Focus Area 26: Substance Abuse

Objective 26-25. Extend legal requirements for maximum blood alcohol concentration levels of 0.08 percent for motor vehicle drivers aged 21 years and older. Target = 51 states [State Data Source: California Department of Motor Vehicles, Research Notes – Summer 1997]

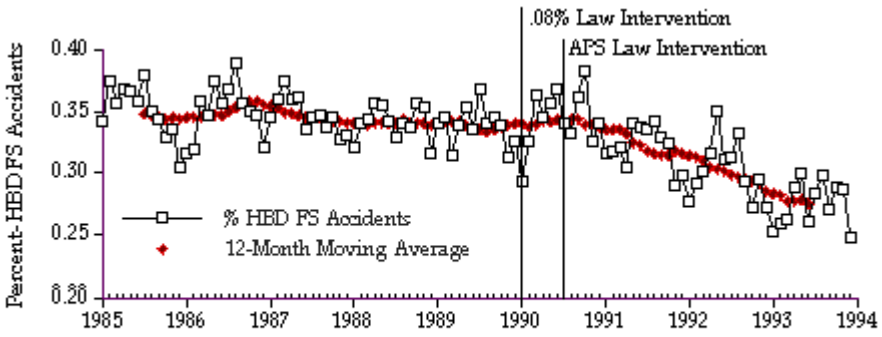
California laws lowering the legal definition of DUI impairment to 0.08% BAC and requiring the immediate license suspension of persons violating that law have proven to be effective in reducing the incidence of alcohol-involved accidents, according to a recent California Department of Motor Vehicles' Research and Development Branch publication. In 1990, the 0.08% blood alcohol concentration (BAC) limit and administrative license suspension laws were implemented in California and were expected to have a large potential for reducing the incidence of drunk driving. At the time, California was only the fourth state to introduce such a low BAC limit.

The administrative license suspension law imposed an immediate driver license suspension on DUI offenders whose BAC was in excess of the legal limit. This administrative per se (APS) action represents a more timely civil action, taken independently of the criminal DUI charge.

The APS law was expected to carry a strong deterrent potential since other studies have shown that license suspension is among the most effective DUI sanctions available in preventing subsequent DUI incidents. In the first five years of the law, over one million APS actions were taken in California.

Any impact of the new laws would be expected to be confined to accidents involving alcohol; therefore, we evaluated changes in the patterns of four categories of alcohol-related or nighttime fatal or injury accidents across three levels of accident severity which are likely to involve alcohol. Intervention time series analyses were used for assessing the laws' impact on monthly alcohol-related accidents from January 1985 through December 1993. We incorporated an appropriate nonalcohol-related accident series as a control in each analysis to produce a more valid assessment of the laws' effects on the accident series by adjusting for additional independent trends that might be present in the control series.

To illustrate the patterns of accidents that we assessed, the following plot shows one of the accident categories - i.e., the proportion of fatal and severe-injury accidents which were designated by police as had-been-drinking (HBD).



California "had-been-drinking" (HBD) fatal and severe-injury accidents as a proportion of total fatal and severe- injury accidents by month, 1985-1994.

In the analysis of the accidents depicted in the plot there was no evidence of a general deterrent effect immediately after the 0.08% law, but there was a significant abrupt decrease after the APS law, representing a 13% decrease in HBD accidents. When other economic and exposure variables were accounted for, the decrease reduced to 9%.

Since the two laws were implemented only six months apart, the analyses of the various accident categories could not completely disentangle the relative contributions of the two laws to the overall reductions in accidents. Consequently, it is best to view the impact of the two laws as an interrelated effect. Some of the major findings from the evaluation were:

- In general, all the alcohol-related accident measures showed a stronger impact of the APS law than the 0.08% law.
- The APS law was associated with significant 9% to 13% declines in the most sensitive HBD alcohol-related accident categories.
- There were no reductions in total HBD accidents attributable to the 0.08% law.
- Proportionately, the largest accident reductions occurred in the hour between 2 and 3 a.m., when a relatively high number of drivers are alcohol-impaired (since it is the first hour after California's bars are required to close). During that one hour, there was evidence of a 16.5% reduction in accidents attributable to the .08 law and a 15.5% reduction due to the APS law.
- Some, but not all, of the reductions were significant after accounting for additional socioeconomic factors.
- There was some evidence that accident reductions may have been bolstered by a media campaign begun one year after enacting the APS law.

While the general deterrent impact was only modest, we conducted a second evaluation which was limited to groups of drivers who were either arrested or convicted of a DUI offense either before or after the new laws. In that study,

reductions in subsequent accidents and DUI offenses among offenders affected by the laws were from 19.5% to 37.1% less than the pre-law rates. The laws were found to be highly effective in reducing accidents and recidivism among DUI offenders, whether or not the offenders were ever convicted of their offense. These specific effects on apprehended DUI offenders were, in fact, substantially larger than the general effect of the laws on the total drinking driving population, as reflected in the general deterrence study. Taken together, both studies provide compelling evidence that the two laws have reduced the incidence of drunk driving and alcohol-related accidents.

The complete two volume report, (number's 158 and 167) entitled "An Evaluation of the Effectiveness of California's 0.08% Blood Alcohol Concentration Limit and Administrative Per Se License Suspension Laws," can be obtained by contacting the Department of Motor Vehicles' Research and Development Branch, 2415 1st Ave., MS F-126, Sacramento, CA, 95818.

For more information on California's legal requirements for BAC levels, visit the California Department of Motor Vehicles Web site at:

http://www.dmv.ca.gov/

For more information on Healthy People 2010 objective 26-25, please visit:

http://www.healthypeople.gov/Document/HTML/Volume2/26Substance.htm

And the DATA2010 Web site at: **http://wonder.cdc.gov/data2010/**