

Alcohol and Injury – Policy Statement: Nova Scotia Trauma Advisory Council (NSTAC)

- **Health care practitioners see the tragic consequences of impaired driving and other alcohol associated injuries each day; this reality is particularly evident in the provinces' emergency departments and in the setting of major trauma.**
- **About 40 percent of all traffic deaths and 50,000 traffic injuries are alcohol related in Canada.**
- **Virtually all individuals show impairment at a blood alcohol content (BAC) level of 0.08 grams percent or 17 mmol/L.**
- *The NSTAC supports alcohol concentration testing of drivers by law enforcement officials in crashes involving deaths or serious injuries.*
- *The NSTAC supports empiric testing of major trauma patients for alcohol concentration (in the emergency department) in order to assist in clinical assessment of the patient (as decided by the attending provider) and to aid in identifying patients in need of counseling interventions while in hospital. NSTAC recognizes the high rate of relapse for persons involved in driving under the influence offenses, and supports efforts by emergency physicians, other health care practitioners and society to identify and arrange treatment for people experiencing problem alcohol use. Empiric use of ethanol levels in the major trauma patient has been shown to identify these patients. The NSTAC recognizes that screening of other injured patients with tools such as the CAGE questionnaire can also identify high-risk patients for alcohol intervention programs.*
- *NSTAC also recognizes that other drugs such as cannabis can alone, and in conjunction with alcohol, further compromise safe driving. Future research will further elucidate the dangers of cannabis and its association with impaired driving and with other injuries.*

Nova Scotia Trauma Advisory Council, May 28, 2004

References

- (1) Dubowski, K.M. Absorption, distribution and elimination of alcohol: Highway safety aspects. *Journal of Studies on Alcohol* (Suppl. 10):98-108, July 1985.
- (2) Voas, R.B., & Lacey, J.H. Drunk driving enforcement, adjudication, and sanctions in the United States. In: Wilson, J.R., & Mann, R.E., eds. *Drinking and Driving: Advances in Research and Prevention*. New York: Guilford Press, 1990. pp. 116-158.
- (3) Starmer, G.A. Effects of low to moderate doses of ethanol on human driving-related performance. In: Crow, K.E., & Batt, R.D., eds. *Human Metabolism of Alcohol: Vol. I. Pharmacokinetics, Medicolegal Aspects, and General Interests*. Boca Raton: CRC Press, 1989. pp. 101-130.
- (4) Howat, P.; Sleet, D.; & Smith, I. Alcohol and driving: Is the 0.05% blood alcohol concentration limit justified? *Drug and Alcohol Review* 10(2):151-166, 1991.
- (5) Moskowitz, H.; Burns, M.M.; & Williams, A.F. Skills performance at low blood alcohol levels. *Journal of Studies on Alcohol* 46(6):482-485, 1985.
- (6) Hindmarch, I.; Bhatti, J.Z.; Starmer, G.A.; Mascord, D.J.; Kerr, J.S.; & Sherwood, N. The effects of alcohol on the cognitive function of males and females and on skills relating to car driving. *Human Psychopharmacology* 7(2):105-114, 1992.
- (7) Finnigan, F., & Hammersley, R. The effects of alcohol on performance. In: Smith, A.P., & Jones, D.M., eds. *Handbook of Human Performance: Vol. 2. Health and Performance*. London, Academic Press, 1992. pp. 73-126.
- (8) Zador, P.L. Alcohol-related relative risk of fatal driver injuries in relation to driver age and sex. *Journal of Studies on Alcohol* 52(4):302-310, 1991.
- (9) Mayhew, D.R.; Donelson, A.C.; Beirness, D.J.; & Simpson, H.M. Youth, alcohol and relative risk of crash involvement. *Accident Analysis and Prevention* 18(4):273-287, 1986.
- (10) National Highway Traffic Safety Administration (NHTSA). *Traffic Safety Facts 1994: A Compilation of Motor Vehicle Crash Data from the Fatal Accident Reporting System and the General Estimates System*. Washington, DC: NHTSA, August 1995.
- (11) Hingson, R.; Heeren, T.; & Winter, M. Lower legal blood alcohol limits for young drivers. *Public Health Reports* 109(6):738-744, 1994.
- (12) Brown, I.D., & Groeger, J.A. Risk perception and decision taking during the transition between novice and experienced driver status. *Ergonomics* 31(4):585-597, 1988.
- (13) Jonah, B.A. Accident risk and risk-taking behaviour among young drivers. *Accident Analysis and Prevention* 18(4):255-271, 1986.

Nova Scotia Trauma Advisory Council, May 28, 2004

- (14) Waller, P.F., & Blow, F.C. Women, alcohol, and driving. In: Galanter, M., ed. *Recent Developments in Alcoholism: Vol. 12. Alcoholism and Women*. New York: Plenum Press, 1995.
- (15) Wells-Parker, E.; Popkin, C.L.; & Ashley, M. Drinking and driving among women: Gender trends, gender differences. In: Howard, J.; Martin, S.; Mail, P.; Hilton, M.; & Taylor, E., eds. *Alcohol and Women: Issues for Prevention Research*. National Institute on Alcohol Abuse and Alcoholism Research Monograph. Bethesda, MD: the Institute, in press.
- (16) O'Hanlon, J.F.; Vermeeren, A.; Uiterwijk, M.M.C.; van Veggel, L.M.A.; & Swijgman, H.F. Anxiolytics' effects on the actual driving performance of patients and healthy volunteers in a standardized test. *Neuropsychobiology* 31(2):81-88, 1995.
- (17) Linnoila, M., & Mattila, M.J. Drug interaction on psychomotor skills related to driving: Diazepam and alcohol. *Eur J Clin Pharmacol* 5:186-194, 1973.
- (18) Hoyumpa, A.M., Jr. Alcohol interactions with benzodiazepines and cocaine. In: Kreek, M.J., & Stimmel, B., eds. *Dual Addiction: Pharmacological Issues in the Treatment of Concomitant Alcoholism and Drug Abuse*. New York: Haworth Press, 1984. pp. 21-34.
- (19) Chan, A.W.K. Effects of combined alcohol and benzodiazepine: A review. *Drug and Alcohol Dependence* 13(4):315-341, 1984.
- (20) Doria, J. Alcohol-drug interactions: Effects on driving performance. *Alcohol Health & Research World* 14(1):16-17, 1990.
- (21) Vogel-Sprott, M. *Alcohol Tolerance and Social Drinking: Learning the Consequences*. New York: Guilford Press, 1992.
- (22) Glencross, D.; Hansen, J.; & Piek, J. The effects of alcohol on preparation for expected and unexpected events. *Drug and Alcohol Review* 14(2):171-177, 1995.
- (23) Sdao-Jarvie, K., & Vogel-Sprott, M. Response expectancies affect the acquisition and display of behavioral tolerance to alcohol. *Alcohol* 8(6):491-498, 1991.
- (24) Nichols, J.L. Treatment versus deterrence. *Alcohol Health & Research World* 14(1):44-51, 1990.
- (25) Wells-Parker, E.; Bangert-Drowns, R.; McMillen, R.; & Williams, M. Final results from a meta-analysis of remedial interventions with drink/drive offenders. *Addiction* 90(7):907-926, 1995.
- (26) Sadler, D.D.; Perrine, M.W.; & Peck, R.C. The long-term traffic safety impact of a pilot alcohol abuse treatment as an alternative to license suspensions. *Accident Analysis and Prevention* 23(4):203-224, 1991.
- (27) Wells-Parker, E.; Landrum, J.W.; & Topping, J.S. Matching the DWI offender to an effective intervention strategy: An emerging research agenda. In: Wilson, R.J., & Mann, R.E., eds. *Drinking and Driving: Advances in Research and Prevention*. New York: Guilford Press, 1990. pp. 267-289.
- (28) McDonald AJ 3rd, Wang N, Camargo CA Jr. US emergency department visits for alcohol-related diseases and injuries between 1992 and 2000. *Arch Intern Med*. 2004 Mar 8;164(5):531-7.

Nova Scotia Trauma Advisory Council, May 28, 2004

- (29) Vol. 6, No. 2, March / mars 2004, Canadian Journal of Emergency Medicine, Proportion of injured alcohol-impaired drivers subsequently convicted of an impaired driving criminal code offence in British Columbia, Roy A. Purssell, MD;* Mark Yarema, MD;† Jean Wilson, PhD;‡ Ming Fang, MA;§ Richard Simons, MD;¶ Sharon Kasic, CCHRA(C);** Riyad B. Abu-Laban, MD, MHS;†† Jeffrey Brubacher, MD;‡‡ Ioana Lupu, BSc§§
- (30) Magruder-Habib K, Stevens HA, Alling WC. Relative performance of the MAST, VAST, and CAGE versus DSM-III-R criteria for alcohol dependence. *J Clin Epidemiol.* 1993 May;46(5):435-41.
- (31) The Alcohol-Crash Problem in Canada: 2000, D.R. Mayhew, S. W. Brown, and H.M. Simpson, The Traffic Injury Research Foundation of Canada, Ottawa, Ontario. <http://www.tc.gc.ca/en/menu.htm>, Transport Canada
- (31) Movig KL, Mathijssen MP, Nagel PH, Van Egmond T, De Gier JJ, Leufkens HG, Egberts AC. Psychoactive substance use and the risk of motor vehicle accidents. *Accid Anal Prev.* 2004 Jul;36(4):631-6.
- (32) Gentilello LM, Samuels PN, Henningfield JE, Santora PB. Alcohol screening and intervention in trauma centers: confidentiality concerns and legal considerations. *J Trauma.* 2005 Nov;59(5):1250-4; discussion 1254-5.
- (33) Gentilello LM. Confronting the obstacles to screening and interventions for alcohol problems in trauma centers. *J Trauma.* 2005 Sep;59(3 Suppl):S137-43; discussion S146-66