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Tech Brief

Study of Recidivism Rates among Drivers Administratively Sanctioned by the New Jersey Motor Vehicle Commission

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BACKGROUND

Improving highway safety and preventing crashes is an important public health and policy objective at the state and national level. Research has consistently shown that drivers who repeatedly violate motor vehicle laws pose higher public safety risks. In New Jersey, the Motor Vehicle Commission (MVC) utilizes a demerit point system to monitor driver behavior and has a program of negligent driver countermeasures that become progressively more severe based on the accumulation of demerit points. The countermeasures used in New Jersey vary based on the number and severity of violations and driver experience (e.g., teens vs. experienced drivers). Although this system of negligent driver countermeasures has been in place for several decades, little is known regarding the effectiveness of these countermeasures in terms of highway safety outcomes.

RESEARCH OBJECTIVES AND APPROACH

The purpose of this study was to examine the current state of practice related to driver improvement countermeasures in the United States and to assess the effectiveness of New Jersey's negligent driver interventions. As part of the study, the research team conducted a review of national literature and a survey of motor vehicle agency policies in other states to document the current state of practice related to driver improvement programs and the current state of knowledge regarding the effectiveness of specific countermeasures. In addition, the research team obtained and analyzed an extensive longitudinal database of driver history records to examine the effectiveness of various countermeasures used in New Jersey to address negligent driver behavior relative to violation and crash recidivism.

FINDINGS

- A review of national literature on negligent driver countermeasures and state driver improvement program practices indicated that New Jersey's program of driver improvement is in the mainstream of current practice. Further, the literature on countermeasure effectiveness over the past fifty years confirmed that negligent

driver interventions can be an effective means to reduce violation and crash recidivism among many negligent driver subgroups.

- Overall, violation recidivism in New Jersey is highest among young drivers (ages 18-24). 60 percent of male drivers and 44 percent of female drivers in this age group had more than one violation recorded in their driving history during the period that they were between the ages of 18 and 24. 32 percent of teen male drivers and 19 percent of teen female drivers received more than one violation in their first one to two years of driving. Recidivism rates are lowest among drivers 85 years and older. If violation rates are normalized to adjust for variation in exposure years, the group of drivers with the highest rate of recidivism is teen male drivers. Teen male drivers have rates of violation recidivism 800 percent to 2,100 percent greater than other subgroups.
- Crash recidivism rates ranged from a low of 9 percent among teen female drivers to a high of 25 percent among young male drivers. If crash rates are normalized to adjust for variation in exposure years, the group of drivers with the highest rate of crash recidivism is teen male drivers. Teen male drivers have rates of crash recidivism 40 percent to 600 percent times greater than other subgroups.
- MVC's **point advisory notices accompanied by negligent driver fees**, which are assessed to experienced drivers receiving a point advisory notice, are an effective means of reducing violation recidivism for most negligent driver subgroups for at least some period of time after the intervention is imposed. Point advisory notices issued to teen drivers, which are not accompanied by negligent driver fees, appear to be ineffective for male teen drivers. (See Table 1).

Table 1. Percent change in mean violation and crash rates in two-year period after MVC intervention

Age Group	Gender	Point Notice + Negligent Driver Fee		Driver Re-education Class + Point Credit +1-year Probation		License Suspension + 1-year Probation	
		Violation	Crash	Violation	Crash	Violation	Crash
Young Drivers	F	-62%	-29%	-64%	-33%	-70%	-56%
	M	-53%	-25%	-56%	-29%	-65%	-56%
Older Drivers	F	-65%	-15%	-56%	-23%	-62%	-41%
	M	-58%	-07%	-53%	-10%	-61%	-42%
Teen Drivers ¹	F	-29%	28%	-54%	07%	-64%	-44%
	M	12%	68%	-35%	06%	-59%	-31%

Note: 1 - The "trigger" for a point advisory notice issued to probationary (teen) drivers is the accumulation of four points. Point advisory notices issued to probationary drivers are not accompanied by fees unless the driver accumulates six or more points.

- Point notices + fees are also an effective means of reducing crash recidivism among young and older drivers of both genders but notices are not effective for teen drivers of either gender. The observed reduction rates are generally lower than those observed for violation recidivism. (See Table 1).
- MVC's **driver re-education classes combined with a point credit and one year probation** (referred to as driver re-education class only) appear to be an effective means of reducing violation recidivism for all negligent driver subgroups for at least some period of time after the intervention is imposed. (See Table 1)
- Analysis results on the effectiveness of driver re-education classes in terms of crash recidivism were less conclusive. A comparison of crash rates in the two-year period before and after drivers successfully completed either Driver Improvement Program (DIP) or Probationary Driver Program (PDP) class showed that mean crash involvement rates among young and older drivers of both genders decreased in the two-year period following intervention; however tests of statistical significance (at the 5 percent confidence level) showed significant variability. The rate differences were statistically significant for only young drivers of both genders and female older drivers, not older male drivers or teen drivers of either gender. The latter two groups exhibited an increase in mean crash rates in the two years after completing the PDP class. This suggests that the value of the driver re-education classes in terms of reducing subsequent crashes among certain driver subgroups may be limited. (See Table 1).
- **Driver's license suspension accompanied by a probation period of one year** (hereinafter referred to as license suspension only) is the most consistently effective means used in New Jersey of reducing both violation and crash recidivism among all negligent driver subgroups. (See Table 1).
- An analysis comparing the effectiveness of MVC's three primary countermeasures combined with their secondary components relative to one another indicated that the differences in mean rate reductions provided by each countermeasure are statistically significant at the 0.05 confidence level. License suspension combined with one-year probation results in the greatest overall reduction in mean violation rates in the two-year period after intervention. Driver re-education classes combined with a point credit and one-year probation results in the lowest mean violation rate reduction. The same is true for crash rates.
- The same test found no statistically significant difference between the effectiveness of various levels of suspensions (i.e., A, B, C, persistent violator, and probationary driver) when compared to one another.

A note of caution should be considered when interpreting the results of this study. The nature of our comparison groups is such that they are all by definition negligent drivers. They therefore likely exhibit higher rates of violation and crash involvement than the general population of drivers in the State. In statistical terms, groups on the extreme ends of a normal population distribution have sometimes been observed to perform more like the “normal” population in any given comparison period just by chance. This phenomenon is called regression-to-the-mean. Thus, it could be true that some portion of the observed rate change documented in this study is due to regression-to-the-mean effects. Absent a true control group from which to compare before and after effects, it is not possible to discern how much, if any, of the observed rate differences documented in this study are due to regression-to-the-mean. It seems clear however from the results that there is strong evidence indicating that the negligent driver countermeasures used in New Jersey are effective at reducing violation and crash recidivism among most negligent driver subgroups.

DISCUSSION AND CONCLUSIONS

This study provides important evidence that New Jersey’s program of negligent driver countermeasures is effective at reducing violation and crash recidivism among most negligent driver subgroups in the two-year period after MVC intervention. Of the countermeasures used in New Jersey, the combination of license suspension with one-year probation resulted in the greatest overall reduction in both mean violation and crash rates. New Jersey’s driver re-education classes which are accompanied by a three-point credit against accumulated demerit points and one-year probation resulted in the lowest mean violation rate reduction. Finally, point advisory notices which are accompanied in New Jersey by a concurrent assessment of negligent driver fees (MVC “insurance surcharges”) appear to be an effective early intervention, producing substantial reductions in both violation and crash recidivism among all driver subgroups except teen drivers. These results are generally consistent with the findings from past studies conducted in other states.

Several policy recommendations can be derived from this research. First, with regard to teen drivers, it appears that license suspension combined with one year probation is the most effective countermeasure that consistently reduces violation and crash recidivism among teen drivers in the same order-of-magnitude as other driver subgroups. This is especially true when examining the effect of countermeasures on the driving performance of male teen drivers.

Recent reforms enacted to enhance New Jersey’s system of teen driver monitoring and control merit active monitoring and on-going evaluation. However, future consideration should be given to whether or not a “zero-tolerance” policy for motor vehicle violations and at-fault crashes should be applied to teen drivers. Despite the generally accepted practice of imposing progressively harsh sanctions against drivers who continue to exhibit negligent driving behavior, it may be appropriate to impose license suspension as an earlier intervention if the reforms already enacted don’t result in meaningful change in teen driver safety outcomes.

Second, the results of the analysis indicate that the complex current structure of the MVC license suspension program which includes seven categories of suspension, may be unnecessarily confusing and cumbersome. MVC should consider streamlining the suspension program to make it more straightforward and easier to administer.

Finally, as documented in a study recently completed for MVC, it is important to note that there has been a downward trend in the number of drivers subjected to MVC negligent driver countermeasures since 2000. This is most likely due to an increase in zero-point plea bargaining of motor vehicle offenses observed over the same period ⁽³⁸⁾. Given this finding, consideration should be given to reviewing and reforming, as necessary, New Jersey's driver monitoring system and/or plea bargaining practices to ensure that repeat traffic offenders are not able to use zero-point plea bargaining to avoid corrective actions that improve safety outcomes.

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A final report is available online at: <http://www.state.nj.us/transportation/refdata/research/>

If you would like a copy of the full report please send an e-mail to Research.Bureau@dot.state.nj.us and ask for:

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