

CALIFORNIA DEVELOPS IMPROVED PROBLEM DRIVER COUNTERMEASURES

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Virtually all driver licensing agencies have statutes and programs for intervening against drivers who accumulate a large number of moving violations or are involved in an excessive number of crashes. It has been established through various studies that repeat traffic violators represent a substantial crash risk. Drivers meeting California's prima facie definition of "negligent operator" have subsequent crash rates that are significantly higher than those of drivers without traffic violations. In fact, negligent operators in California have higher subsequent crash rates than offenders convicted of driving under the influence.

Problem

Negligent drivers are clearly a legitimate target group for countermeasures. California has used a variety of such interventions. In 1971 the California Legislature nearly eliminated the state's intervention program because evidence demonstrating safety benefits was lacking. However, the program was retained on the condition that the Department of Motor Vehicles report annually to the legislature on the program's effectiveness.

Solution

To meet the above condition, a project was initiated to evaluate California's negligent driver interventions. The goal of this effort was to identify policy and program modifications that would substantially increase the program's traffic safety benefits and cost-effectiveness. The project resulted in an operational evaluation system in which four basic negligent driver levels and corresponding actions ("treatments") were identified:

- ◆ Level 1: prenegligent operator—warning letter
- ◆ Level 2: negligent operator—group meeting, usually with license probation and/or suspension
- ◆ Level 3: probation violator—license suspension for violations during probation
- ◆ Level 4: reinstatement of violator—restoration of license when conviction-free for a year

The most innovative feature of the system was ongoing use of a randomized experimental design involving control groups from whom the above treatments were temporarily withheld. Without such control groups, it would have been impossible to determine whether any reductions in the subsequent crash or conviction rates of the treated groups were attributable to the program intervention. The ability to answer this question definitively can prevent two types of decision errors: (1) eliminating a program that is truly effective, and (2) continuing a program that is actually ineffective. The consequence of the first error is a potential reduction in public safety, whereas that of the second is in an inefficient allocation of resources.

Application

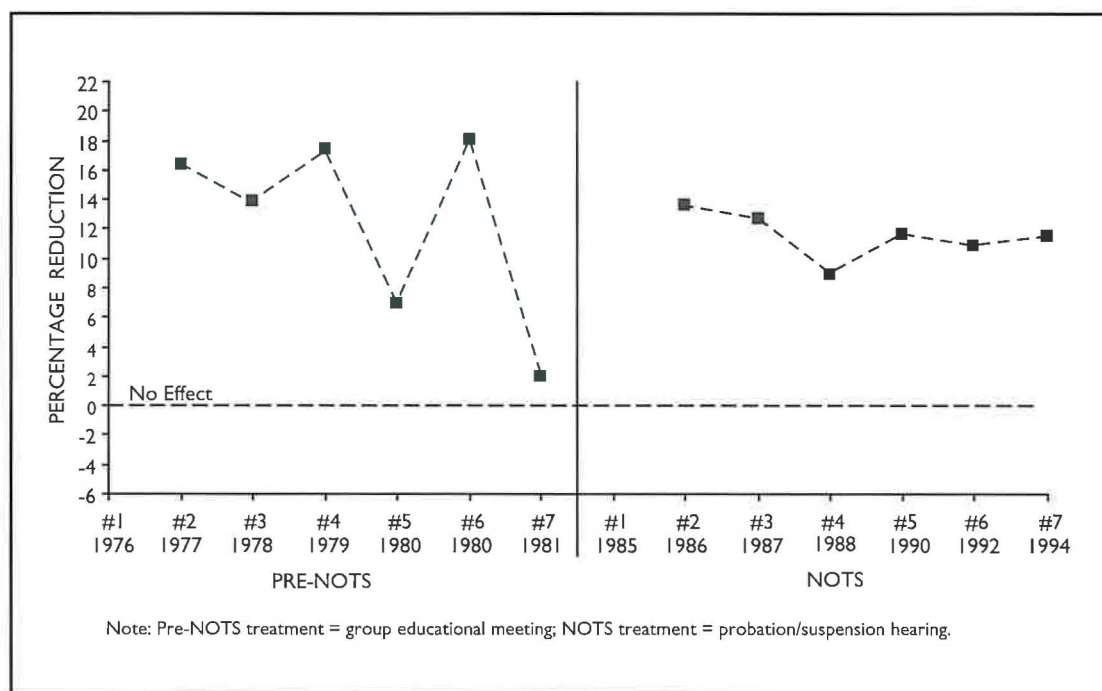
The cumulative findings for 1976 to 1979 demonstrated that all of the program's intervention components (warning letter, group meeting, and probation violator suspension, as well as three intervention programs) resulted in statistically significant reductions in the subsequent crash and citation rates of the targeted offenders. In 1980–1981, however, declining effects were observed. At that time, the countermeasure being used for level 2 was a group meeting.

In response to this information, the intervention program was redesigned. During the period 1985 to 1995, the program evolved into the Negligent Operator Treatment System (NOTS), an effort to improve the net impact of the program by adopting the following strategies:

- ◆ Intervening with offenders sooner.
- ◆ Increasing the number of drivers targeted for intervention.
- ◆ Increasing the use of license suspension at levels 2 and 3.
- ◆ Establishing a formula for determining the length of license suspension for violation of probation and limiting the scope of any requested administrative hearing. Suspensions were implemented by mail, and a hearing was granted only upon demand instead of being scheduled automatically.



FIGURE 1 Percentage reduction in subsequent accidents among repeat offenders.



Benefits

The new approach proved to be effective. The most dramatic evidence for a greater impact on traffic safety occurred at level 2 (see Figure 1). Under the pre-NOTS program, the intervention at this level consisted of a group meeting without license suspension. Under NOTS, the first in-person intervention included an individual one-on-one hearing, as well as greater use of license suspension and probationary restrictions. Overall, the following estimated benefits of the new program were documented in the 1992 biennial report:

- ◆ NOTS intervened against 400,000 more drivers annually than the pre-NOTS program.
- ◆ NOTS prevented 2,000 more crashes annually.
- ◆ NOTS was much more cost-effective in terms of the ratio of benefits (crash cost savings) to costs (program expenditures).

The California experience illustrates how a continuous evaluation system can prevent an effective program from being eliminated, and how a rigorous program evaluation can identify declines in program effectiveness and precipitate corrective actions. Had the evaluation system not existed, the DMV would likely have continued with a less effective program.

The importance of using control groups cannot be overemphasized. No other evaluation approach would have permitted the sensitivity and specificity with which modest effects, let alone changes in effects over time, were detected. Although the temporary withholding of treatment exposed small

proportions of drivers to increased risk, the information provided by the evaluation system led to safety benefits that far outweighed those small, temporary risks.

The DMV and the State Legislature concluded that the effectiveness of the negligent driver program had been sufficiently demonstrated through 20 years of intensive evaluation such that it was no longer desirable to withhold interventions from a small percentage of eligible offenders. Hence in 1994 the DMV decided to modify the evaluation system. Alternative statistical approaches are currently being explored, such as combining the 20-year history of control group baseline data to produce an acceptable statistical model for simulating crash expectancies in the absence of control groups.

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Automated Enforcement

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Regarding constitutional issues, privacy is a legitimate concern, but only in places considered to be private. Limited privacy can be expected in public places such as streets and highways, and drivers cannot reasonably protect themselves from others' observations, including the photographic detection of traffic offenses. Moreover, driving on public roads is a regulated activity. In obtaining a license, motorists agree to abide by traffic regulations. Neither the law nor common sense suggests it is wrong for drivers to be observed on the road or to have their violations documented.

Conclusion

Traffic control devices and traffic laws are established to ensure public safety. Voluntary compliance is implicit and essential. However, far too many drivers routinely and deliberately disobey traffic devices and traffic laws, creating substantial risks. Motor vehicle crashes caused by such recklessness impose an enormous burden on society. It is impossible for police to be everywhere at all times. Automated enforcement is an effective and increasingly popular method of deterring dangerous traffic violations and lessening the motor vehicle crash problem. Public support for such technologies generally is strong and appears to increase in communities that implement such enforcement programs. This support reflects strong public desire for safer roads.

Achieving safety benefits requires changing driver attitudes about compliance with traffic laws and the perceived likelihood of being ticketed. It should be emphasized, therefore, that deterrence is the primary goal of automated enforcement. Deterrence requires highly visible, well-publicized, and sustained enforcement, including the use of conspicuous traffic signs alerting drivers to the presence of cameras—which may also help address concerns of those opposed to automated enforcement. Continued research and documentation of the effects of camera enforcement on driver behavior and crashes are needed to provide further evidence of the safety benefits associated with automated traffic law enforcement programs.

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