

Library Watch on driving

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Marketing and alcohol-related traffic fatalities: Impact of alcohol advertising targeting minors.

Smith RC; Geller ES. *Journal of Safety Research* 40(5): 359-364, 2009. (35 refs.)

Problem: Alcohol-related youth traffic fatalities continue as a major public-health concern. While state and federal laws can be useful in tackling this problem, the efficacy of many laws has not been empirically demonstrated. We examined the impact of state laws prohibiting alcohol advertising to target minors. **Method:** Using statistics obtained from the Fatality Analysis Reporting System (FARS), youth alcohol-related, single-vehicle, driver traffic fatalities were compared by state as a function of whether the state has a law prohibiting alcohol advertising that targets minors. **Results:** Overall, states possessing this law experienced 32.9% fewer of the above specified traffic fatalities. **Discussion and Impact on Industry:** The results suggest that not only are youth drinking rates affected by alcohol advertisements targeting youth, but also drink-driving behaviors. Indeed, we estimate that if this type of legislation were adopted in the 26 states that do not prohibit targeting of minors with alcohol advertising, then 400 youth lives could be saved annually. Copyright 2009, National Safety Council.

Failure to reduce drinking and driving in France: A 6-year prospective study in the GAZEL cohort.

Constant A; Lafont S; Chiron M; Zins M; Lagarde E; Messiah A. *Addiction* 105(1): 57-61, 2010. (22 refs.)

Aim: An unprecedented decline in alcohol consumption and road mortality has been observed recently in France, but it is still unclear whether or not these changes affected driving while alcohol-intoxicated (DWI). The objective of the study was to estimate prospectively trends of excessive speed on the roads, alcohol consumption and DWI between 2001 and 2007 in a large cohort of experienced drivers. **Methods:** Participants were current employees or recent retirees of the French national electricity and gas company, who volunteered to participate in a research cohort established in 1989 under strict conditions of anonymity. An annual cohort questionnaire is sent to participants that includes two

questions about overall alcohol consumption. In 2001 and 2007, 10 684 participants reported their driving behaviours using the same self-administered questionnaire. **Results:** Between 2001 and 2007, the proportion of participants (n = 10 684) who reported having driven at speeds at least 20 km/hour above the limit decreased from 23.7% to 4.1% in built-up areas ($P < 0.001$), from 34.3% to 9.3% on rural roads ($P < 0.001$) and from 24.3% to 2.7% on highways ($P < 0.001$). Regular and non-regular excessive alcohol consumption decreased from 22.7% to 19.7% and from 18.0% to 14.9%, respectively, whereas DWI increased from 22.9% to 25.3% over the same period ($P < 0.001$). **Conclusions:** A recent crackdown on road violations by the French government has failed to deter DWI. Given that DWI seems to be a sporadic and rarely punished behaviour, its prevention requires more coercive measures, such as using a breath alcohol ignition interlock device. Copyright 2010, Society for the Study of Addiction to Alcohol and Other Drugs.

Ethnic differences in drinking outcomes following a brief alcohol intervention in the trauma care setting.

Field CA; Caetano R; Harris TR; Frankowski R; Roudsari B. *Addiction* 105(1): 62-73, 2010. (54 refs.) **Background:** Evidence suggests that brief interventions in the trauma care setting reduce drinking, subsequent injury and driving under the influence (DUI) arrest. However, evidence on the effectiveness of these interventions in ethnic minority groups is lacking. The current study evaluates the efficacy of brief intervention among whites, blacks and Hispanics in the United States. **Methods:** We conducted a two-group parallel randomized trial comparing brief motivational intervention (BMI) and treatment as usual with assessment (TAU+) to evaluate treatment differences in drinking patterns by ethnicity. Patients were recruited from a level 1 urban trauma center over a 2-year period. The study included 1493 trauma patients, including 668 whites, 288 blacks and 537 Hispanics. Hierarchical linear modeling was used to evaluate ethnic differences in drinking outcomes including volume per week, maximum amount

consumed in 1 day, percentage days abstinent and percentage days heavy drinking at 6- and 12-month follow-up. Analyses controlled for age, gender, employment status, marital status, prior alcohol treatment, type of injury and injury severity. Special emphasis was given to potential ethnic differences by testing the interaction between ethnicity and BMI. Results: At 6- and 12-month follow-up, BMI significantly reduced maximum amount consumed in 1 day ($P < 0.001$; $P < 0.001$, respectively) and percentage days heavy drinking ($P < 0.05$; $P < 0.05$, respectively) among Hispanics. Hispanics in the BMI group also reduced average volume per week at 12-month follow-up ($KH2 = 6.8$, $df = 1$, $P < 0.01$). In addition, Hispanics in TAU+ reduced maximum amount consumed at 6- and 12-month follow-up ($P < 0.001$; $P < 0.001$) and volume per week at 12-month follow-up ($P < 0.001$). Whites and blacks in both BMI and TAU+ reduced volume per week and percentage days heavy drinking at 12-month follow-up ($P < 0.001$; $P < 0.01$, respectively) and decreased maximum amount at 6- ($P < 0.001$) and 12-month follow-up ($P < 0.001$). All three ethnic groups In both BMI and TAU+ reduced volume per week at 6-month follow-up ($P < 0.001$) and percentage days abstinent at 6- ($P < 0.001$) and 12-month follow-up ($P < 0.001$). Conclusions: All three ethnic groups evidenced reductions in drinking at 6- and 12-month follow-up independent of treatment assignment. Among Hispanics, BMI reduced alcohol intake significantly as measured by average volume per week, percentage days heavy drinking and maximum amount consumed in 1 day. Copyright 2010, Society for the Study of Addiction to Alcohol and Other Drugs.

Alcohol and driver fatalities in Israel: An examination of the current problem.

Jaffe DH; Savitsky B; Zaistev K; Hiss J; Peleg K.

Israel Medical Association Journal 11(12): 725-729, 2009. (24 refs.)

Background: The role of alcohol in driver fatalities in Israel is unknown, and monitoring blood alcohol concentration among drivers is not routine. Moreover, over the past decade, self-reported access to and consumption of alcohol in Israel has been on the rise. Objectives: To use available data to characterize alcohol-related driver fatalities. Methods: The prevalence of alcohol-related driver fatalities were estimated for 443 drivers, aged 17+ years, using data from Israel's National Center for Forensic Medicine for 2000-2004. Results: Between 8% and 17% of driver fatalities had a BAC ≥ 0.05 g/dl. Most drivers with alcohol exceeding this level were males aged 21-30 years who died on weekends. Recreational and/or medicinal drugs were found in 6%-11% of driver

fatalities. Mean BAC among driver fatalities with BAC ≥ 0.05 g/dl was threefold higher than the legal driving limit and appears to be increasing with time. Conclusions: In light of the evidence suggesting an increasing mean BAC over time as well as reported increasing trends in access to alcohol and consumption, this study should serve as a basis for future research to comprehensively characterize the extent of this problem. Copyright 2009, Israel Medical Association.

Relationship between blood and urine alcohol concentrations in apprehended drivers who claimed consumption of alcohol after driving with and without supporting evidence.

Jones AW; Kugelberg FC. *Forensic Science International* 194(1-3): 97-102, 2010. (34 refs.)

For various reasons, many people suspected of driving under the influence of alcohol (DUIA) are not apprehended sitting behind the wheel, but some time after the driving. This gives them the opportunity to claim they drank alcohol after the time of driving or after they were involved in a road-traffic crash. Alleged post-offence drinking is not easy for the prosecution to disprove, which often means that the DUIA charge is dropped or the person is acquitted if the case goes to trial. The routine practice of sampling and measuring the concentration of alcohol in blood (BAC) and urine (UAC) and calculating urine/blood ratios (UAC/BAC) and the changes in UAC between two successive voids furnishes useful information to support or challenge alleged drinking after driving. We present here a retrospective case series of DUIA offenders ($N = 40$) in half of which there was supporting evidence of an after-drink (eye witness or police reports) and in the other half no such evidence existed apart from the suspect's admission. When there was supporting evidence of an after-drink, the UAC/BAC ratio for the first void was close to or less than unity (mean 1.04, median 1.08, range 0.54-1.21) and the UAC increased by 0.21 g/L (range 0.02-0.57) between the two voids. Without any supporting evidence of post-offence drinking the mean UAC/BAC ratio was 1.46 (range 1.35-1.93) for the first void, verifying that absorption and distribution of alcohol in all body fluids and tissues was complete. In these cases, the UAC between successive voids decreased by 0.25 g/L on average (range 0.10-0.49), indicating the post-absorptive phase of the BAC curve. Long experience from investigating claims of post-offence drinking leads us to conclude that in the vast majority of cases this lacks any substance and is simply a last resort by DUIA offenders to evade justice. Unless supporting evidence exists (eye

witness, police reports, etc.) of post-offence drinking the courts are encouraged to ignore this defence argument. Copyright 2010, Elsevier Science.

Brief motivational interviewing for DWI recidivists who abuse alcohol and are not participating in DWI intervention: A randomized controlled trial.

Brown TG; Dongier M; Ouimet MC; Tremblay J; Chanut F; Legault L; Kin NMKNY. *Alcoholism: Clinical and Experimental Research* 34(2): 292-301, 2010. (70 refs.)

Background: Driving while impaired (DWI) recidivists with unresolved alcohol use problems pose an ongoing risk for traffic safety. Following conviction, many do not participate in mandated alcohol evaluation and intervention programs, or continue to drink problematically after being relicensed. This study investigated if, in DWI recidivists with alcohol problems and not currently involved in DWI intervention, Brief Motivational Interviewing (BMI) produced greater reductions in risky drinking at 6- and 12-month follow-up compared to an information-advice control condition. Additional analyses explored whether BMI was associated with greater readiness to change, subsequent substance abuse treatment service utilization, and satisfaction compared to the control condition. Methods: Male and female recidivists with drinking problems and not currently engaged in DWI intervention were recruited, evaluated, and then randomly assigned to receive 1 of 2 manualized interventions: 30-minute BMI session or information-advice. Participants, interviewers, researchers, and statisticians were blind to assignment. Outcomes were changed in percent of risky drinking days (i.e., ≥ 3 standard drinks/d for males; ≥ 2 for females) in the previous 6 months derived from the Timeline Followback, biomarkers of alcohol abuse (GGT, AST, ALT, MCV) by blood assay, and alcohol abuse-related behaviors using the MMPI-Mac scale. Data from the Readiness to Change Questionnaire, a substance abuse service utilization questionnaire, and the Client Satisfaction Scale were also collected. Results: Analyses revealed significant declines in risky drinking with both interventions. BMI ($n = 92$) resulted in a 25% reduction in risky drinking days at 12-month follow-up, which compared to the control intervention ($n = 92$) represented a significant decline from 6-month levels. Exposure to BMI also produced significantly greater improvement at 6-month follow-up in a biomarker of alcohol abuse and a behavioral measure related to recidivism risk. Exploration of readiness to change, substance abuse service utilization, and satisfaction with intervention indicated a perception of BMI being more useful in coping with

problems. Conclusions: Brief MI approaches warrant further implementation and effectiveness research as an opportunistic DWI intervention strategy to reduce risks associated with alcohol use outside of clinical and DWI relicensing settings. Copyright 2010, Research Society on Alcoholism.

Adolescent and young adult crash risk: Sensation seeking, substance use propensity and substance use behaviors.

Dunlop SM; Romer D. *Journal of Adolescent Health* 46(1): 90-92, 2010. (9 refs.)

In a national youth sample, the propensity to use substances was more strongly related to motor vehicle crashes than use of any specific substance studied (cigarette, alcohol, marijuana). Substance use propensity was associated with sensation seeking, suggesting that increased crash risk for these youth is likely a result of general risk-taking tendencies. Copyright 2010, Society for Adolescent Medicine.

Psychosocial characteristics of drunk drivers assessed by the Addiction Severity Index: Prediction of relapse.

Hubicka B; Laurell H; Bergman H. *Scandinavian Journal of Public Health* 38(1): 71-77, 2010. (25 refs.)

Aims: To investigate psychosocial characteristics and problems of a representative sample of Swedish drunk drivers with special consideration of the gender of the driver; analyze criminal records of the drivers before and after enrolment in the study; identify psychosocial predictors of relapse to drunk driving. Methods: Psychosocial characteristics were assessed by the Addiction Severity Index (ASI). Alcohol problems were additionally assessed by the Alcohol Use Disorders Identification Test (AUDIT). Criminal records were collected for the five year period before the enrolment, and for the subsequent two years, from Sweden's official crime statistics. Results: About half of the investigated drivers had other psychosocial problems besides the drunk driving offence. Female drivers had more alcohol, drug, psychiatric and relational problems, including with parents when growing up, than male drivers, but less previous and subsequent criminality. Heavily drunk drivers (blood alcohol concentration $\geq 0.1\%$) had more problems with alcohol, legal status and employment and support than the other drunk drivers. Problems with legal status, family and social relations and alcohol use increased the risk of relapse in drunk driving, while medical problems seemed to be a protective factor. Different ASI risk factors were identified for relapse in either traffic offences or other crimes. Conclusions: As well as the drunk driving offence, drunk drivers often

have other psychosocial problems, female drivers in particular. Already the blood alcohol concentration per se gives some indication of the psychosocial problem profile of a drunk driver and the ASI profile has some prognostic value for relapse in drunk driving. Copyright 2010, Sage Publications.

Trends in drug use of Scottish drivers arrested under Section 4 of the Road Traffic Act: A 10 year review.

Officer J. *Science & Justice* 49(4): 237-241, 2009. (12 refs.)

A Study of Section 4 RTOA cases Submitted to the SPSA forensic science laboratory in Edinburgh over a 12 year period was carried out. The main aims of the study were to identify the most frequently encountered drugs and to determine if there were any major drug trends from the data collected. Three groups of cases from 1996 to 2000 (102 cases), 2003 (26 cases) and 2008 (295 cases) were examined. The large increase in submissions was mainly due to the introduction of SPSA, whereby the laboratory began to carry out the analysis for all criminal and RTOA cases in Scotland. The preliminary results for the 8 drug groups (amphetamine and related compounds, benzodiazepines, cannabinoids, cocaine, methadone, methylamphetamine and related compounds, morphine and opiates) identified a number of major trends: cannabinoids were consistently present in 40-50% of cases: benzodiazepines more than doubled in frequency to over 80%; there has been a significant increase in cases positive for morphine and methadone - up from less than 2% each to 31% and 23% respectively; there has been an increase in the number of cases screening positive for opiates (19% to 29%); and the frequency of positive cases for cocaine, amphetamine and methylamphetamine remained unchanged (approximately 22%, 6% and 5% respectively). A significant finding was the huge increase in polydrug use. The number of cases positive for 4 or more drug groups has increased from 4% in 1996-2000 to 25% in 2008. In comparison, in the 1996-2000 group 72% of cases were only positive for one drug group compared to 17% in 2008. For those cases which were negative for all 8 drug groups, a

screen for potentially impairing prescription and over the counter medicines was carried out. The most frequently encountered medicines were sedatives, sedative antidepressants, sedative antihistamines and antiemetics. These were often found in conjunction with alcohol below the legal limit for driving. Copyright 2009, Forensic Science Society.

A comparison of web-based and telephone surveys for assessing traffic safety concerns, beliefs, and behaviors.

Beck KH; Yan AF; Wang MQ. *Journal of Safety Research* 40(5): 377-381, 2009. (16 refs.)

Introduction: The purpose of this investigation was to compare the results of a web-based and a telephone interview survey measuring driver concerns about a variety of traffic safety issues, their beliefs, and specific driving behaviors. Method: State-wide, annual random digit-dial telephone surveys and web-based surveys were conducted in Maryland. A total of 1,700 drivers were surveyed by telephone and 6,806 took a web survey. Results: Telephone respondents were more likely to be female and older. Web respondents were more likely to be white and not Latino/Hispanic. After controlling for demographic differences, telephone survey respondents were more likely to be concerned about traffic safety. They were more likely to believe that sobriety checkpoints reduce drunk driving (OR = 2.18, 95% CI 1.94, 2.45), they would be ticketed for not wearing a seat belt (OR = 1.26, 95% CI 1.12, 1.43), and they would be stopped by the police if they drove after drinking too much (OR = 1.17, 95% CI 1.03, 1.32). They were less likely to report a variety of risky behaviors including using a cell phone while driving (OR = .54, 95% CI .48, .61) and driving 10+ mph over the speed limit (OR = .81, 95% CI .72, .91), but were more likely to report having been ticketed for a moving violation in the last month (OR = 2.22, 95% CI 1.70, 2.90). Suggestions are offered for overcoming potential sources of sampling bias. Impact on Industry: Web-based surveys produce substantially different results than random-digit-dial telephone surveys, when used for public assessments of traffic safety concerns and behaviors. Copyright 2009, National Safety Council.