Effects of Alcohol Countermeasures in Quebec on the Risk of Alcohol-Related Accidents

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Introduction: For almost 40 years, public policies about DUI have relied greatly on the results of the Grand Rapids Study (Borkenstein, 1974), which showed an increased risk of accident as the BAC increase, and on many studies replicating this study revealing age and gender differences.

Since 1997, new licensed drivers in Quebec are subject to a two year probationary period while they have a maximum of four demerits points and 0.00% BAC legal limit. Also we are facing a situation where the proportion of killed drivers with BAC over 0.08% shifted from 40% ten years ago to a minimum of 22.5% in 1999.

Objectives: The goal of this study is to analyze the alcohol-related risk of fatally injured drivers in a context of general decreasing contribution of alcohol to accident and the special case of graduated licensing system.

Methods: A major epidemiological study on the incidence of drugs in fatal collisions began in 1999 in Quebec. This study integrate two different analyses: a case/control study comparing fatally injured drivers (about 700) with a sample of drivers intercepted in a roadside survey (11,574) and a responsibility analysis for killed drivers with the method developed by Terhune (1992). Those two analyses allow to replicate Borkenstein’s work and, as in the German study (Kruger et al, 1995), make sure that risk estimates are made only with drivers at-fault in the accident.

Results: BAC data from the coroners for year 2000 are available since September and responsibility analysis is on its way and should be finished in late December. So the authors will be able to complete the analysis before March 15th, deadline for the full manuscript.

Discussion and Conclusion: Conclusions and discussion will compare risk of accident estimates in Quebec with those of previous studies in the context of graduated licensing system and the major decrease in alcohol related accident in Quebec. Also, source of data for responsibility is different (information from the police for the German study and evaluation by a panel of judges without knowledge of drugs consumption for Quebec study) so results may vary.