Nigerian Law Enforcement Agents' Knowledge and Enforcement of Drink Driving/Riding Law

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Abstract

Objective - To understand how knowledgeable and equipped the law enforcement agents in Nigeria are to enforce the drink drive law.

Method - We conducted a descriptive cross-sectional study of Law Enforcement Agents in four Nigerian states selected by convenient sampling. The study utilized a pre-tested questionnaire designed to obtain subjects demographic data, elicit their knowledge about drink driving law, and understand how equipped the subjects are. A team member walked respondents through the questions to ensure comprehension and accuracy with completion of the questions.

Result - 496 law enforcement agents were studied. They were 414(83.5%) male and 82(16.5%) females mostly aged 21-40 years (64.3%). Close to half (48.2%) were police officers, while 35.7% were officers in the Federal Road Safety Corp (FRSC). 45% of respondents' had secondary / high school education, while 39.5% had bachelor's degree; with a significant majority in the FRSC.

269(54.2%) respondents had convicted a road user of drunk driving/riding on the basis of subjective assessment. The use of breathalyzers and awareness of permissible Blood Alcohol Concentration (BAC) / Breath Alcohol Concentration (BrAC), was reported by a few respondents (5%), mostly FRSC officers, and others with relatively higher educational attainment. The majority were ignorant of the approved BAC limit in Nigeria (0.05g/100dl) and objective methods of assessing breath alcohol concentrations.

Conclusion – In Nigeria, there is a huge knowledge gap on the drink driving law. and the acceptable penalties for offenders in Nigeria among law enforcement agents. The law enforcement agents lack equipment for objectively detecting drunk driving among road users. Our findings call for an urgent intervention in the training and practice of law enforcement agents if the prevalence of RTC arising from drunk driving will be reduced in Nigeria.

Introduction

Road traffic crash (RTC) is an important global public health pandemic, claiming about 1.3 million lives and injuring up to 70 million people annually (WHO 2009, WHO 2011). Although a vast majority (80%) of the world's cars are owned by some 15% of the world's population, located in North America, Japan, Australia and Western Europe, the burden of RTC is disproportionately felt by developing countries with fewer vehicles per population (Peden et al 2004) . More than 85% of road traffic fata1lities and 90% of disability-adjusted lost years from road traffic injuries occur in developing countries (Peden et al 2004).

High alcohol intake by drivers and riders has been implicated in RTCs in the developing countries (Eikhamenor and Agwubike 2004, 2015) and this has led to early deaths and disabilities (Peden et al 2004, WHO 2015). The WHO's recommendation states that nations set blood alcohol concentration (BAC) limits for drivers and enforce them. This is endorsed and practiced in most developed countries of the world but not in Nigeria (Riley and Marshall 1999). In most developed countries, random breath alcohol

concentration (BrAC) checks amongst drivers and riders by law enforcement agents is routine. When there is a suspicion of driving under the influence of alcohol, or following a crash, checks are mandatory.

In Nigeria, the Federal Road Safety Corps (FRSC) is a Government Agency with statutory responsibilities for road safety administration. It was founded in 1988 by the Federal Government through Decree No. 45 of the 1988 as amended by Decree 35 of 1992 (FRSC official web site www.frsc.gov.ng). The FRSC operates in all Nigerian states and the Federal Capital Territory. It is the leading agency in Nigeria on road safety administration and management. Statutory functions of the FRSC include making the highways safe for motorists and other road users, checking road worthiness of vehicles, recommending works and infrastructures to eliminate or minimize accidents on the highways and educating motorists and members of the public on the importance of road discipline on the highways.

The FRSC is empowered to carry out nineteen particular responsibilities or functions, (Appendix 1) (FRSC 2007) which include empowerment to arrest and prosecute persons reasonably suspected of having committed any traffic offence. Apart from the FRSC, other law enforcement agents operate in Nigeria. They include the Nigeria Police Force, Nigeria Security Defense Corp, and a few other emerging units empowered by individual states.

Road traffic crashes in Nigeria can be attributed to driver factors, vehicle factors, and roadway factors (Oginni 2013). Driver factors (including drink and driving) account for about 59% of the crashes in Nigeria (Lum and Reagan 1995) and is reportedly the major cause of morbidity and mortality from RTC (Odueme et al in 2008 and Ogeleyinbo 2015). Close to 70% of drivers admitted to drunk driving, and tested positive for breath alcohol at work (Oginni et al 2017). Ready availability of alcohol at drivers' rest station in Nigeria has been rightly documented (Ogazi and Eddison 2012). Unfortunately, there are no reliable records on the magnitude of drink driving fatalities nationally. Although a legal limit of 0.05g/100ml for blood alcohol concentration exists in Nigeria (Ogazi and Edison 2012), the drink drive law is yet to be fully enforced, probably due to the unavailability of alcohol testing equipment. The imposition of less severe punitive measures as a method of deterrence in Nigeria compared with developed countries may be responsible for poor adherence to the law.

Considering the drink drive situation in Nigeria, this study sought to understand how knowledgeable and equipped members of the FRSC, Nigeria Police Force and other law enforcement agents in Nigeria are at enforcing the drink drive law.

Methods

Ethical clearance ref IPHOAU/12/668 was obtained for this study from the research and ethics committee of the Obafemi Awolowo University Teaching Hospital Ile-Ife Nigeria. This descriptive cross-sectional study was conducted at the weekly meetings and duty posts of selected Law Enforcement Agents in four Nigerian states. We obtained permission from the appropriate officers and were allowed into statutory

meetings at stipulated times on a weekly basis. Convenience sampling method was employed in getting the study participants. The research subjects were the law enforcement officers present at the meetings or duty posts during our visits. Informed consent and study enrolment were conducted at a comfortable location within the premises of the Agency. The study was introduced to participants and then copies of the questionnaire (Appendix 2) were distributed to all participants. The research team appointed a member who walked respondents through the questions to ensure comprehension and accuracy with its completion.

Sample size was calculated using the sample size formula for measuring characteristics in terms of proportion.

$$N = \frac{4(Z_{crit})^2 \, p(1-p)}{D^2}$$

Where N= Sample size. Z_{crit} = Standard normal variate (1.96); D= absolute error or precision (0.05), p=0.081 (derived from a correct response rate obtained in a study conducted by Tatiana Valverde da Conceição et al (Tatiana Valverde da Conceição et al 2012) titled "Awareness of legal blood alcohol concentration limits amongst respondents of a national roadside survey for alcohol and traffic behaviours in Brazil" in the absence of a study on law enforcement agents.

$$N = \frac{4(1.96^2)\,(0.081)\,(0.919)}{0.05^2}$$

$$= \frac{4(3.8416) \text{ X } 0.081 \text{ X } 0.919}{0.0025}$$

$$= \frac{15.3664 \text{ X } 0.074439}{0.0025} = \frac{1.14386}{0.0025} = 457.544 \approx 458$$

Completed questionnaires were collected from respondents. Data was inputted into a computer and analyzed using the SPSS version 20.0. Simple descriptive statistics and chi square tests were employed appropriately. Mean, median, mode and standard deviation were applied in describing nominal variables while the Chi square test was employed in comparing variables. Statistical significance was inferred at p value $\leq$ 0.05.

N.B: Additional references to this work can be found in bibliography

Supplementary texts and figures are to be determined

Results

496 law enforcement agents who have been in service for a range of 1 to 43 years with mean (SD) at 13.1(8.9) years, mode at 5.0 years and median 10.0 years were studied. We identified three major agencies but the group described as others include a few state law enforcement agent sectors.

Subjects were 414 (83.5%) male and 82(16.5%) females mostly aged 21 to 40 years (64.3%). Close to half (48.2%) of the respondents were police officers, while over a third (35.7%) were members of the FRSC. Respondents' highest educational attainment was mostly secondary education (45%) followed by bachelor's degree (39.5%). Their age group, sector of law enforcement agent and highest educational attainment did not differ significantly by gender. (Table 1 and Appendix Table A1)

Respondents' educational attainments were classified by their agencies as shown in Table 2. The qualifications classified as others include diplomas. A majority had secondary school certificate (44.9%) and bachelor's degree (39.5%) while only 6.2% had postgraduate qualifications. Holders of postgraduate qualifications were predominantly members of the FRSC. The difference in educational attainment observed among the agencies was statistically significant ($p<0.001$)

Appendix Table A2 demonstrates respondents' diverse understanding or knowledge of the Nigerian drunk driving / riding law. A few 5 (1%) of respondents admitted to ignorance about what exactly the law says; while 36(7.3%) supplied responses judged absolutely incorrect and not classifiable on the structure presented in appendix Table A2. Vague and incorrect responses emanated mostly from the primary school certificate holders, while the best expressions of the law emerged mostly from the secondary and tertiary education certificate holders ($p=0.00015$).

Appendix Table A3 displays our respondents' understanding of the penalty for violating drunk driving law in Nigeria. 37.6% had no idea what the penalties were, 12.1% of which gave no response at all. Other responses obtained varied widely, ranging from fine of less than N5000:00, to various jail terms.

270 (54.5%) respondents had convicted someone of drunk driving in the past, 14(2.8%) provided no answer while 212(42.7%) respondents had never convicted anyone. 81 of the 212 (38.2%) however knew someone who had convicted an offender. Table 3 and Appendix Table A4 show the test types carried out/employed by officers who had convicted an offender or seen someone convict an offender. Notably the use of Breathalyzer was reported sparingly and mostly by FRSC officers, and those with relatively higher educational attainment. A range of subjective physical assessment techniques were employed by every category of law enforcement agent. These include sniffing mouth odour for smell of alcohol, gait test, etc.

Majority of the respondents from FRSC had heard of Breath Alcohol Concentration. Table 4. Consequently, only a minority of respondents would employ the use of breathalyzer in detecting drunk driving. A majority would engage Hospital tests, smell of the driver's breath or observation of his or her demeanor Appendix Figure A1.

In Figure 1, 70.5% of our respondents were not equipped with breathalyzer for detecting BrAC, therefore they employed a variety of non-specific and subjective assessments. Only 5% provided the correct permissible BAC limit (0.05g/100dl) in Nigeria. Table 5.

Discussion

The impact of drink driving on the incidence of road traffic crashes in Nigeria has been established (Abiona et al 2006, Ogazi and Edison 2012). While a variety of factors may influence drink driving, the enforcement of existing regulations that are structured to control drink-driving in Nigeria can be most effective. Till date, majority of studies have focused on the drink/driving behaviours among drivers, its prevalence and the adverse effects on the society (Abiona et al 2006, Damsere-Derry et al 2016) however, very few studies have examined the law enforcement agents in drink driving situations (Gana and Emmanuel 2014). In Nigeria, the law enforcement agents involved with the drunk driving laws include largely the members of the FRSC and Nigerian Police, and to a lesser extent a few outfits empowered by individual states and geo-political zones.

A male preponderance (83.5%), and peak age at 21 to 40 years (64.3%) among law enforcement agents is a pattern similar to what obtains among in most countries of the world (Jiabmed 2015). This may be attributed to the nature of the work, which requires substantial physical efforts, agility, and strength.

In Nigerian Universities, no direct/specific courses on Law enforcement are offered however, we judge that, closely related programs like Law, Psychology etc. could form an excellent background for a career in law enforcement. Interestingly, most respondents in this study had secondary school (High school) level education, which is the basic requirement for recruitment into the police academy till date. The FRSC on the other hand would admit only bachelor's degree holders (with no particular reference to a specific course of study) as officers and School certificate, Diploma holders etc as Marshals. These entry requirements may account for the distribution of highest educational attainment among our respondents. Our data clearly substantiates a relatively higher level of educational attainment among members of the FRSC compared with others. We opine that highest educational attainment may be a reliable indicator of a Law enforcement agent's knowledge and perhaps effectiveness.

Aspects of knowledge deficit: Overall our study reflects a deficit in the knowledge of drink/driving law and its fundamentals among the studied law enforcement agents. Deficits tend to be higher with reduced educational attainment. This could substantiate a case for upgrading the entry requirement into all Law enforcement agencies to bachelor's degree. Furthermore, ensuring that members undertake additional training and regular refresher courses in relevant fields will be worthwhile. This is in agreement with the findings of Erik Fritsvold's work (Fritsvold E 2020).

Drink driving law and penalty: - According to FRSC Act 2007, driving or attempting to drive a motor vehicle on a highway under the influence of drugs or alcohol is a traffic offence and members of the Corps shall have the power to arrest and prosecute any person suspected of having committed such traffic offence

(FRSC 2018)[14]. Driving a motor vehicle on a highway under the influence of alcohol above 0.5 grammes per litre or to such an extent as to be incapable of having proper control of such vehicles, shall be guilty of an offence and be liable on conviction to a fine of five thousand Naira or to imprisonment for a term not exceeding two years, or to both fine and imprisonment (FRSC Act 2007). (Appendix Table A3) With reference to this, only 5.6% of our respondents provided the correct recommended penalty for drunk driving (3.8% fine of N5000-N10,000 and 1.8% >6-18 months in jail). This is abysmally low and unacceptable.

BAC limit: Nigeria's BAC legal limit is 0.05 g/100 ml, but only 5% of our respondents (Table 5) selected the correct BAC limit; an indication of the knowledge deficit within the law enforcement agency. They are obviously unequipped as alcohol testing equipment is unavailable, therefore unable to enforce the law. The FRSC as a federal agency dedicated to improving road safety and the clear lead agency in Nigeria (Ogazi and Edison 2012) should of provide training and of a necessity be equipped to carry out this essential duty.

Gana et al (Gana and Emmanuel 2014) identified the lack of adequately trained manpower as one of the major challenges confronting FRSC in enforcing road traffic laws. This is corroborated by our findings, which specifically focuses on drink driving law enforcement. Since some respondents were able to provide the correct answers, we could argue that the sources of knowledge, through a structured curriculum of training are possibly in place, however, their delivery and or uptake may be inconsistent, hence the irregular responses obtained. Having heard of or know BAC but lacking a thorough understanding of its details is equally disappointing. Perhaps the place of refresher courses and occasional assessment in bridging the knowledge gap and forgetfulness should be emphasized. Aside these, the conspicuous absence of hands on practice of what was taught in training and its routine use is unhelpful and thus should be addressed (Burns and Moskowitz 1977, Anderson et al 1983, Harris et al 1980).

Additionally, we see a need for every law enforcement training program in Nigeria to incorporate the knowledge, fundamentals and practice of enforcing the drink driving laws into the trainings (Burns and Moskowitz 1977, Anderson et al 1983, Harris et al 1980). Since drink driving is a major issue in Nigeria, it would only be appropriate to make this a compulsory course for all trainees and also apportion credit units commensurate with the magnitude of the problem and expectation in practice to the course.

Proper training on drink driving among the law enforcement agents will definitely improve their effectiveness in service delivery.

Detecting a drunken driver: Our subjects were not equipped with the tools necessary for determining the BAC (Appendix Figure A1). A similar report was published by Ogazi and Edison 2012 who concluded that law enforcement is weak because of unavailability of the alcohol testing equipment almost a decade ago. Unfortunately, the situation has remained essentially the same. In the absence of the right tool(s), our law enforcement agents resorted to a variety of subjective and interesting means of detecting

defaulters. Alluding to testing and color change, pupil size, gait, sobering test, responses to questions, etc suggest that some or most the LEAs have the knowledge but not the tools. Detecting drunkenness from sniffing a driver's breath for instance is not only hazardous to other road users but may be hazardous to the health of the law enforcement agents in the course of duty (Table 3, 4 and appendix Table A4). This practice is grossly inadequate, unacceptable and illegal.

Knowledge of/about the availability of Breathalyzer is deficient at all levels and this should be addressed promptly. Furthermore, the need for provision of Breathalyzer and training law enforcement agents on its use at every duty post (especially on the highway) will go a long way in ensuring that agencies perform their duties effectively as they reliably determine alcohol-impaired driving.

Being an important global health pandemic, it is important for the government and non-governmental organizations (NGO) to continue to educate the drivers and the entire public on the drink/driving laws and the appropriate penalties for offenders. More importantly law enforcement agents need to be adequately informed about the law, equipped to detect drunk driving objectively and enlightened about the acceptable penalties for offenders in Nigeria. This will definitely go a long way in reducing the prevalence of RTA due to drink/driving in Nigeria.

Conclusion and recommendations:

Having established the grossly inadequate knowledge of drink driving law and enforcement of the same by the studied law enforcement agents, we propose the following recommendations:

1. Upgrading the minimum entry requirement into all types of Law enforcement agencies to bachelor's degree.
2. Ensure that members undertake additional training and regular refresher courses.
3. Emphasis on hands on practice as well as occasional assessment to bridge knowledge gap.
4. Incorporation of courses on fundamentals, practice and knowledge of drink driving law into the law enforcement training program in Nigeria, with credit units commensurate with the magnitude of the problem / expectation in practice.
5. Provision of Breathalyzer or similar kits by Federal and State government, and training of law enforcement agents on their daily uses especially on the highway.
6. Public awareness on the drink driving law and the appropriate penalties for offenders by the FRSC and concerned NGOs.

Hopefully, these should go a long way in ameliorating the situation with our drink driving law enforcement, public awareness and prevalence of RTCs attributable to drink-driving.

Declarations

The authors declare no competing interest.

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Tables

TABLE 1: Distribution of law enforcement agents' age group, sector of service and highest education attainment by sex.

		Males (n=414)	Females (n=82)	Total (n=496)
		No (%)	No (%)	No (%)
Age Group	<21 years	3(0.6)	2(0.4)	5(1.0)
	21-40 years	264(53.2)	55(11.1)	319(64.3)
	41-60 years	147(29.7)	25(5.0)	172(34.7)
Sector of Local Law Enforcement Agent	Police	193(38.9)	46(9.3)	239 (48.2)
	Federal Road Safety Corp	148(29.8)	29(5.9)	177(35.7)
	Civil defense and Others	73(14.7)	7(1.4)	80(16.1)
Highest Educational Attainment	Primary, Secondary	204(41.1)	29(5.8)	233(47.0)
	Bachelor's Degree and equivalent)	184(37.1)	48(9.7)	232(46.8)
	Masters & PhD)	26(5.2)	5(1.0)	31(6.2)

N.B: Detailed format is in appendix 3

TABLE 2: Respondents' sector of law enforcement agent by their highest educational attainment

Highest Educational Attainment	**SECTORS OF LAW ENFORCEMENT AGENT**				**TOTAL**
	Police	**Civil defense**	**FRSC**	**Others**	
Primary	4(1.7)	2(6.5)	1 (0.6)	3(6.1)	10 (2.0)
Secondary	138(57.7)	22 (71.9)	33 (18.6)	30 (61.2)	223 (44.9)
Ψ Bachelor's Degree	79(33.1)	7(22.6)	98 (55.4)	12 (24.5)	196 (39.5)
*Post graduate Masters	5(2.1)	0 (0.0)	24 (13.5)	1(2.0)	30 (6.0)
*Post graduate (PhD)	1(0.4)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.2)
Ψ Others	12(5.0)	0 (0.0)	21 (11.9)	3(6.1)	36 (7.3)
TOTAL	239(100.0)	31(100.0)	177 (100.0)	49 (100.0)	496(100.0)
	χ^2 = 98.4 df=9 p=<0.001				

Table 3: Test types prescribed by law enforcement agent types and educational attainment.

TEST TYPE PRESCRIBED	LAW ENFORCEMENT AGENT TYPE			HIGHEST EDUCATIONAL ATTAINMENT			TOTAL
	Police (n=183)	FRSC (n=133)	Civil Defense & Others (n=35)	Primary & Secondary (n=138)	Bachelors / Equiv. (n=163)	Masters & PhD (n=34)	(n=351)
Medical test in hospital	73(20.8)	8(2.3)	4(1.1)	52(14.9)	34(9.7)	6(1.7)	**92(26.2)**
Breath odour	32(9.1)	6(1.7)	2(0.6)	21(6.0)	18(5.2)	2(0.6)	**41(11.7)**
Examine for attitude / appearance	15(4.3)	7(2.0)	2(0.6)	7(2.0)	13(3.7)	4(1.1)	**24(6.8)**
Reckless driving and over speeding	10(2.8)	8(2.3)	0(0.0)	7(2.0)	9(2.6)	3(0.9)	**19(5.4)**
Breathalyzer	0(0.0)	62(17.7)	0(0.0)	4(1.1)	45(12.9)	13(3.7)	**62(17.7)**
Alcohol test/other investigations	12(3.4)	13(3.7)	0(0.0)	20(5.7)	11(3.1)	1(0.3)	**31(8.8)**
Some subjective assessments	20(5.7)	29(8.3)	3(0.8)	25(7.2)	25(7.2)	1(0.3)	**52(14.8)**
Others	21(5.9)	0(0.0)	8(2.3)	2(0.6)	20(5.7)	4(1.1)	**30(8.5)**

Table 4: Responses to question "Have you ever heard of Breath Alcohol Concentration"?

Law Enforcement Agent	Have you ever heard of Breath Alcohol Concentration			
	Yes No (%)	No No (%)	No response No (%)	Total No (%)
Police	83(16.7)	152(30.6)	4(0.8)	239 (48.2)
Civil Defense	4(0.8)	24(4.8)	3(0.6)	31(6.2)
FRSC	126(25. 4)	49(9.9)	2(0.4)	177(35.7)
Others	6(1.2)	43(8.7)	0(0.0)	49(9.9)
TOTAL	219(44.2)	268(54.0)	9(1.8)	**496(100.0)**
	χ^2 = 104.4 df = 6 p= 0.001			

Table 5: What is the normal / acceptable BrAC limit in Nigeria?

Responses	No (%)
No response	24 (4.8%)
I don't know	243 (49%)
0.005-0.04 g/100ml	10(2.0)
0.05 g/100ml	25(5.0)
>0.05-0.5 g/100ml	14(2.8)
>0.5 g/100ml	180(36.3)
TOTAL	496(99.9)

Figures

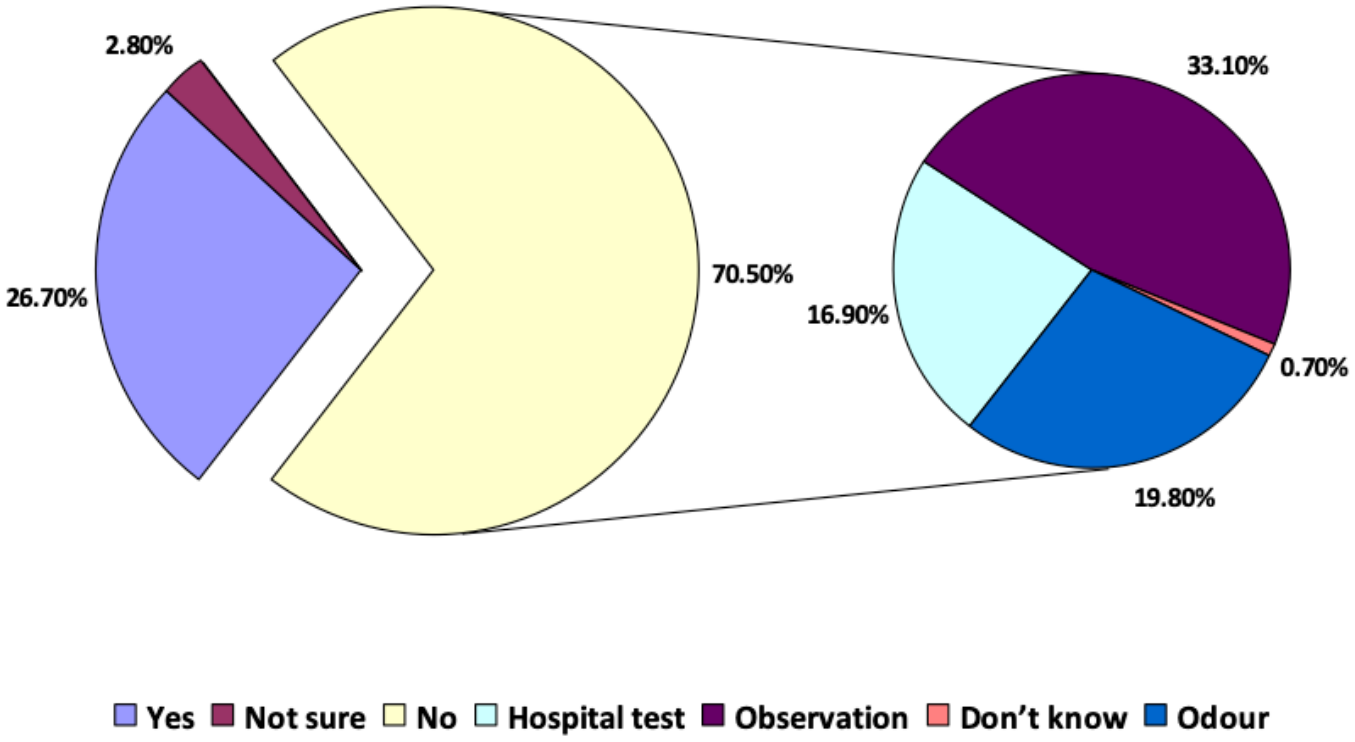

Figure 1

Are you equipped to determine BAC on road users? If not, how do you determine an offender?

Supplementary Files

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