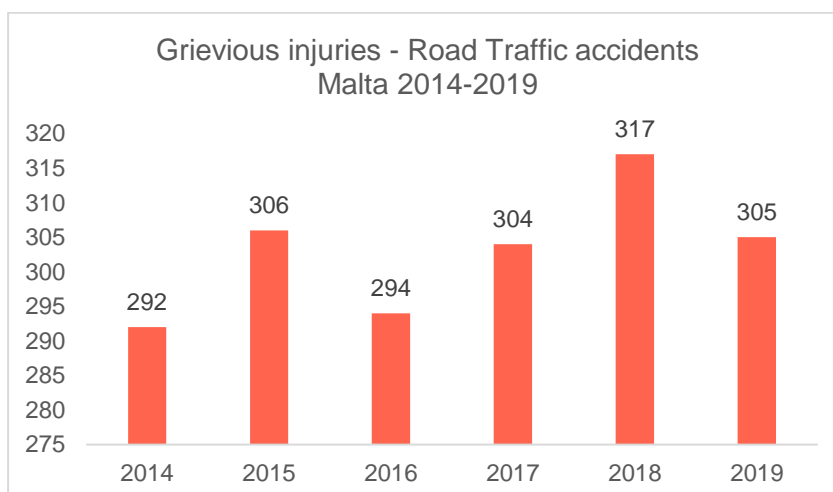


Figure 2 (Source: National Statistics Office Malta)

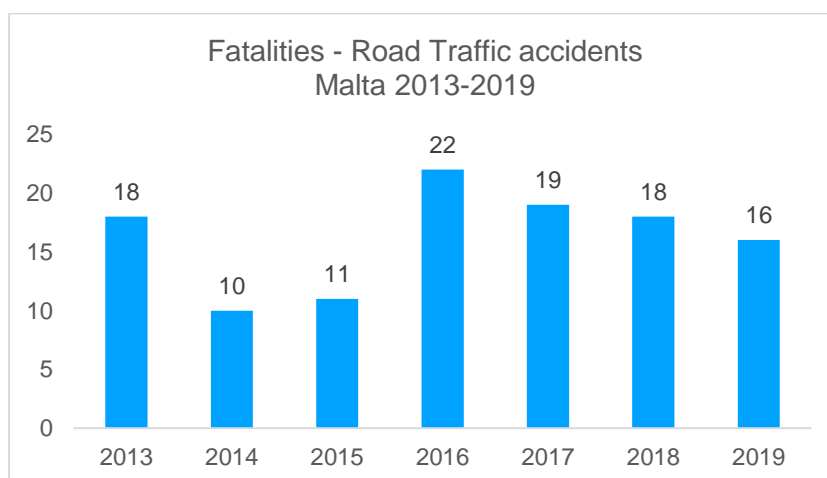


Figure 3 (Source: National Statistics Office Malta)

There are no local routine statistics on drink-driving. Malta is one out of the three EU countries (the others being Italy and Norway) where national data on alcohol related road traffic accidents are not available²⁰. The National Statistics Office (NSO) does not provide any data related to alcohol consumption in relation to driving. Most reports related to serious road accidents in the press do not comment regarding possible causes for legal reasons. D4RS is not aware of any other local data compiled from the results of court cases. Such data is admittedly difficult to compile as court cases often take years to conclude. The latest Road Safety Strategy (2014) also refers to the lack of data on important risk factors for road traffic accidents (RTAs) including wearing of seatbelts, fatigue and drink and drug-driving¹⁵.

There is, however, some local data available for proxy indicators of drink-driving behaviour. In a study on alcohol levels in patients who were admitted to the Accident and Emergency department after an RTA in 2014-15, it was found that out of 1235 persons who were involved in an RTA (includes both drivers and passengers) and required emergency care, 103 persons (8.3%) had BAC levels measured. Out of these, 75% (77 persons) had blood alcohol levels above those permitted by law²⁰. This implies that excess alcohol levels were present in at least 6% of individuals requiring emergency care after an RTA, a likely gross underestimate considering that in 91.7% of these cases the individual was not tested and the BAC was therefore unknown. Despite the obvious limitations of this study, it gives some initial insight into the scale of this problem in Malta.

Roadside breathalyser testing by the Police gives some further insight (figure 4). In 2010, 146 alcohol roadside police tests were carried out, 68 of which resulted to be positive (46.5%). The police carried out an average of 176 breathalyser tests a year between 2015 and 2018. The table below further highlights the worrying state of affairs with respect to this issue.

	2015	2016	2017	2018
Tests carried out	146	241	155	165
Positive result	106	188	109	106
%	72%	78%	70%	64%

Figure 4 - Home Affairs Ministry reply to PQ by Mr Glenn Bedingfield MP

Local law and enforcement

In the most recent amendments to Maltese law (2017), the legal limits of blood alcohol concentration have been set at 20mg/dl for drivers of commercial vehicles and drivers in possession of a probationary driving licence, 0mg/dl for drivers of buses, coaches and other vehicles carrying passengers, and 50mg/dl for drivers of all other vehicles¹⁴.

The law as it stands in Malta¹⁴ requires the enforcement agency (police officers or wardens) to “*reasonably suspect* that a person is driving or attempting to drive or is in charge of a motor vehicle or other vehicle on a road or other public place and has alcohol in his body” before proceeding to test for presence of alcohol in the body. This precludes police officers from carrying out spontaneous spot checks and roadblocks, having to resort to additional motives for doing this (such as checking validity of vehicle licences) before actually proceeding to test when they “*reasonably suspect*”. This is obviously not ideal and paves the way for weak enforcement as well as a weak *perception* of enforcement.

Roadside testing based on reasonable suspicion is still ‘considerably low compared with other EU countries’¹⁵. The lowest scoring EU countries include Romania which still manages to conduct 80 tests per 1000 inhabitants per year. In Malta in 2018, 165 roadside breathalyser tests were performed (figure 4). We know from the statistics section above, that the great majority of those suspected (64%) were found to be positive.

It is also important to point out the sparsity of these roadside checks. Of these 165 tests, 30 were done on Christmas Eve and 5 were done on New Year’s Eve. This is evidently a gross imbalance with the rest of the year (130 tests), giving an average of less than three roadside checks per week.

Furthermore, other sections of the law lend to loopholes of legal interpretation. This is evident in section 15E, which describes the process that the police need to follow to be able to request a specimen of breath, blood or urine from the suspect. The loophole may be found in section 15E (4), which states that:

“A person who refuses or fails to provide the requisite specimen as provided under this article or regulations made under this Ordinance shall be guilty of an offence and unless the contrary is proved, it shall be presumed that the proportion of alcohol in that person’s blood exceeds the prescribed limit:

Provided that it shall be a defence for such person to prove that his failure to provide a specimen was due to physical or mental incapacity to provide it or because its provision would entail a substantial risk to his health.”

With the aid of skilful legal representation, suspects sometimes utilize this clause to dismantle the case brought by the prosecution, which is disheartening for law enforcement officers striving to bring offenders to justice. In a recent intervention by a magistrate with many years of experience presiding over traffic court (Malta Insurance Association Conference: Gearing

Up for Safer Roads, 12th April 2019), other reasons for acquittal in cases of suspected drink-driving brought to court include:

- suspects who refused to be tested arguing that it was not sufficiently explained to them that refusal to take the test is tantamount to the offence
- errors of procedure or documentation on the part of law enforcement officers (e.g. incorrect times, dates, number plates or breathalyser calibration, failure to sign report)

This same magistrate also pointed out that sufficient liaison between traffic court and Transport Malta is often lacking, meaning that court decisions relating to drink-driving and other traffic-related offences are not always enforced (e.g. addition of points to licences).

Breathalysers

Alcohol breathalysers, which have long been available to law enforcement agencies, are now being marketed direct to consumers, for example in some UK pharmacies and motoring stores, to test safety to drive following drinking alcohol, including the morning after. In July 2012, it became a legal requirement for drivers in France to carry a personal breathalyser at all times.

In a study on personal breathalysers, it was shown that the most accurate single-use breathalyser tested (Dräger Alco-Check) gave a false sense of reassurance in 1 in 20 of users whilst the least accurate single-use breathalyser (Alcosense Single) provided false reassurance to 3 out of 4 users, when compared to the reference standard breathalyser recommended by the UK Police¹⁶.

The use of single-use breathalysers is becoming more frequent in Malta. This is partly based on the promotional use of these units by road safety organisations, as well as increasing awareness on the dangers of drink driving. Some of these units are similar to the ones described in this study, notably the one with the lowest accuracy. Some commercial organisations are also promoting sales of multi-use breathalysers in the form of keychains or other devices. At time of writing, D4RS does not have access to any independent studies on the sensitivity of these multi-use commercial breathalysers.

D4RS is unable to recommend the use of commercial breathalysers being marketed to drivers. D4RS also advises caution when breathalysers are distributed as part of promotional activities relating to road safety. Any such promotional use should be accompanied by counselling to potential users, which should also include the known limits of that specific device. It should always be emphasized that if driving, it is safest to avoid drinking alcohol altogether.

The Malta Road Safety Strategy (2014) and the National Alcohol Policy (2018): Implementation phase

a. Road Safety Strategy 2014

In the section 'Enforcement' of the Road Safety Strategy 2014, the objectives listed are:

Objective 1: To establish social intolerance for over speeding and for drink driving, seat belt wearing / child restraint devices (especially young children), failing to stop at red lights

Objective 2: To eliminate drink driving and drug driving

The Strategy Action Plan to achieve this includes:

1. Carry out consultation with stakeholders and the community at large to investigate the scope of reducing the legal blood alcohol concentration (BAC) for all drivers
2. Manage educational programmes to promote the understanding of the public of the provisions of the law
3. Promote the application of alcohol interlocks to convicted drink driving offenders
4. Work to strengthen random breath testing and random roadside drug testing programmes and improve public awareness of these programmes
5. Monitoring progress by checking the Blood Alcohol Concentration of drivers involved in accidents with grievous and fatal injuries

One can immediately note that *Point 1* above has been achieved successfully. Malta has lowered the BAC limits to similar levels to those permissible in most EU states (i.e. 22 mcg of alcohol in 100 ml of breath, or 50 mg of alcohol in 100 ml of blood, or 67 mg of alcohol in 100 ml of urine). This has been a big step forward in getting this message across to drivers. However, it is important to point out that having such limits in place means that many drivers will attempt to judge whether they are safe to drive after having ingested alcohol. It is for this reason that some organisations and agencies have advised the use of BAC charts, personal single or multi-use commercial breathalysers, or an empiric personal alcohol unit ingestion limit before driving.

Point 2 is ongoing through the various events, activities and programmes organised by the various stakeholder entities which includes the Road Safety Council, The Health Promotion and Disease Prevention Directorate, and NGOs which include D4RS and others like the Bicycle Advocacy Group and Touring Club Malta.

Points 3-4 have to our knowledge not yet been implemented.

Point 5 also has yet to be implemented. In fact, in 2018, in reply to a PQ asking how many people had had blood samples taken in order to ascertain whether they were under the

influence of alcohol, the ministry reply was that none were taken over that period. (In 2018, there were 18 fatal RTAs and 317 grievous RTA-related injuries.) One should point out that this is already permissible (but not mandated) by Maltese law which states in Section 15C (d) of the Traffic Regulation Ordinance:

“Where a Police officer reasonably suspects that a person was driving or was attempting to drive or was in charge of a motor vehicle or other vehicle on a road or other public place when that motor vehicle or other vehicle was involved in an accident, he may require that person to provide a specimen of breath for a breath test.”

b. National Alcohol Policy 2018-2023

The National Alcohol Policy published by the Ministry for the Family, Children’s Rights and Social Solidarity identifies measures addressed to the entire population as well as specific measures targeting young people and drink driving. It states clearly that no single measure will be effective if taken in isolation and that the Ministry through the National Coordinating Unit for Drugs and Alcohol aims to ensure that there is consolidation of initiatives and coordination among the various Ministries, voluntary organisations and other bodies.

Article 3.3 on Policy actions to reduce drink driving proposes several actions to achieve this objective.

Action 18: Ensure the necessary legislative support. This area requires scrutiny and development in view of the poor record of random breath testing partly as a consequence of legislative ambiguity. Action 18 recommends compulsory road testing following a road accident, but this action is yet to be implemented.

Actions 19 and 20: Introduction and Reduction of Blood Alcohol Content (BAC) limits. Although the introduction of BAC limits is noteworthy, there is clear scientific evidence that even if one is within the legal drink-drive limit, alcohol adds 13 per cent to the reaction time, increases distraction and over-confidence and reduces hazard perception. Hence, if driving, it is safest to avoid drinking altogether.

Action 21: Work to ensure that penalties for drink driving offences are increased. This action is complementary to action 18 in terms of the necessary legislative support to deter drink driving and is also awaiting implementation. At present, drivers over the drink drive limit may have their license rescinded for 6 to 12 months, receive up to 11 penalty points on their driving license, be fined from Euro 1200 to 2329 or face imprisonment from three to six months (Chapter 65, Traffic Regulation Ordinance).

Action 22: Introduce mandatory assessment, education and treatment for drink driving offenders. The legislative and logistical framework to implement this action is insufficient and requires review.

Action 23: Promote and encourage the concept of ‘designated driver’. This is a laudable objective, which further reinforces the message that if driving, it is safest to avoid drinking altogether, and serves as a vehicle for changing social norms. This simple, straightforward concept lends social legitimacy to the non-drinker’s role, encourages people to plan ahead for transportation if they intend to drink and contributes to a strong social consensus about the seriousness of drink driving. The harnessing and channelling of social media and mass communication must be consistent throughout the year.

The monitoring, co-ordination and implementation of the National Alcohol Policy using key indicators is stated to take place on a yearly basis between 2018 and 2023, with the National Addictions Advisory Board responsible for the development of the Policy and the National Co-ordinating Unit for Drugs and Alcohol responsible for the implementation of the Policy. Reports on the workings, recommendations and conclusions of these Boards are awaited.

Proposals and recommendations

In this position paper, D4RS has the following proposals and recommendations:

1. The most effective deterrent to drink-driving behaviour will not result from further increases in the penalties associated with the offence, but from increasing the likelihood of being caught offending. This hinges on improved enforcement of drink-driving legislation.
2. The frequency of enforcement checks needs to be stepped up to include regularly irregular, intermittent, and asymmetrical checkpoints, particularly in high-risk areas.
3. Sufficient resources and manpower need to be allocated to enable this increased enforcement. Breathalysers should be easily available and accessible for enforcement officers to use whenever necessary.
4. Retraining of police officers and wardens in the relevant procedures would help to decrease the number of cases of acquittals based on technicalities and procedural errors described above.
5. Testing the BAC of drivers in all RTAs resulting in fatal and/or grievous injuries should be implemented with immediate effect as this is already allowed by Maltese law. In addition, all RTAs where the police are called in which result in any form of bodily injury should immediately mandate an alcohol breathalyser test of the drivers involved (this is already present in some EU states and is a recommendation for all EU member states²⁰).
6. Exploring how Transport Malta can contribute to the enforcement of drink-driving legislation, and how changes to road infrastructure (e.g. crash barriers) can help prevent serious injuries consequent to drink-driving.
7. Improved communication between the entities involved in the enforcement of drink-driving laws. In particular, communication channels between traffic court and Transport Malta should be improved to ensure that traffic court decisions are enforced (e.g. points are actually docked from licences).

8. Important local strategy and policy documents such as the Road Safety Strategy (2014) and the National Alcohol Policy (2018) need to be closely followed up to make sure that their extremely valid recommendations are implemented.

D4RS will be monitoring this important issue regularly and reviewing the response to this paper very closely.

Doctors for Road Safety
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