# AN EVALUATION OF THE IOWA DRIVER IMPROVEMENT PROGRAM

Conducted
by

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for

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Office of Safety Programs

Office of Driver License

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## Preface

The authors would like to thank all those individuals within the Office of Driver License and the Office of Safety Programs for all their kindness and assistance, both known and unknown. In particular, they would like to extend their appreciation to Ms. Marianne V. Mickelson, the Contract Technical Monitor for efforts on their behalf during the conduct of this project.

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# OVERVIEW

During 1978, the Iowa Department of Transportation awarded a contract to McBride Planning, Research Analysis, Inc. to evaluate a newly developed driver improvement instructional program produced and distributed by the American Automobile Association. This program had been designed to be used by State driver improvement agencies (and other traffic safety groups) as a method for instructing drivers in basic safe driving practices.

The objectives of this evaluation were to:

* Assess the comparative effectiveness of the newly developed instructional program in reducing the accident and conviction rates of participants.
* Establish the cost effectiveness of alternate driver improvement activities.
* Identify those drivers most likely to benefit from participation in this instructional program.
* Recommend changes to the Iowa driver improvement program on the basis of results obtained from this evaluation.

## Iowa Driver Improvement

Prior to this evaluation effort, drivers licensed in Iowa were required to attend an informal hearing conducted by officers of the Driver Improvement Division of the Department of Transportation if their driving record contained:

- three convictions for traffic law offenses within a 12 month period.
- one conviction for a serious traffic law offense (for example, exceeding speed limit by 25 mph).

Drivers meeting these citation criteria were notified in writing of the status of their driving record and advised to attend a hearing at which a licensing action could be taken. Those failing to attend were suspended on the basis of their accumulated driving record and notified as to this effect. At this hearing, a number of options were available to the Hearing Officer. The driver's license could be suspended for a period of time as prescribed by state law, they could be placed on probation (or both), or the Hearing Officer could take no action. Appeals to these actions are handled via the Department of Transportation's appeals process; and officers conducting these appeals can modify, set aside, or affirm the Hearing Officer's ruling.

A habitual offender provision within Iowa state statutes authorized the Department to suspend for a period of 12 months any driver convicted of six moving violations within a 24 month period. A subsequent conviction occurring during the suspension period results in the extension of the period of suspension for an additional time of the same length as the original suspension.

The remainder of this Evaluation Report details the history of the evaluation effort, the results obtained, and recommendations for changes to the Iowa Driver Improvement Program.

## REVIEW OF DRIVER IMPROVEMENT RESEARCH

Numerous driver improvement programs operated by State driver licensing agencies have been evaluated during the past several years. While the results of these efforts have produced some conflicting results, there is little doubt that properly constituted and organized driver improvement programs can have a significant impact on the accident and conviction rates of "problem" drivers.

A critical factor to be considered in developing driver improvement programs is their cost. The results of several research efforts have demonstrated a requirement for driver improvement programs to be as inexpensive to operate as is possible. Unlike other state functions which are revenue "generating", driver improvement programs are revenue "saving". That is to say, because they reduce the accident rate, they "save" the State and its citizens the cost of these accidents.

It is obvious that driver improvement programs cannot cost more to operate than they save in accident dollars. What is important to recognize, is that the cost-effectiveness of any driver improvement action (as measured in terms of its ability to impact the accident rate at a given operational cost) can be controlled only by adjusting the cost of operating the program. The cost of accidents is relatively fixed, as is the ability of driver improvement programs to impact the accident rate. The only cost factor controllable by the administrator of a driver

improvement program is program cost itself.

Traffic accidents in general have been demonstrated to be "reluctant" to respond to any organized treatment, be it improved licensing procedures, stiffer medical standards, heavy fines or suspensions, etc. Although certain driver improvement actions can function as a viable "treatment" for accidents, their effect is relatively limited, necessitating that an inexpensive approach as possible be taken in treating them through the driver improvement system. Most driver improvement programs, when efficiently operated, can reduce the accident rate of participants as much as 10%. While this effect may appear insignificant at first, it must be remembered that the average cost of accidents is so high (approximately $7,000) that marginally effective programs can indeed represent valid solutions to the accident problem.

Of all driver improvement actions evaluated, three appear to be the most valuable as a method of reducing the accident rate:

* Warning Letters
* Driver Improvement Schools
* Suspension/Probation

Warning Letters

Studies by Kaestner (1967), McBride and Peck (1969), and Edwards (1972) demonstrated the effectiveness of warning letters in reducing subsequent accident and conviction experience. While these effects are small (warning letters reduce the accident rate

of recepients approximately 1%), their cost is such that they represent one of the most cost-effective driver improvement actions currently available. Most warning letter programs cost less than $.60 per letter to operate.

In addition, warning letters reduce the subsequent conviction rate of recepients, thereby reducing the number of drivers who gravitate to more expensive driver improvement actions such as hearing, driver improvement schools, etc.

The content characteristics of warning letters have been well defined by these research results. They should be reasonably brief, readable at the 6th to 8th grade level, and be slightly-threatening. Information to be contained in these letters should include:

* Costs associated with continued convictions, i.e. fines, increased insurance premiums, lost time.
* Increased risk of suspension.
* Increased risk of accident involvement.
* Summary of previous convictions.

The cost of operating a warning letter program can be reduced by using computer generated form letters addressed in person to the driver.

Driver Improvement Schools

The effectiveness of driver improvement schools as a means of reducing the accident and conviction experience of drivers has been demonstrated in a number of research findings. Marsh

(1971) evaluated the Group Education Meeting operated by the California Driver Improvement Bureau and identified its impact on both the 12 month accident and conviction rates of drivers. Studies by Harano (1971) and Edwards, et al (1976) have provided further evidence as to the effectiveness of these programs. These latter studies however, revealed that the effectiveness of these programs varies to a great extent as a function of driver age, younger drivers deriving more benefit than older segments of the driving population.

Course content has been demonstrated to be of importance in the overall effectiveness of these programs. Content devoted to training drivers in the application of basic safe operating practices appear to be more effective in reducing the accident rate than programs oriented solely toward improving the driver's "attitude" toward safe driving. There is no evidence to date to suggest the amount of time which should be devoted to this instruction.

A second factor influencing effectiveness is the net rate of attendance by drivers required to participate in the program. From all evidence, it would appear that only those programs which can acheive an 80% minimum attendance rate are cost effective in terms of costs required to operate the program in comparison to the cost of accidents "saved".

Suspension/Probation

The evidence regarding the effectiveness of suspension or

probation as a means of reducing accident experience is insufficient to permit the reaching of any conclusions regarding its overall contribution to the effectiveness of driver improvement programs. Most research reveals that drivers on suspension continue to drive (approximately 60%), but at reduced mileage rates and reduced accident and conviction involvement levels. However, this is certainly not the intended function of this method for treating problem drivers. It is likely that the true value of suspension and/or probation lies in its association with other driver improvement actions. No doubt, some of the effectiveness of driver improvement schools and warning letters is the threat of more "punitive" driver improvement actions should conviction involvement continue.

Summary

In conclusion, it can be stated that certain driver improvement actions can have a significant impact on the accident and conviction rates of problem drivers provided that they are inexpensive to operate, are directed toward those drivers most likely to be involved in accidents (young drivers), and are organized such that their effect increases with each subsequent action.

## EVALUATION DESIGN

A completely randomized eavluation design was employed to measure the impact selected driver improvement treatments on the accident and conviction rates of drivers defined by Iowa state statutes as "problem" drivers. Drivers meeting these citation criteria were randomly assigned to one of the four following groups:

* Warning Letter Group -- Drivers assigned to this group were utilized as the "control" group. The accident and conviction experience of these drivers was compared with that of the other groups to provide a measure of program impact.
* Driver Improvement School Group -- Those assigned to this group were scheduled to participate in the instructional program developed by AAA and operated through the Iowa Community College System.
* Driver Improvement Interview Group -- Drivers assigned to this group were treated via the normal hearing process.
* Automatic Suspension Group -- Those assigned to this group were notified by mail that their license had been suspended for 90 days.

The application of "random" assignment to each of the evaluation groups was accomplished to insure that no differences would exist among the drivers assigned to each with respect to age, sex, and prior driving experience. These are all factors known to be related to accident experience, and would signifi-

cantly bias the results if not distributed equally across the evaluation groups. A "no treatment" group was not available for the evaluation and the Warning Letter Group was employed as the reference group for purposes of comparison. The lack of a "no treatment" group prohibited any determination of the effectiveness of these programs when compared to no program at all, but did permit an analysis of the relative effectiveness of alternative driver improvement programs as compared to one another.

Sample Size

Departmental concerns with respect to the public's receptivity of certain actions (especially the Automatic Suspension) dictated that drivers be randomly assigned to each of the above groups on a proportional basis. As a result, 10% of eligible drivers were assigned to the Warning Letter and Automatic Suspension Groups, and 40% each to the Driver Improvement Hearing and School Groups. The total number of drivers assigned during the entire evaluation are enumerated below:

* Warning Letter - 4,127
* Driver Improvement School - 12,753
* Driver Improvement Interview - 12,493
* Automatic Suspension - 1,200

During 1979, the Automatic Suspension treatment was suspended by the Department. All drivers subsequently assigned to this group were forwarded warning letters until the end of

the assignment period.

Period of Evaluation

The impact of these driver improvement programs was assessed for the 12 month period following the driver's date of participation. This time frame was selected for two reasons: (1) Past research has indicated the optimal period of effectiveness for driver improvement programs is approximately 12 months and, (2) Existing departmental actions are based on a 12 month time frame.

At the time the evaluation was initiated, the number of drivers who had acquired a 12 month driving record beyond their date of participation was significantly less than the total number of drivers who had been originally assigned. Approximately one-half of the available drivers were employed in the final evaluation of program effectiveness.

## EVALUATION OF PROGRAM IMPACT

The evaluation of program impact was directed toward a determination of the relative effectiveness of the Driver Improvement School in comparison to the Hearing process as a means of reducing the accident and conviction experience of drivers. The Warning Letter group was employed solely as a reference group with which the accident and conviction experience of drivers assigned to the other two groups was compared. The Automatic Suspension Group was excluded from this evaluation in consideration of two factors:

* Sample Size -- The sample size accumulated prior to the termination of this treatment was insufficient to detect the small impact on the accident rate expected of this treatment approach.
* Department Policy -- Termination of this particular action appeared to reflect a policy in basic opposition to this approach.

Within this evaluation framework, the frequency of accidents and convictions occurring during the first 12 months following participation was compared across all programs (Warning Letter, School, and Hearing). An analysis of the differences in accident and conviction rates for the 12 month period preceeding and following participation was not performed. This analytic approach has been demonstrated to be inappropriate because of the large changes which occur in the frequency of accident and conviction involvement from one time period to the

next. Typically speaking, of those driver involved in an accident in any one-year period, only 15% will be involved in an additional accident during the following year. Thus, a pre-post comparison would always reflect an approximately 85% reduction in the accident rate even when the program being evaluated had no impact whatsoever. The same is true when examining the distribution of convictions over two time periods.

Use of the Warning Letter group as the point of comparison for the Driver Improvement School and Hearing limited to some extent the ability of the analytic technique employed to measure the "true" impact of these programs. As discussed in the review of driver improvement programs, warning letters do have a significant, although small, impact on accident and conviction rates. Thus, in the present comparison, the accident and conviction rates of drivers assigned to the Warning Letter Group do not provide an estimate of those rates which would be expected if no treatment had been administered.

A third factor which must be considered when interpreting the results of this evaluation is the treatment of drivers during the 12 months following their participation in one of these programs. Ideally, the Department of Transportation would have refrained from any further driver improvement action involving drivers assigned to these groups for the 12 months following their initial participation. This was not the case however. Drivers assigned to the Driver Improvement School were placed on probation for a period of 6 months, and drivers

assigned to the Hearing could receive a variety of subsequent actions depending upon subsequent conviction involvement. Any convictions occurring during this "post" treatment period resulted in the driver being scheduled for a Driver Improvement Hearing. Thus, the results of the evaluation are confounded by the fact that more than one driver improvement action was taken, making it difficult to determine whether or not the effects observed were a function of the first treatment or subsequent treatments.

Analysis of Pre-Treatment Experience

An analysis of the accident and conviction experience of drivers assigned to each of the evaluation groups for the 12 month period prior to their participation was performed to assess the extent to which these groups were compatible. Differences in these measures would indicate that the assignment process had not been random as designed. The average accident and conviction experience for this time period appears below for each of the evaluation groups:

| | Warning Letter | School | Interview |
|---|---|---|---|
| Accs. | .41 | .40 | .41 |
| Convs. | 2.66 | 2.68 | 2.66 |

As can be seen, the average pre-treatment experience for the 12 months prior to participation in these programs is essentially identical for all groups. These results provide

evidence that the randomization process was applied properly. It is important to note as well, that the total average accident and conviction experience approximates 3.00, the minimum number of convictions required for a driver improvement action to be initiated in Iowa. Should this summing of accidents and convictions appear confusing, it should be remembered that these accidents are paired with convictions for traffic law violations that were issued in conjunction with accidents and thus, the average total of 3.00. In essense, accidents are equal to convictions when this form of citation criteria is utilized by a state.

Analysis of Post-Treatment Experience

The average accident and conviction experience for the 12 month period following participation in each of the driver improvement programs is presented in the following table:

| | Warning Letter | School | Interview |
|---|---|---|---|
| Accs. | .21 | .20 | .19 |
| Convs. | .80 | .73 | .70 |

In all cases, large differences in these rates as compared to pre-treatment rates exist. The reasons for these dramatic reductions have been enumerated earlier. When observing these values however, it is apparent that some differences exist in the ability of these three treatments to affect accident and conviction rates. The post-treatment accident rates for

drivers assigned to the Driver Improvement School and Hearing are approximately 5% and 10% lower respectively than the rate attained by drivers assigned to the Warning Letter group. Differences in the post-treatment conviction rate are roughly proportional, being 9% and 13% respectively. Differences between the Driver Improvement School and Hearing would appear to be negligible.

The results of a One-Way Analysis of Variance applied to this data provides support for these inferences. The summary statistics for the comparison of accident data appears below:

| Source | Df | SS | MS | F |
|---|---|---|---|---|
| Between | 2 | .800 | .400 | 1.843 |
| Within | 15,134 | 3291.07 | .217 | |
| Total | 15,136 | 3291.87 | | |

The F value obtained (1.843) is significant at the .16 level. This level of significance indicates that the likelihood that the differences in average accident rates observed are due to chance, and not the effect of the treatment program. A supplementary analysis of the significance of differences in the accident rates among all possible comparisons of two groups (Warning Letter vs. School, School vs. Hearing, etc.) revealed that while there were significant differences between the Warning Letter group as compared to either the School or Hearing groups, no differences existed between School and Hearing groups.

The overall significance of the impact of these two programs on the accident rate of participants is marginal at best. The justifications for interpreting these results to reflect a significant comparative impact for the School and Hearing as compared to the Warning Letter group are:

* Sample Size -- The net sample size available for evaluation was approximately 50% of that required to detect a 5% to 10% reduction in the accident rate, based on estimates of the probability of accident involvement derived at the beginning of the project and used to project sample size requirements. While this planned sample size was achieved, approximately one-half of the drivers did not accumulate a 12 month post-treatment driving record before the evaluation was initiated and thus were excluded from the evaluation sample. The effect of this reduced sample size is to lower the "power" of the test. Thus, while the "true" effect of the program may be to reduce the accident rate by 5% to 10%, the sample size achieved would not permit the detection of this effect. This does not imply that the effect was not present, but rather that it could not be detected.

* Inequality of Sample Sizes -- Differences in sample sizes among the groups to be compared (the sample size for the Warning Letter Group was approximately one-third the size of the others) create differences in the "sensitivity" of statistical tests. Generally speaking, the larger the sample size, the smaller the estimate

of error in the actual average accident experience in this instance. Had the sample size for the Warning Letter Group been more equivalent to the other evaluation groups, the sensitivity of the Analysis of Variance test would have improved, providing a more valid estimate of the significance of program impact.

* Prior Research -- As has been discussed, prior research evidence provides support for these conclusions drawn as to the significance of the impact of these programs on the accident rate.

* Effect of Warning Letters -- Warning Letters have a demonstrated impact on the accident rate of approximately 1%. Applying this expected impact to the present data would increase the accident rate for warning letters, thereby increasing the differences in post-treatment accident rates observed.

Conviction Analysis

A One-Way Analysis of Variance was employed in the analysis of conviction experience. The summary statistics for this analysis are presented as follows:

| Source | Df | SS | MS | F |
|---|---|---|---|---|
| Between | 2 | 18.072 | 9.036 | 9.99 |
| Within | 15134 | 13680.6 | .904 | |
| Total | 15136 | 13662.6 | | |

The F value obtained (9.99) is significant at the .01 level, indicating that highly significant differences exist in the abilities of these respective programs to impact subsequent conviction involvement. A supplementary analysis of these differences produced the same results as the analysis of accident data. Both the School and Hearing groups experienced significantly fewer convictions during the 12 month period following participation than the Warning Letter group. No differences were found between the School and Hearing groups when compared to one another.

Taken collectively, these results indicate that both the Driver Improvement School and the Driver Improvement Hearing have a significant impact on the accident and violation experience of participants, an impact which exceeds that associated with the Warning Letter. This is not to say that the Warning Letter itself is not an effective treatment for accidents and convictions, but rather that the school and hearing treatments produce a larger impact. These results further indicate that the effects of the school and hearing actions are essentially equivalent, and that one may be substituted for the other without jeopardizing the overall effectiveness of the driver improvement program in Iowa.

## ANALYSIS OF COST-BENEFIT

The results of an analysis of the cost-benefit ratios for the Driver Improvement School and Driver Improvement Hearings

is presented in the following table. An analysis of the benefit to be derived by the State of Iowa in implementing any driver improvement program is imperative given today's economy and declining state operational budgets. This is especially the case in those instances where state programs function to save revenue rather than generate revenue, as is the case with driver improvement programs. In such programs, monies are expended by the state in an attempt to reduce the extent to which other funds must be expended. The operation of a driver improvement program, at a given cost to the state, can in fact save monies if that program reduces the accident rate subsequently reducing the cost these accidents impose on both the state and its citizens. This table contains estimates of the monies expended (on a per driver basis) in comparison with the costs saved by preventing accidents.

| | Cost per Driver | Cost per Accident | Accidents Saved per 1,000 | Cost/Benefit Ratio |
|---|---|---|---|---|
| School | $ 2.70 | hi-$7813<br>lo-$3934 | .86 | hi-.40<br>lo-.80 |
| Interview | $10.60 | hi-$7813<br>lo-$3934 | 1.26 | hi-.48<br>lo-.96 |

The Department's costs per student include only those directly estimable costs associated with the Department's activities in each of the respective treatments. These costs exclude such items as overhead, office space, support staff,

student tuition, etc. Two dollar amounts for accident costs were utilized in this analysis of cost benefit. The larger of these two ($7,813) is the figure employed by the National Highway Traffic Safety Administration to assess the cost effectiveness of its various programs. The lower cost represents the cost estimate employed by the National Safety Council. The difference between the two is due to NHTSA's inclusion of long-term injury and accident costs in its estimates.

The cost benefit ratios depicted in this table were derived by dividing the cost associated with conducting the treatment (Departmental costs) by the average accident cost, utilizing both NHTSA and NSC estimates. The use of both values provides a high and low estimate of cost benefit. The formula for these ratios is such that values larger than 1 would indicate a program cost more to administer than it saved; values less than 1 reflecting a positive cost benefit ratio, in that more monies were saved than expended.

Both the Driver Improvement School and the Driver Improvement Interview appear cost effective given this analytic approach. However, it should be noted that when the low accident estimate is utilized, the Driver Improvement Hearing appears to be only marginally cost-effective. This is typical of the experience gained in other states, and reflects one of the major difficulties associated with operating costly driver improvement programs of minimal effectiveness. Thus, while individually

conducted driver improvement hearings may, in actuality, have a greater net impact on the accident rate of participating drivers, their cost can render them ineffective from the standpoint of expenditures required to operate the program. It should also be noted at this point, that while no cost benefit analyses were performed for the Warning Letter program, analyses performed routinely by the California Department of Motor Vehicles indicate that the warning letter is the most cost-effective of all driver improvement programs, even though its impact on the accident rate is marginal.

The estimates of accidents saved per thousand drivers treated were derived by subtracting the average number of accidents per driver during the 12 month period following treatment for both the Driver Improvement School and Hearing groups from similar statistics derived for the Warning Letter group. This method produces a conservative estimate of the number of accidents saved per 1,000 drivers because the impact of the warning letter cannot be factored out. Regardless of any deficiencies in this analytic approach, it is apparent that both programs are cost-effective, the Driver Improvement school being the more so of the two.

## ANALYSIS OF SAMPLE CHARACTERISTICS

An analysis of sample characteristics was undertaken to determine:

* The extent to which driver characteristics were common across all evaluation groups.

* Unique characteristics of "problem" drivers which might be used by the Department to identify those most likely to benefit from participation in a particular driver improvement program.

The information upon which this analysis was based was derived from two questionnaires administered to participants in the Driver Improvement School and the Driver Improvement Hearing. The first of these questionnaires was employed to obtain information relating to age, sex, and educational status as well as overall accident and conviction experience. The second was utilized to provide information regarding attitudinal and life style factors known to be related to accident and conviction involvement.

Analysis of Driver Demographics

Comparisons between those drivers assigned to the hearing and those assigned to the school revealed no significant differences with respect to the above enumerated factors. These results provide additional support for the validity of the random assignment process.

Analysis of Life Style Factors

The results obtained from the analysis of life style factors reflect an overwhelming tendency for "problem" drivers as defined by Iowa statutes to be young, male, and single. Approximately 90% of the drivers included in the evaluation conformed to this categorization. The lack of variation in

these factors eliminates any possibility of employing this information to ascertain which treatment method is most appropriate for a given driver. In fact, one could argue that the citation criteria employed defines the type of driver (in terms of these characteristics) to be treated through the driver improvement system and not vice-versa. Regardless of the results obtained however, it is apparent that the assignment of drivers on the basis of these factors would result in no improvement in the overall effectiveness of the driver improvement program and for this reason, no further analysis of this data was attempted.

## RECOMMENDED REVISIONS TO IOWA DRIVER IMPROVEMENT PROGRAM

The results of this evaluation effort, coupled with what is currently known with respect to the effectivensss of various driver improvement methods, suggests that a number of revisions to the Iowa Driver Improvement Program be undertaken. These recommendations, enumerated in the following text, provide the Iowa Department of Transportation with two important benefits:

* A reduction in the overall cost and manpower requirements necessary to support the functioning of driver improvement within the State of Iowa.
* A net increase in the effectiveness of driver improvement actions as measured by their impact on accident and conviction rates.

The first of these benefits is accrued principally through the shifting of driver actions occurring at the 3 conviction (or one serious conviction) level from individually based treatments to group based treatments. This basic shift in the method of treatment for these drivers reduces costs in two respects. Firstly, the shift from individual hearings to group instruction taught through the Community College System essentially eliminates the substantial portion of the Department's cost burden for driver improvement actions at this level of conviction involvement. Secondly, the reinstitution of individual driver improvement interviews at the 4th conviction reduces operational costs further as the number of drivers

with four convictions in a 12 month period is substantially less than the number of drivers with three convictions in a similiar time frame. A report prepared by the Office of Safety Programs of the Iowa Department of Transportation (Hammond, 1979) bears out this premise. In this study, a 1% sample of drivers licensed in Iowa was selected from driver history files maintained by the Office of Drivers License. An analysis of the conviction involvement rates for the drivers included in this sample revealed that for a one-year period, approximately 87% of drivers had no accident-related convictions. Ten percent had only 1; two percent only 2, and less than one percent had 3 or more. Obviously, the number of drivers having 4 convictions posted to their record within a 12 month period would be extremely small.

A second projection of these estimates of conviction involvement, based on more complete data prepared by the Office of Safety Programs (Hammond, 1981) indicates the following:

* Drivers with 2 convictions in 12 months - 80,000
* Drivers with 3 convictions in 12 months - 20,000
* Drivers with 4 convictions in 12 months - 10,000

When combined, these two projections clearly illustrate the reductions in operational costs that would be achieved by initiating Driver Improvement Interviews at the four, rather than three conviction level. Were individual hearings to remain at

the three conviction level, the estimated total direct costs for operating these hearings (as applied to the above projections) would approximate $318,000 annually. A shifting of these hearings to the four conviction level would reduce these costs to approximately $106,000, a substantial savings in operating costs to the state.

It should be pointed out that this reduction in costs is not paralleled by a reduction in effectiveness. Recalling the evaluation results presented earlier, the group driver improvement school was found to be as effective as the hearing in reducing the accident involvement rate of drivers, at a more favorable cost/benefit ratio than the individual hearing.

Suggested Revisions

The recommended revisions to the Iowa Driver Improvement Program are four:

1. Institute a Warning Letter program at the 2 conviction level. Drivers convicted of two common traffic offenses (moving violations only) would be issued this letter. Its text should encompass those content items delineated previously. Should the Department desire, this letter could also be forwarded to drivers whose first offense was one of the more serious offenses currently employed in the definition of a problem driver by the state.
2. Require participation in the driver improvement school operated within the Iowa Community College System. Drivers convicted of three traffic law

violations in a 12 month period would be assigned to this school. Should the Department not wish to issue warning letters to drivers whose first offense is categorized as "serious", they could be assigned to the school. In addition to this mandatory participation requirement, drivers would be placed on probation for 12 months from the school completion date. A subsequent conviction within this period of probation would result in a Driver Improvement Interview, as would a Failure To Complete the school.

3. Initiate the Driver Improvement Interview at the 4 conviction level. Drivers convicted of 4 traffic offenses during a 12 month period or 1 serious traffic offense would be required to attend this hearing. The Hearing Officer would have the option to:

    - suspend with or without work permit
    - place driver on probation - 1 year from date of hearing.
    - restrict operating privileges
    - recommend "no action"
    - require Driver Improvement School (if not attended during the past 24 months)
    - require surrender of driver license
    - issue temporary driving permit

4. Employ the Driver Improvement Hearing as the vehicle for extending the period of suspension should a driver accumulate more than 4 convictions within a 12 month period. The driver would of course have the right of appeal through the Department of Transportation's existing appeal process.

Drivers against whom a driver improvement action had been initiated would be required to remain conviction-free for a period of 12 months before they would no longer be eligible for an action on the basis of accumulated convictions.

The driver improvement program characteristics outlined above have been configured on the basis of a model for such programs recently developed by the National Public Services Research Institute under funding provided by the National Highway Traffic Safety Administration. This model system is currently in the process of being approved by the membership of the American Association of Motor Vehicle Administrators as their recommended driver improvement program standard. An overview of this system and the rationale for its organization is presented in the following sections. It has been modified where appropriate, to reflect the revisions suggested for the Iowa Driver Improvement Program.

## DRIVER IMPROVEMENT GOALS AND OBJECTIVES

The ultimate objective of any driver improvement program is to reduce the accident rate of those drivers treated. The approach to be taken in achieving this objective is based on the assumption that drivers with a history of conviction involvement are more likely to be involved in accidents than drivers with little or no history of convictions. To achieve this goal of accident reduction, the driver improvement system must achieve the following objectives:

* Identify "high risk" drivers, i.e. those who have the greatest likelihood of being involved in an accident.
* Carry out actions that will cause these individuals to drive more safely.
* Remove from the roads those people who prove unable to improve their driving enough to assure a reasonable level of safety for others.

To encourage its acceptance by legislators, the judicary, the general public, and motor vehicle administrators, the system must satisfy several institutional objectives:

* It must treat habitual violators in an orderly, reasonable, and fair manner.
* It must be cost-effective.
* It must recognize the real world limitations of power, purse, and personnel made available to administrators of driver improvement programs.

Driver Improvement Principles

To achieve these goals and objectives, this model driver improvement system employs a set of principles which have been applied successfully to the reduction of violations and accidents among traffic law offenders across the country. These principles may be summarized as follows:

1. Increasing severity -- The severity of driver improvement action is geared to the seriousness of the offender's record. Under this principle, the action demanded of the offender and the re-

sources demanded of the driver improvement program increase as the number and severity of offenses increases.

2. Continuity of action -- Once a traffic offender enters the driver improvement program, each additional conviction results in a driver improvement action. The specific action is determined by the driver's current status in the system.

3. Gradual exit -- Offenders work their way out of the system gradually. Those offenders who remain violation free for a period of time do not leave the driver improvement program abruptly. Rather, they pass through a phase in which another violation neither subjects them to more severe action nor ignores them as it would a non-offender.

ENTRY CRITERIA

The first action in the proposed system involves issuance of a warning letter. Issuing a warning letter to soon (following one conviction) is likely to be viewed by drivers as an over-reaction. In addition, since all subsequent driver improvement actions are predicated on this initial action, issuance of a warning letter at one conviction would dramatically increase the cost of driver improvement operations as greatly increased numbers of drivers would require treatment at each level. On the other hand, issuance of a warning letter at high levels of conviction involvement (for example, three or more convictions) would have the net effect of eliminating the potentially beneficial effect of early intervention.

The eligibility criteria for the warning letter in this proposed driver improvement system are:

* Two moving violations in a 12 month period.

PROGRESSION CRITERIA

Once in the system, drivers progress from one level to the next upon conviction of any traffic law violation within a specified period of time from the date of the previous action. The principal advantage of this approach is that once a driver enters the driver improvement system, each subsequent conviction for a traffic offense results in a driver improvement action being taken. The knowledge on the part of the driver, that this is indeed the case, provides additional motivation to improve driving habits.

In this system, the period of time established for progressing to the next level of driver improvement activity is the occurrence of an additional conviction within 12 months of the date of the last conviction.

CONTINUATION CRITERIA

The principle of gradual exit from the driver improvement system dictates than an interim period exist between the time drivers at any level are eligible for more severe action, and the time when they are allowed to exit from the system and are no longer subject to any action. The length of this interim period in the recommended system is 12 months. During this

interim period, a driver would remain at the same level of driver improvement action in the sequence of actions. The conviction for a traffic offense during this interim period would not result in progression to the next level of driver improvement activity but rather a return to the 12 month active phase. Thus, drivers who have gone at least 12 months following a driver improvement action without an additional conviction being posted to the record would not be liable for more severe action on the basis of this conviction. On the other hand, they are not completely free of the driver improvement system since they are back in the active phase where one more violation would move them to the next level.

EXIT FROM SYSTEM

In the recommended system, drivers who operate for a 2 year period without a moving violation, regardless of previous driver improvement actions, would be viewed as no longer representing a "problem" and, thus no longer eligible for driver improvement actions.

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