



REPUBLIC OF GHANA

MINISTRY OF TRANSPORT
NATIONAL ROAD SAFETY COMMISSION

FINAL REPORT

A STUDY TO DETERMINE THE MAGNITUDE OF DRIVING
UNDER THE INFLUENCE OF ALCOHOL AND ITS IMPACT ON
ROAD SAFETY IN GHANA



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EXECUTIVE SUMMARY

This report presents findings of a study into the prevalence of drunk-driving and its impact on road safety in Ghana. Alcohol impairment is an established risk factor for the incidence and severity of road traffic crashes. Whereas the developed countries have dedicated resources to combating this menace, drunk-driving research and preventive programmes are at rudimentary stages in developing countries. The objective of this study was to establish baseline prevalence of drunk-driving and its impact on road safety in Ghana.

Systematic roadside random sampling was used to determine the prevalence of drunk-driving in the country. Alco-sensor v breathalyzers were used for screening drivers to determine whether they have ingested any alcohol before driving their vehicles. If alcohol was detected, a second test involving administration of disposable mouthpieces to establish the actual volume of alcohol in their breaths was conducted.

2,736 drivers were randomly stopped and their BrAC measured with the breathalyzers. In all, 8.7% drivers had detectable alcohol in their breaths with 5.5% exceeding the legal limit of 0.08%. BrAC measurements were converted to BAC using the BrAC:BAC ratio of 2,300:1 for easy understanding in Ghana. A stratified analysis shows that 64% of the drivers who tested positive for alcohol exceeded the legal BAC limit, 19% had BAC between 0.05 and 0.08% whilst the remaining 17% had ingested alcohol ranging between 0.001 to 0.05%. None of the 2% female drivers sampled on the roadside had detectable alcohol showing low female participation in drunk-driving in Ghana. Having formal education is a protection against episodic drinking among drivers in Ghana. The likelihood of drunk-driving is significantly higher among drivers with no formal education compared to drivers with basic education $p=0.0462$. In contrast, the incidence of drunk-driving among drivers with secondary school level qualification and tertiary level education were not statistically different from drivers with basic school qualification, $p=0.2564$ and $p=0.4433$ respectively. Age was seen to exhibit differential prevalent rates regarding drunk-driving. The likelihood of observing a drunken driver within the 50-59 year olds is 3.2 times higher, $p<0.001$ when compared with the 40-49 year olds. The relative incidence of drunk-driving among the 18-29 year-olds and 30-39 year-olds are 1.6 and 2.0 times respectively higher than the 40-49 year-olds.

The likelihood of drunk-driving incidence among commercial drivers is 41% lower compared with private car drivers, $p=0.021$. More so, over 95% drivers sampled could not give a definitive legal BAC limit of the country indicating the paucity of drivers' knowledge in legal BAC of Ghana.

Truck driving is associated with a significantly higher likelihood of drunk-driving compared with car driving (OR=1.8: $p<0.009$). The odds of drunk-driving among bus drivers and two wheeler riders are not significantly different from car drivers, $p=0.406$ and $p=0.535$ respectively.

Impaired driving has been established as an important risk factor of road traffic fatalities in Ghana, $p < 0.001$. A one percent (1%) increase in the proportion of drunken drivers on the roadway is associated with a 4% increase in road traffic fatalities and a one percent (1%) decrease in the proportion of drivers who exceed the legal BAC limit is associated with a 4% decrease in road traffic fatalities.

Drunk-driving prevalence in Ghana is very high compared with many industrialized countries. It is therefore recommended that Ghana should embark on a comprehensive drunk-driving programme in the country. The following strategies are therefore suggested. There is the need to define what standard drink is in the Ghanaian context and disseminate this information to the driving populace in the country by embossing standard drink labels on all alcoholic beverages on sale. Ghana should raise the minimum legal age for drinking alcohol (MLADA) from 18 years to 25 years for young drivers who want to drink alcohol and drive to prevent the potential upsurge of road carnage among young drivers. There is the need to set up a special unit of National Alcohol Management Programme consisting of the police, and a research unit to provide empirical status research findings to the National Road Safety Commission for policy formulation and implementation. The procedures for the National Alcohol Management Programme should include;

(i) regular roadside breathalyzer administration to drivers, (ii) fines for drivers who exceed the legal limit, (iii) severe punishment for drunk-driving recidivism, (iv) reformation programme for drivers who exceed the legal limit three times in a year- of which the offending driver pays full cost of his training.

Again, there is the need to include legal alcohol limit sign in the list of road signs in the country, which should be posted on the roadways and interpreted to the driving populace. In the long term, there is the need to review the legal BAC limit downwards from 0.08% to 0.05% in conformity with the WHO recommendation. There is also the need to launch a research to ascertain the prevalence of drug use among drivers in the country just in-case there is any paradigm shift of substance of abuse particularly among the commercial drivers.