Review Article

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Driving Under the Influence of Drugs: An Overview of Current Legal Frameworks

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ABSTRACT: Driving under the influence (DUI) of alcohol and/or illicit drugs has been shown to increase the risk of involvement in road traffic collisions. Thanks to the scientifically proven link between blood alcohol concentration and impaired driving ability, a broadly accepted legislative framework has been established and is now widely adopted across the globe. In contrast, less is known about the effects of illicit drugs, and a clear correlation between blood drug concentrations and driving performance has been defined by some authors as a "mirage". In this review, we examine the advantages and limitations of current legislative initiatives regulating DUI of psychoactive drugs. The predominant approaches employed are "zero tolerance", "legal limits", and "impairment assessment". We discuss the distinctions among these methods, focusing on their implications for balancing citizens' rights and public safety. Additionally, we address the pre-analytical, analytical, and post-analytical challenges associated with the implementation of each legislative framework. The application of these three approaches is also discussed in light of recent changes in drug policies observed in many countries, including the decriminalization of certain substances, such as cannabis, and the growing prevalence of drugs prescribed for medical purposes. In conclusion, due to the absence of a robust scientific foundation, determining the most appropriate approach among the three remains challenging. The choice of method is primarily influenced by the government's policy priorities, which may emphasize either the protection of citizens' rights or the promotion of road safety.

KEYWORDS: Cannabis, cocaine, driving under the influence, drug legislation, illicit drugs, impairment assessment, legal limits, zero tolerance.

INTRODUCTION

According to the World Health Organization (WHO), road traffic collisions (RTC) cause over one million deaths per year and represent the main cause of death for people aged 5–29 years [71]. Alcohol and, to a lesser extent, psychoactive drugs are associated with approximately 15% and 3% of total road traffic deaths respectively [72], representing a serious threat to public safety. The association between alcohol-impaired driving and the risk of involvement in RTC has been widely demonstrated as well as the inversely proportional association between blood alcohol concentration (BAC) and driving ability [51,54]. These led to standardized analytical methods and scientifically proven international BAC threshold limits [25] associated with sanctions. However, such limits are based on reductions of driving skills on group levels, while individual performance decrements at certain BAC levels demonstrate considerable variation [38,41,54].

An Australian study has indicated a relation between RTC risk and blood THC concentration, although less pronounced than for alcohol [17]. In general, however, less is known about the effects of driving under the influence (DUI) of illicit and medicinal psychoactive drugs [19,65], and a consensus correlation between blood drug concentrations and RTC risk is still debated [11]. As a consequence, scientifically supported cutoff values (as observed for BAC) are not available, while a great dissimilarity is observed in the enforcement of impaired driving legislation worldwide [28,39].

According to the European Monitoring Center for Drugs and Drug Addiction (EMCDDA), 27.4% of the European population (aged 15–64 years) has consumed illicit drugs at least once in their life, with the most used being cannabis followed by cocaine, opioids, and amphetamine [12,21]. Moreover, the use of prescription psychoactive drugs (pain medication, treatment of anxiety and sleep disorders) has recently increased appreciably with the consequence of an increase in the prevalence of drivers taking such prescription drugs [20].

As with many other laws, DUI legislation should be a balance between citizens' civil rights and public safety. Different legislative approaches can tip the scale more to one side (civil rights) or the other (public safety). At present, the legislative frameworks based on measured blood drug concentration are the "zero tolerance" and "legal limits" models, with the latter adopting, in some countries, graded or enhanced penalties depending on the amount of psychoactive drug found in the blood [27]. A third model is "impairment assessment" where sanctions are associated with the direct evaluation of drug-related impairment of driving skills, regardless of blood drug concentrations [49].

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