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TITLE: Prediction of Driving Record following Two Major Convictions or Three Alcohol-Related Incidents

DATE: October 1989

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PROJECT OBJECTIVES:

To identify high-risk subgroups of drivers having two major convictions or three alcohol-related incidents.

SUMMARY:

Part I: Identifying High-Risk Subgroups among 316 and 317 Drivers

The Negligent-Operator Treatment Evaluation System (NOTES) is, at the time of writing, an ongoing system to evaluate the effectiveness of the negligent-operator (neg-op) program in California. Drivers with specific types of entries in a 3-year period were eligible for negligent-operator actions which were classified as level 3 alcohol treatment in NOTES:

- reason code 316 actions-two major convictions
- reason code 317 actions-three alcohol-related incidents

Samples of NOTES drivers eligible for 316 and 317 actions were identified. Drivers whose driver record met the 1-year or 3-year neg-op point criterion were excluded from this study. Discriminant analysis was used to develop equations to predict involvement in posttreatment accidents and alcohol-related (A/D) incidents separately for 316 and 317 drivers.

The accident prediction equations were used to divide 316 drivers and 317 drivers into three subgroups, each of which had markedly different accident rates within the 316 and 317 groups. For 317 drivers the accident prediction equation also predicted involvement in *AID* incidents about as well as an equation specifically developed to predict these incidents. For 316 drivers the accident prediction equation performed poorly in predicting involvement in *AID* incidents, compared to the *AID* incident prediction equation.

Part II: Examining the Potential Contribution of BAC level to the Identification of High-Risk Subgroups.

BAC level was thought to be an important predictor of future accident involvement for drivers convicted of DUI. BAC information was not present in the NOTES data. BAC information was available in the data collected for an in-progress study of the Dill Offender Tracking System (DOTS). The DOTS study sample was composed of drivers with DUI convictions during the first half of 1984. Samples of first-time DUI offenders and second offenders were selected from the DOTS study sample.

Only 40% of first offenders and less than 38% of second offenders had BAC data available. For both first and second offenders there was an inverse relationship between BAC and total subsequent accidents (Le., high BAC levels were associated with having lower subsequent accident rates). For both first and second offenders there was a direct relationship between BAC and subsequent *AID* incidents (Le., high BAC levels were associated with having more such incidents in the future).

The report recommended the following:

- In the event that the Department decided that some form of 316/317 intervention was desirable, then a three-tier approach was proposed, such that
 - (1) The groups of drivers having the lowest accident prediction scores should be left untreated.
 - (2) Groups having intermediate scores should be treated with a low-cost intervention (such as a mailed self-study brochure).
 - (3) The Department should reserve the relatively high-cost in-person contacts (hearings or reexaminations) for the groups with the highest accident prediction scores.
- Any treatment program used with 316 and 317 drivers should be evaluated through NOTES, and an increased percentage of these drivers should be assigned to the NOTES control group.
- For the present, BAC level should not be used to assign 316 and 317 drivers to treatment. Before considering BAC for this use in the future, the Department should undertake a study of the relationship between BAC and accidents in the 316 and 317 populations.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The Department decided to accept the recommendation found in NOTES reports #2, #3, and #4 to discontinue the 316/317 treatment program. Therefore, the recommendations of this study were no longer relevant.

SUPPLEMENTARY INFORMATION:

See Marowitz, Reports #161 and #164, for a much larger scale study on the relationship between BAC level and subsequent DUI recidivism.