



Drinking drivers and drug use on weekend nights in the United States[☆]

Robert B. Voas^{a,*}, John H. Lacey^a, Kristina Jones^a, Michael Scherer^a, Richard Compton^b

^a Impaired Driving Center, Pacific Institute for Research and Evaluation, 11720 Beltsville Drive, Suite 900, Calverton, MD 20705-3111, United States

^b National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590, United States

ARTICLE INFO

Article history:

Received 25 May 2012

Received in revised form

14 November 2012

Accepted 14 November 2012

Available online 21 December 2012

Keywords:

DUI

DWI

Drugged driving

Drug prevalence

Impaired driving

BrAC limit

ABSTRACT

Background: Studies of drinking drivers in alcohol-related crashes have shown that high breath-alcohol concentrations (BrACs) are associated with illegal drug use. Until the 2007 National Roadside Survey (NRS), the prevalence of drugs among drinking drivers on U.S. roads was unknown. Using NRS data, we explore how many drivers with positive BrACs may also be using drugs and their significance to current drinking-driving enforcement procedures.

Methods: Based on a stratified, random sample covering the 48 U.S. contiguous states, we conducted surveys on weekend nights from July–November 2007. Of the 8384 eligible motorists contacted, 85.4% provided a breath sample; 70.0%, an oral fluid sample; and 39.1%, a blood sample. We conducted regression analyses on 5912 participants with a breath test and an oral fluid or blood test. The dependent variables of interest were illegal drugs (cocaine, cannabinoids, street drugs, street amphetamines, and opiates) and medicinal drugs (prescription and over-the-counter).

Results: 10.5% of nondrinking drivers were using illegal drugs, and 26 to 33% of drivers with illegal BrACs (≥ 0.08 g/dL) were using illegal drugs. Medicinal drug use was more common among nondrinking drivers (4.0%) than among drivers with illegal BrACs (2.4%).

Conclusions: The significant relationship between an illegal BrAC and the prevalence of an illegal drug suggests as many as 350,000 illegal drug-using drivers are arrested each year for DWI by U.S. alcohol-impaired driving enforcement. These drug-using drivers need to be identified and appropriate sanctions/treatment programs implemented for them in efforts to extend per se laws to unapprehended drug users.

© 2012 Elsevier Ireland Ltd. All rights reserved.

1. Introduction

Worldwide attention to drugged driving has increased recently. European concern with drug-impaired driving led to the 2006 launch of an 18-nation research project on driving under the influence of drugs (DRUID), which is designed to support drugged-driving legislation in the European Union (Berghaus et al., 2010; Hels et al., 2011; Krismann et al., 2010; Schulze et al., 2011). In Australia, random roadside breath testing for alcohol has been extended to random testing for drugs via oral-fluid analysis (Boorman and Owens, 2010; Boorman and Swann, 2010). The U.S. Office of National Drug Control Policy (ONDCP, 2010) has issued a call for all states to enact per se drugged-driving laws aimed at reducing drugged-driving by 10% in 2015. This action reflected the increasing percentage of drug-positive fatally injured drivers in the United States (National Highway Traffic Safety Administration

[NHTSA], 2010) and the increasing prevalence of drug-using drivers as evidenced in the U.S. 2007 National Roadside Survey (NRS; Lacey et al., 2009b). Currently, 17 states have enacted per se drugged-driving laws (Lacey et al., 2011; Walsh, 2009).

Enforcement of drugged-driving laws is restrained in the United States compared to Australia and some other industrialized countries where motorists can be stopped at random for a drug-screening test. In the United States, vehicles can only be stopped for cause, and a test can only be required if there is sufficient evidence of impaired driving to make an arrest. Thus, the current U.S. drugged-driving enforcement system functions primarily as an adjunct to the driving-while-intoxicated (DWI) by alcohol enforcement program, as most officers patrolling the highways are trained to detect drunk drivers, not drugged drivers. Drivers arrested in the field are transported to the police station for an alcohol test. Normally, if the driver's breath-alcohol concentration (BrAC) is ≥ 0.08 g/dL (grams per deciliter), no further tests are conducted, as a conviction can be obtained based on the BrAC result. Typically, police only seek a drug test if the BrAC is < 0.08 g/dL. Even the testing of drivers with BrACs below 0.08 is limited because of the expense (Compton et al., 2009). Further, if a test is performed and the suspect is convicted of driving while impaired by a drug other

[☆] Supplementary material can be found by accessing the online version of this paper at <http://dx.doi.org> and by entering doi:...

* Corresponding author. Tel.: +301 755 2720; fax: +301 755 2799.

E-mail address: voas@pire.org (R.B. Voas).

than alcohol, the court record may be unclear because the offense is recorded as a “DWI,” which does not distinguish between impairment by alcohol and impairment by other drugs. Consequently, the number of drivers currently being removed from the roadway for drug impairment is unknown (Compton et al., 2009).

This limitation in our knowledge is important to policy makers considering the ONDCP initiative. Evidence is strong that drug use by drivers is associated with alcohol consumption. For example, Ward and Dye (1999), in a summary of 20 epidemiological studies of drivers’ cannabis use, found approximately 80% of marijuana users also used alcohol. Clearly, U.S. DWI alcohol enforcement programs are apprehending some drugged drivers (Maxwell et al., 2009; Smith et al., 2002), but the actual number is unknown. Moreover, it is possible that U.S. DWI enforcement identifies the drug users with the highest crash risk. The combination of drugs and alcohol appears to significantly increase the crash risk over alcohol alone (Drummer et al., 2004; Dussault et al., 2002; Gadegbeku and Amoros, 2010; Hels et al., 2011; Movig et al., 2004). In a summary of the relative risk of drugged drivers in the DRUID studies, Hels et al. (2011) reported that alcohol combined with other drugs typically fell into the “extremely high risk” category for crash involvement.

Presumably, in responding to the ONDCP initiative, U.S. policy makers will consider ways to increase the number of drugged drivers apprehended under current enforcement procedures; for example, by more testing of drivers with BrACs below 0.08. They will need to consider the tradeoff between devoting extra resources to the current enforcement system, thereby increasing both alcohol and related drug arrests, and using extra resources for additional officer training and drug screener devices to establish a special system for drug enforcement. Determining the extent to which the current U.S. DWI enforcement program that principally targets alcohol-impaired drivers results in the arrest of offenders who also use drugs will help inform such decisions.

Although the actual number of drug users currently arrested in the United States is obscured by the failure to test all arrestees, an opportunity to study the principal population from which those arrestees are drawn, nighttime weekend drivers, was provided by the 2007 National Roadside Survey (NRS; Lacey et al., 2011). That stratified random sample of weekend drivers on the roads of the 48 contiguous states collected breath samples to measure BrACs and oral-fluid samples to measure drug use. Though data were collected on Friday mornings and afternoons, we used only the nighttime data collected between 10 PM and 3 AM on Fridays and Saturdays because those are the primary times when DWI arrests occur. Alcohol-impaired driving can occur at any time; however, a century of experience has demonstrated that most drinking and driving occurs on weekend evenings. Consequently, those are the periods when police departments implement special alcohol enforcement patrols and sobriety checkpoints. We focused on weekend nights because the 2007 NRS data illustrated that 12.4% of the nighttime drivers had positive BrACs but only 1.1% of daytime drinkers had positive BrACs (Lacey et al., 2009a). Additionally, the occurrence of a crash during nighttime hours has long been used as a surrogate measure for alcohol involvement (Voas et al., 2009).

In this study, we focused on the principal target group of the U.S. impaired-driving enforcement program, weekend nighttime drivers, to estimate the number of drug users likely to be among the arrestees for DWI. Specifically, we investigated the four research questions: (a) What percentage of weekend nighttime drivers with illegal (≥ 0.08) BrACs also were using drugs? These are the offenders typically convicted of an alcohol offense and not tested for drugs. (b) What percentage of weekend nighttime drivers with positive BrACs below the illegal limit (< 0.08) also were using drugs? These are the offenders who are usually but not always tested for drugs. (c) What are the major drugs of abuse used by weekend nighttime drivers with positive BrACs? These are the drug users

likely to be affected by increasing current DWI enforcement efforts. (d) How many weekend nighttime drivers are using and possibly abusing prescription and over-the-counter drugs? This is significant because of the need to consider protections for prescription users in the enforcement of per se laws that make any measurable amount of a drug in a driver’s system an offense (Voas et al., 2012).

2. Methods

2.1. Survey procedures

The 2007 NRS sampling plan and survey procedures (approved by the Pacific Institute for Research and Evaluation’s Institutional Review Board) are fully described in Lacey et al. (2011) and in Supplementary Material. The survey involved police stopping motorists at 300 locations nationwide and directing them into safe off-road locations for an interview by specially trained survey personnel. Potential participants were assured that they had done nothing wrong and had been randomly selected for participation in an anonymous, voluntary national survey. Interviewers briefly described the purpose of the research and the participant’s role in the survey, which was to answer a brief set of questions and take a breath test. They were informed that they could earn up to \$65 for some additional portions of the survey.

The survey began with a set of 22 questions covering basic demographics, annual mileage, origin and destination of their current trip, drinking, and drinking and driving; a breath sample was then collected. After completing this initial segment of the survey, which took about 5 min, participants provided an oral-fluid sample by holding the collection device under their tongues for 3–5 min. While providing that sample, participants completed a questionnaire covering drug use, drug-use disorders, alcohol-use disorders, and other topics (Lacey et al., 2009b).

2.2. Response rate

Of the 8537 nighttime drivers entering the survey sites, 8384 were eligible to participate, drivers aged 15 and younger and commercial drivers were ineligible. Of the eligible drivers, 6920 (82.50%) were interviewed and 7159 (85.45%) breath tested; some drivers agreed to the breath test but did not have time for an interview. In the second phase, we collected 5869 (70.0%) oral-fluid samples and 3276 blood tests from the 8384 eligible drivers. A total of 5908 drivers had a breath-test result and either an oral-fluid or blood-test analysis result, or both.

2.3. Measures

2.3.1. Driver’s BrAC. The CMI, Inc., Intoxilyzer® 400, which is on NHTSA’s Conforming Products List for Evidential Breath-Test Devices (NHTSA, 1993), was used to collect evidentiary BrACs of participating drivers. In addition, a passive alcohol sensor (PASVr.®, Fredericksburg, Virginia), which detects and measures alcohol in the air in front of the driver’s face, was used to alert the interviewer to a driver who might need assistance. A high reading resulted in the initiation of an impaired-driving protocol, designed to keep intoxicated drivers off the road (Lacey et al., 2011). That measure also provided a basis, along with gender and time of night, for imputing BrACs for participants for whom evidentiary BrACs were not available. Overall, we imputed 13% of the BrACs in this study (Lacey et al., 2009c).

2.3.2. Driver drug use. We collected approximately 1 ml of saliva from each participant using the Quantisal collection device (manufactured by Immulysis Corporation, Pomona, California). The

Download English Version:

<https://daneshyari.com/en/article/7507747>

Download Persian Version:

<https://daneshyari.com/article/7507747>

[Daneshyari.com](https://daneshyari.com)