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TITLE: An Evaluation of the Traffic Safety Impact of Provisional Licensing

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PROJECT OBJECTIVE:

To evaluate the traffic safety impact of California's Provisional Driver License Program. The primary goal of the program is to reduce the rate of traffic accidents and traffic violations involving 15- through 17-year-olds in California.

SUMMARY:

California Senate Bill 483 (Chapter 776, 1982) authorized the California Department of Motor Vehicles (DMV) to establish a demonstration Provisional Driver Licensing Program for drivers under 18 years of age. DMV implemented this program on October 1, 1983. The legislation required that DMV evaluate this program and submit an interim report by July 1, 1986 and a final report by December 31, 1988.

For the interim report, a time series analysis of aggregated monthly accident data for January 1979 through December 1985 was conducted. Various accident rates of two age groups in California were compared: 15 through 17 years versus 24+ years or older. The accident rates for adults were included in the analysis to control extraneous influences. For each type of accident, a separate intervention test was conducted for each age group. The results of the analysis suggested that provisional licensing prevented what would otherwise have been a 13.17% increase in the fatal/injury accident rate for 15-through 17-year-olds, representing a total reduction of 2,540 serious accidents each year. No significant program effects were found for total, fatal-only, or single-vehicle accident rates.

For the final report, a different method of time series analysis was used to evaluate program effects. Data for 1979 through 1986 were analyzed and the same age groups were included. For each type of accident, the accident rate series for the adult group was included as a covariate, or independent variable in the time series model. This method was generally believed to be more powerful and accurate than the approach used for the interim report. The same analysis was repeated in four other states for comparison purposes. The findings provided evidence that provisional licensing was associated with a 5.3% reduction in the rate of total accidents involving drivers aged 15 through 17, or an accident avoidance of 2,436 per year. No significant program effects were found for fatal/injury accidents, had-been-drinking fatal/injury accidents, or single-vehicle late-night male-only fatal/injury accidents. However, the trends in fatal/injury and alcohol-involved accident measures were consistent with the reduction in total accidents.

The final report also includes an analysis of the driver records of over 400,000 drivers who received an original license at ages 16 or 19. About one half of the drivers in each age group were licensed before (pre) provisional licensing, and the others were licensed after (post) program implementation. Total accidents, fatal/injury accidents, and major traffic convictions were counted during the first 3 years subsequent to driver's 15th birthday (for 16-year-olds) or 18th birthday (for 19-year-olds). In addition, total accidents and total convictions were counted during the first 2 years following licensure. Various administrative process measures for 16- and 17-year-old licensees were also monitored, and the effect of the postlicensing control component of the program on accidents and convictions was analyzed.

It was found that provisional licensing was associated with a reduction in the average total number of accidents 3 years subsequent to 15th birthday for 16-year-old licensed drivers. The net annual

accident reduction was 1,666. The findings also suggested that the program substantially decreased the rates of total convictions and convictions of serious violations among 16-year-old licensees. The effect of the program on the rate of fatal/injury accidents for this age group was not statistically significant, but was directionally consistent with a positive program effect. It was also found that the program greatly increased the number of postlicensing control sanctions (warning letters, restrictions, suspensions) applied to 16- and 17-year-olds, and the provisional postlicensing control was more effective in reducing accident and conviction rates than was the control system in use for adults.

An analysis of the effect of a shift in the type of driver training (traditional to competency-based) was also conducted. The purpose of this analysis was to separate the effect of driver training from the effect of provisional licensing. Evidence was found that the effect of the driver training shift was contrary to a positive effect of provisional licensing were probably greater than found in the program evaluation.

Based on the findings of positive traffic safety benefits of provisional licensing, it was recommended that California retain the program as a permanent policy for licensing minors. It was also recommended that consideration be given to alternative approaches for enhancing the beneficial impact of the program, such as (1) nighttime driving curfews and other restrictions, (2) extension of some components of provisional licensing to all drivers under 21 years of age, (3) stronger postlicensing control actions, and (4) more stringent competency requirements for initial actions, and (4) more stringent competency requirements for initial licensing.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

DMV has initiated a legislative proposal to give the program permanent status. As of this date, the recommendations to extend the program through age 20 had not been implemented.

SUPPLEMENTARY INFORMATION:

Information on the development of the provisional licensing program is available in Carpenter et al., Report #73, and in California DMV, Division of Driver Safety and Licensing, April 1982, *A Recommended Provisional Licensing System for California*.

A rudimentary data collection system that provided much of the information necessary for the evaluation of provisional licensing is described in Liddicoat and Marsh, Report #99.

The interim report on provisional licensing was published as Hagge and Marsh, Report #108.