



## LOWER BAC LIMITS FOR YOUTH Evaluation of the Maryland .02 Law

Alcohol continues to be associated with a substantial number of highway crashes and deaths among those under 21 years of age. The objective of this study was to determine the effects of special drinking-driving sanctions aimed at youth. A secondary objective was to examine the extent to which a public information and education (PI&E) program about the sanction could increase its effectiveness. These objectives were achieved by evaluating a Maryland law which prohibits driving by those under 21 with a Blood Alcohol Concentration (BAC) of .02 or more. The components of the study were:

- A pre/post evaluation of the statewide impact of the Maryland 0.02 law on the number of crash-involved drivers under 21 judged "Had Been Drinking" (HBD) by the investigating officer.
- The development of a TV, radio and print PI&E campaign to publicize the existence and nature of the 0.02 BAC law and its associated penalties in six selected counties.
- An evaluation of the additive benefits of the PI&E campaign in the six selected experimental counties by comparing their monthly distribution of crash-involved drivers under 21 judged HBD with the distribution in two comparison counties which did not receive the PI&E.

The Maryland 0.02 BAC sanction was enacted July 1988 and went into effect January 1, 1989. It is a license restriction which the Maryland Motor Vehicle Administration is required to place on all drivers under 21. The restriction makes it illegal for a young driver to operate a motor vehicle at a BAC of 0.02 or more. Violators can be penalized by license suspension, revocation and/or a fine up to \$500. After the law had

been in force six months, an added requirement was placed on the MVA to imprint driver licenses of those under 21 with the words *Under 21 Alcohol Restricted*.

The PI&E campaign in the experimental counties began in February 1990. Prior to the campaign, cooperating local universities surveyed youth in both the experimental and comparison counties about their knowledge of the sanction and exposure to PI&E. The survey was repeated after the campaign had been ongoing for approximately one month.

### Results

The first analyses were structured to examine the impact of the sanction statewide on the number of crash-involved drivers judged HBD. Several statistically significant time series models were developed based on the statewide data series of crash-involved drivers under 21 judged HBD. The significant model with the most traditional form showed an estimated decrease in the monthly mean number of crash-involved drivers under 21 judged HBD of 14.9 from the mean of 133 per month mean prior to adoption of the sanction. This is a reduction of approximately 11 percent. There was no significant reduction in the statewide data series associated with the introduction of the PI&E in the experimental counties.

In the experimental counties, the analysis showed a 21 percent reduction in crash-involved drivers under 21 judged HBD during the post-sanction period through January 1990, and an additional reduction of 30 percent in the post-PI&E period through December 1990. Among the comparison





counties, only the intervention associated with the January 1989 adoption of the law was significant: an estimated 26 percent reduction in the monthly mean.

The survey data supported the crash data findings: awareness of the law was relatively high even before the start of the PI&E program; and knowledge of the law increased in the experimental counties after application of the PI&E program but did not change in the comparison counties.

**Conclusions**

This study leads to the conclusion that the Maryland 0.02 BAC sanction for youth is a highly effective highway safety countermeasure. As initially implemented, the sanction was associated with a significant reduction of crash-involved HBD drivers under 21. This reduction was attributed to the adoption of the sanction, the "normal" publicity attendant to

the passage and implementation of the law and the imprinting of new licenses with the words *Under 21 Alcohol Restricted*.

The sanction combined with PI&E was associated with an estimated reduction in crash-involved HBD drivers under 21 years of age of approximately 50 percent in six experimental counties according to the analytic model selected. Thus the addition of localized PI&E *which emphasized the penalties for violation of the law* appeared to substantially increase the beneficial effects of the sanction.

A detailed report and a technical summary report, entitled *Lower BAC Limits For Youth: Evaluation Of The Maryland .02 Law* are now available. For additional information about this project, contact: Office of Program Development and Evaluation, NHTSA, NTS-30, 400 Seventh Street, S.W., Washington DC 20590.

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