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Report on Motor Vehicle Safety

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REPORT
ON
MOTOR VEHICLE SAFETY

The Committee: Robert Ditewig, John Donnelly, M.D., Dale R. Kneeland,
Patrick H. Maney, and Emerson Hoogstraat, Chairman.

* * *

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REPORT ON

MOTOR VEHICLE SAFETY

To the Board of Governors,
The City Club of Portland:

I. INTRODUCTION

A. Committee Assignment

The Motor Vehicle Safety Committee was formed in April, 1965, pursuant to authorization by the Board of Governors in January, 1965. The original Committee assignment was as follows:

To study and recommend practical and worthwhile improvements in law and regulations, other than traffic regulations, which would promote safe operation of motor vehicles. The Committee should include within the scope of its study:

1. Periodic re-examination in licensing of drivers;
2. The desirability of requiring particular safety devices and design factors in vehicles sold and/or licensed in Oregon;
3. The utility of a state motor vehicle inspection system, taking into account the cost, frequency, scope and means of inspection, and its effect on traffic accidents and insurance rates; and
4. Any other feasible regulatory measures which the Committee believes would substantially reduce automotive hazards and human incompetence in the operation of motor vehicles.

In accordance with this assignment, the Committee reviewed the available literature, conducted surveys, interviewed expert witnesses, and analyzed legislation, both enacted and proposed, on the federal and the state level. In the course of its deliberations, the Committee has held more than fifty meetings.

Although it could not have been anticipated at the time the research project was approved, developments in the field of motor vehicle safety came very rapidly on the heels of the Committee's formation. Stimulated by new disclosures and publications, notably Ralph Nader's book, Unsafe at Any Speed, federal and state legislators were prompted to oratory, to instigate a variety of investigations and studies, and to promotion of a wide variety of legislation. Most significantly, the federal Congress passed two acts which were intended to have revolutionary impact. The National Traffic and Motor Vehicle Safety Act of 1966 (hereafter referred to as the "Motor Vehicle Safety Act") provided for the promulgation of standards for safety and design features in motor vehicles, and The Highway Safety Act of 1966 provided powerful incentives for state legislation in such areas as motor vehicle inspection, driver licensing and driver education. Pursuant to the Highway Safety Act and in accordance with the new popularity of automobile safety crusades, many state legislatures considered legislation in the field. The Oregon State Legislature was faced with a voluminous hopper of highway safety bills in its 1967 and 1969 sessions but took action on very few.

Although this flood of legislative activity might have suggested a reduction in the scope of the Committee's research, the Committee was of the opinion that these new developments actually added to its responsibilities. It felt that many of these legislative proposals were ill-advised by reason of hasty preparation without adequate study and that several important areas had been given inadequate consideration. Accordingly, the original assignment of the Committee was expanded to include a critique of federal and state legislation and the Committee's recommendations on them, and specific suggestions for additional legislation to further implement the Committee's basic objectives.

B. Specific Areas Studied

In accordance with the Committee's revised assignment, the entire field of motor vehicle safety (except traffic regulations) was reviewed, and seven specific
areas were selected for study. The report and the recommendations are divided into these areas:

1. Motor Vehicle Inspection
2. Driver Licensing
3. Driver Education
4. Safety and design features in motor vehicles
5. Alcohol and medical factors as they related to driver licensing and traffic law enforcement
6. Traffic law enforcement, including both the police function and the judicial function
7. Adequacy of statistics and data collection regarding accident causation.

The Committee realized very early in its deliberations that the scope of its research assignment was so broad and complex as to be almost unmanageable. It felt it was necessary, therefore, to narrow the framework of its study and recommendations to include only those types of vehicles and accidents which were most significant. First, the Committee has directed its attention specifically to automobile safety. Much of what the Committee recommends also applies to motorcycles, trucks and busses and their operators, but no attempt was made to study the special problems peculiar to these types of vehicles.

The second limitation was to restrict attention to methods of reducing the number of serious injuries and fatalities, and not just accidents per se. It could be questioned whether this distinction has merit, in light of the fact that any vehicle accident carries the potential of personal injury. In fact, however, available statistics on accident causation, inadequate as they may be, do indicate sharply different patterns of causation for fatal or injury-producing accidents than for the total of all accidents.

These limitations still left the Committee with some serious research problems, described in Appendix A.

II. SCOPE OF RESEARCH

The Committee obtained the information on which it based the report and conclusions from many sources. First, it collected and studied pertinent literature from a variety of agencies, including private traffic safety organizations, trade organizations, federal and state agencies and universities. This literature included statistics on accident and fatality causation, reports on experiments with contrived accidents, reports on experiences of states and localities with accident reduction programs, federal and state laws and regulations, and recommendations for improvements in traffic safety. Appendix B of this report is a bibliography of the literature the Committee felt was most useful in its study. Appendix C is a list of organizations, agencies and individuals which provided information used by the Committee.

Some Committee members conducted surveys of special studies in connection with their specific committee assignments. One member, for example, surveyed the motor vehicle departments of all 50 states to determine regulations and attitudes regarding certain aspects of driver licensing. The findings of this survey are summarized in Appendix D.

Valuable sources of information were the interviews with experts in various fields of traffic safety, some conducted by individual Committee members, but most conducted by the Committee as a whole. A list of witnesses interviewed by the entire Committee is found in Appendix E.

The Committee's work was facilitated by the valuable services of its research intern, Lyndon A. S. "Tuck" Wilson. Mr. Wilson compiled information on federal and state legislation, both in Oregon and in other states, keeping the Committee posted on legislative developments as they occurred.

This is an appropriate point in the report to express the Committee's appreciation to Mrs. W. E. Naylor and her City Club staff for their assistance in gathering information, writing correspondence, preparing drafts, arranging meetings and generally assisting in the preparation of this report.
III. BACKGROUND

A. Accident, Injury and Fatality Causation

1. Analysis of Statistics

The tragic story of injuries and fatalities on United States streets and highways and their increase in recent years hardly needs to be told again. This report would not be complete without a few such statistics, however, so some of the highlights are listed here:

Nationally, motor vehicle deaths are at the rate of about 55,000 per year, and injuries at the rate of about 3,500,000 per year. Total annual direct cost of motor vehicle accidents is estimated at about $11 billion.

From 1900 through 1964, motor vehicle deaths in the United States totalled 1,510,000, about 2½ times the number of United States military deaths in the entire history of the country through 1964.

Motor vehicle deaths in Oregon increased from 414 in 1955, to 463 in 1960, to 681 in 1965, to 689 in 1970. Reported injuries from motor vehicle accidents in Oregon have shown a similar pattern, increasing from 15,442 in 1955 to 18,939 in 1960 to 32,000 in 1969.

Over a recent five-year period, the loss from motor vehicle accidents in Oregon was estimated at about $565 million, or about $282 for every man, woman and child in the State.

Partially offsetting these disturbing statistics is the happy disclosure that some fatality statistics are showing recent improvement. The national death rate per billion vehicle miles travelled was 60 in 1957, but had dropped to 56 in 1966, and to 50 in 1970. Although these statistics evidence only very moderate improvement, they at least indicate that improvement is possible, and that there is no excuse for throwing up our hands in despair at the "inevitable" slaughter on the nation's highways.

The urgency of the need to make serious effort to reduce traffic injuries and fatalities is self-evident. Only the most effective methods need to be determined. The first step in determining proper methods ought to be the scientific identification of the most important causes of accidents, injuries and fatalities. Unfortunately for the traffic safety investigator, a serious lack of funds, trained personnel and governmental sponsorship has prevented the study of accident causation from keeping pace with the increasing complexities of the interactions of man, machine and environment in traffic accidents.

Accident causation statistics, as a result, show nothing more than crude approximations of apparent causes. The available statistics have been derived primarily from police officers' accident reports and eyewitness accounts and are restricted to a single "prime causative factor". Although some local and state police departments conduct limited "in-depth" studies of accident causation, especially in fatality-causing accidents, these studies do not contribute much to the understanding of accident causation. Their results are lost in the compilation of gross statistics of accident totals.

Crude and inadequate as they may be, statistics published by state police departments and departments of motor vehicles must be the beginning point of any appraisal of accident causation. Fortunately, a number of limited independent studies, conducted both by public and private agencies, help to fill in the gaps when attempting to appraise the influence of individual factors (such as intoxication) on motor vehicle accidents and fatalities. A percentage analysis of statistics on accident, injury and fatality causation for the State of Oregon, as compiled from police accident reports by the Motor Vehicles Division, is shown below:
TABLE I
MOTOR VEHICLE ACCIDENTS IN OREGON, 1969
Percentage breakdown, by severity of accident and prime causative factor

<table>
<thead>
<tr>
<th>PRIME CAUSATIVE FACTOR</th>
<th>ALL ACCIDENTS ($ months only)</th>
<th>NON-FATAL INJURY ACCIDENTS ($ months only)</th>
<th>FATAL ACCIDENTS (full year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving Under Influence of Alcohol</td>
<td>1.8%</td>
<td>3.4%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Excessive Speed</td>
<td>7.1</td>
<td>11.8</td>
<td>33.5</td>
</tr>
<tr>
<td>Other Driver Defect</td>
<td>1.6</td>
<td>2.7</td>
<td>4.4</td>
</tr>
<tr>
<td>Other Driver Violation</td>
<td>83.9</td>
<td>76.5</td>
<td>49.7</td>
</tr>
<tr>
<td>Total Driver-Related Causes</td>
<td>94.4</td>
<td>94.4</td>
<td>95.4</td>
</tr>
<tr>
<td>Total Pedestrian-Related Causes</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Total Vehicle Defect Causes</td>
<td>3.2</td>
<td>3.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Environmental Causes</td>
<td>0.3</td>
<td>0.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Miscellaneous Causes</td>
<td>2.1</td>
<td>0.9</td>
<td>0.4</td>
</tr>
<tr>
<td>All Causes</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

(Source: Oregon State Department of Transportation, Motor Vehicles Division)

It should be repeated that these official statistics must be read and interpreted with caution. Not only are they based (in most instances) on very cursory examination by the police officer or eyewitness, but they indicate only the one apparent prime causative factor. If excessive speed is an obvious factor, other contributing causes probably will not be reflected at all in the statistical data. To illustrate the significance of these drawbacks, several independent studies have indicated that drinking is a factor in at least 50 percent of all fatal motor vehicle accidents, but the Oregon statistics indicate that drinking is the prime causative factor in only eight percent of the fatal accidents. A discrepancy of this magnitude can only be accounted for by the presumption that about half of the fatal accidents attributed to excessive speed and other driver-related causes also involved driving under the influence of alcohol.

2. Causative Factors

The element which stands out most clearly in the Motor Vehicle Division summary is the overwhelming predominance of driver-related causes, as opposed to vehicle-related and environmental causes (highway design, signalization, sight obstructions, etc.). Testimony of witnesses appearing before the Committee have generally corroborated the relative insignificance of the vehicle and the environment in accident causation.

Several other insights into accident and fatality causation factors can be gleaned from the Summary. Two significant disclosures will be analyzed at this point. One has to do with the role of speed in accident fatalities and the other has to do with the factor of driver age.

a. Speed Converts Accidents into Injuries and Fatalities

Although this statement might appear to be obvious, the Committee feels that far too many drivers completely overlook the significance of speed in traffic accidents and fatalities. Even some professional traffic law enforcement people interviewed by the Committee showed very little interest in this factor. Although the Committee has little evidence that speed, per se, causes very many accidents, (7.1 percent of accidents in Oregon in 1969 involved speed as the prime causative factor, according to the Motor Vehicle Division summary), there is ample evidence that speed converts what would otherwise be a minor accident into an injury or fatality producing accident. This is certainly as important to understand as it is to know whether speed contributes very significantly to the generation of the accident in the first place. The above table shows how excessive speed sharply increases in importance as a causative factor when we move from statistics for total accidents to non-fatal injury accidents and to fatal accidents.

Even more telling evidence of the effect of speed on accident severity is found in the following data. In Oregon in 1969 although only 31 percent of
all accidents occurred in rural areas, 37 percent of non-fatal injury-producing accidents occurred in rural areas, and 80 percent of fatal accidents occurred in rural areas. Another way of stating this is that, although only 0.24 percent of urban accidents resulted in fatalities, 2.11 percent of rural accidents (a rate nine times as high) produced fatalities. Because average speeds are significantly higher in rural areas than in urban areas, and as there appear to be no other factors which would tend to make rural driving more hazardous than urban driving, it can probably be concluded that speed is a basic ingredient which converts what would otherwise be a non-fatal accident into a fatal accident.

This evidence is further bolstered by a comparison between accidents and fatalities on freeways versus other state and federal highways. Of the total of accidents in Oregon in 1969 on these two classes of highways, 2.9 percent occurred on freeways. However, 3.2 percent of the non-fatal injury-producing accidents occurred on the freeways and 5.3 percent of the fatal accidents occurred on the freeways. The percentage of accidents resulting in fatalities was significantly higher on freeways than on the other state and federal highways. Here again, what basic difference in conditions exist except for higher average speeds on the freeways? If there are other differences, they would appear to be differences which would make freeway driving safer—not more hazardous. The evidence seems strong enough to put at rest the contention expressed by many that speed, as such, is not a problem in traffic safety. Even if it could be shown that speed alone doesn't cause a significant number of accidents, it certainly causes fatalities.

b. Youth is a Significant Factor

Traffic safety literature is replete with references to the high accident and fatality record of the youthful driver. The only reason for additional reference here is to show what the actual experience has been in the State of Oregon. The following table shows the relative propensities of drivers in different age groups to be involved in accidents of different degrees of severity, according to the experience in Oregon in 1969. The figure of 1.0 represents the average involvement record of all age groups combined. The figure of 2.9 for accident involvement by drivers 18 and 19 years of age, for example, means that such drivers were involved in accidents 2.9 times as frequently as the average Oregon driver.

These indices should be studied with caution, however, because they do not take into consideration (1) the number of drivers of each age, (2) the number of miles driven by drivers of each age, or (3) the degree of guilt in causing the accident (the statistics on which these indices are based indicate involvement only—not responsibility for the accident). Despite these drawbacks, the figures clearly represent an indictment of the young. It is interesting to note that the indices in each age bracket are quite consistent among the different severity categories. Only in the 16-year age category and the 20-24 age category is there a noticeable difference between the indices for all accidents and fatal accidents.

<table>
<thead>
<tr>
<th>AGE OF DRIVER</th>
<th>ALL ACCIDENTS</th>
<th>NON-FATAL INJURY ACCIDENTS</th>
<th>FATAL ACCIDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>2.2</td>
<td>2.4</td>
<td>1.6</td>
</tr>
<tr>
<td>17</td>
<td>2.9</td>
<td>3.2</td>
<td>3.4</td>
</tr>
<tr>
<td>18 &amp; 19</td>
<td>2.9</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>20-24</td>
<td>2.0</td>
<td>2.1</td>
<td>2.8</td>
</tr>
<tr>
<td>25-34</td>
<td>1.1</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>35-44</td>
<td>0.9</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>45-54</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>55-64</td>
<td>0.6</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>65-74</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
</tr>
</tbody>
</table>

(Source: Calculations based on information provided by Oregon State Department of Transportation, Motor Vehicle Division)
For further insights into the causes of accidents, and more particularly the causes of fatal accidents, the investigator must go beyond the gross statistics published by official data collection agencies. A number of special studies to determine the influence of specific factors in motor vehicle fatalities have been conducted over the years by many public and private agencies. Most of these studies have been concerned with the influence of alcohol, mental and emotional problems, and proneness to traffic violations. This report will look briefly at each of these areas.

c. The Role of Alcohol in Traffic Fatalities

In the face of the official statistics on fatality causation which usually do not give alcohol a great deal of blame, either in Oregon or elsewhere, several special studies have disclosed that either the driver or the deceased was under the influence of alcohol (although not necessarily officially intoxicated) in 50 percent or more of fatal accidents. The results of a few of these studies are described below:

A seven year study in Dade County, Florida, revealed that 45 percent of all traffic victims tested for alcohol had been drinking, and that 67 percent of all drivers killed in single vehicle accidents had been drinking.

An eight year study of single vehicle fatal accidents in Westchester County, New York, showed that, of the 83 drivers tested, 49 percent were found to have blood alcohol levels of 0.15 percent at death (legal intoxication level in most states), and that an additional 20 percent had blood alcohol levels of 0.05 percent to 0.15 percent at death (generally considered high enough to sharply impair driving ability).

Sixty-two percent of all fatalities in a 1961-63 study in New Jersey were tested for blood alcohol level. The reasons for testing or not testing had nothing to do with suspicion of intoxication. Of the 62 percent who were drivers, as opposed to passengers, 41.3 percent had blood alcohol levels of 0.10 percent or higher and 52.0 percent had blood alcohol levels of 0.05 percent or higher. Ninety-four percent of the drivers with blood alcohol levels of 0.05 percent or higher were determined to have been responsible for the accident.

In a California study in 1966, 49 percent of the drivers determined to be responsible in fatal accidents had blood alcohol levels of 0.10 percent or higher. Fifty-eight percent of such responsible drivers had some positive alcohol reading.

Closer to home, in Oregon in 1969, 48 percent of all deceased drivers in fatal accidents were given blood tests. Forty-five percent of these had blood alcohol readings of 0.10 percent or higher, 33½ percent had readings of 0.15 percent or higher, and 20 percent had readings of 0.20 percent or higher. An additional 6 percent had readings between 0.05 percent and 0.10 percent.

Although these are just a few isolated studies, they are typical of all studies which have been conducted to determine the influence of alcohol in traffic fatalities. They should give cause to seriously question any traffic safety program which does not devote substantial emphasis to the problem of the drinking driver.

d. The Role of Mental and Emotional Problems

Mental or emotional problems, temporary or chronic, and resulting either from mental illness or emotional immaturity, have been cited in a few studies as highly significant factors in motor vehicle fatalities. These factors, of course, are not as amenable to statistical verification as is blood alcohol level, but the evidence is there, nonetheless. In a recent University of Michigan study, the psychiatrist investigator contacted relatives or employers of 96 dead persons held to be responsible for fatal automobile accidents. His findings showed that 41 percent suffered from one or more of depression, suicidal, paranoid or violent mental states. Thirty-nine percent were alcoholics, defined as drinking to the point where personal relationships, jobs or health were endangered. Specifically regarding suicidal tendencies, another study of 11 Kansas City fatal accidents disclosed that three of the drivers had threatened suicide before departing on
the fatal trip, and four of the drivers had past histories of suicidal threats or attempts. All of the fatalities except one followed quarrels with wives, sweethearts, other family members, or employers. The police had listed all of the fatalities as “accidental”.

e. The Place of Accident Records in Identifying Potential Fatalities

Several studies have related fatalities to past violation records and have shown that drivers with extensive records of violations, especially certain types of violation, have a high propensity to be involved in fatal accidents. One such study was conducted by Mr. Noel F. Kaestner of the Oregon State Motor Vehicle Division. Parts of his summary, as quoted from the June 1964 issue of Traffic Safety Research Review read as follows:

“Analysis of prior driving records of the males revealed that the fatal accident group typically had higher involvement records at nearly every age level. Their driving histories were particularly noteworthy for the recency and frequency of convictions. Even more noteworthy was the remarkable tendency for certain conviction types to characterize their prior driving records. These types (speed and noise-equipment violations) though frequent in the youngest segment of the male driving population, usually show a sharp decline for successive ages. Probably the most impressive finding of this study consists of the remarkable persistence of these conviction types in older male drivers in fatal accidents. . . . The hypothesis that immaturity is a major trait of these drivers was discussed.

“A subdivision of the fatal accident drivers into those judged culpable and those labeled otherwise, revealed that even the latter group had atypical prior driving records. In other words, the records of the culpable group, though worse, were not significantly so. Even the group of drivers involved but not deemed culpable in fatal accidents, had records that may have been predisposing factors (along with the general immaturity suggested above).”

After reviewing studies of this type, along with studies relating fatalities to drinking and to emotional and mental problems, it is little wonder that the Stanford Research Institute can make the claim that cancelling 20 percent of our driver’s licenses would result in an 80 percent drop in accidents.

3. General Conclusions

Inadequate as available statistics and studies may be, they seem to point to some general conclusions regarding accident and fatality causation, which will have to be relied upon until further studies verify, modify or refute them. These conclusions are as follows:

1. Among the three basic elements in injury and fatality producing accidents — driver, vehicle and environment — the overwhelmingly significant factor is the driver. To the extent that improvement in this factor is possible, efforts should be concentrated here.

2. Three objectively measurable elements are very commonly found in fatal accidents — alcohol, speed and atypical records of prior driving convictions and accident involvements. Where speed, of itself, is not a causative factor in an accident, it certainly increases the likelihood that an accident caused by other factors will result in serious injury or death. An accident reduction program which does not place major emphasis on the removal from the road of the speeder, the driver under the influence of alcohol, and the driver with a serious record of violations and convictions is doomed to substantial failure from the start.

3. Although only subjectively measurable, emotional and mental problems appear to play a significant role in serious injury and fatal accidents.

4. The young, especially the very young, play a significantly disproportionate role in the drama of highway accidents and fatalities.

It should not be inferred from this listing that the role of the traffic safety investigator should stop here. Many other causative factors and their potential remedies have been studied by the Committee and will be reported in the main body of this report. Other factors, such as drugs, narcotics, driver incompetence, vehicle defects, environmental conditions, etc., have frequently been mentioned.
as possible contributors to highway accidents and deaths. Any reasonable actions which hold promise of reducing the impact of these influences on traffic accidents and fatalities certainly merit serious consideration. But to the extent priorities should, or must, be established, the most important causative factors should be given the lion's share of our attention.

B. Remedies Adopted Prior to Federal Legislation of 1966

Until the recent promotion of remedial programs by the federal government, virtually all efforts to alleviate traffic safety problems were made on the state and local level. Apparently most such efforts have been made either on an emotional basis or on the basis of incomplete study. There has been little effort to establish the probable efficacy of such programs prior to their institution, and the rising volume of traffic injuries and fatalities does not attest to their value. Some of the traditional efforts are described below:

1. Driver-Oriented Programs

a. Driver Education

Among the most conspicuous programs directed at driver improvement are the various “propaganda” programs designed to point up the horrors of highway slaughter and the need for safe, courteous and “defensive” driving. These are ordinarily privately-sponsored or sponsored by quasi-governmental agencies, although governmental agencies are occasionally involved. The Traffic Safety and Education Division of the Oregon State Motor Vehicles Division, for example, has conducted limited highway billboard campaigns. Such programs generally are given a low rating by serious students of traffic safety. It is the opinion of most of the experts interviewed by the Committee that such “scare” tactics are taken by the typical driver to refer always to the other drivers, and not to themselves.

Driver education, especially programs in the public schools, has received rapidly growing attention in recent years. This has been further promoted by the Highway Safety Act of 1966, which includes expansion of such programs in the limited list of absolute requirements for approval of a state traffic safety program. Public school driver education in Oregon is widespread, but far from universal. Over 111,000 have received such training since 1958. This represents only about 15 percent of students eligible for driver education. The percentage of eligible students taking driver training courses has shown a steady increase, however, to about 24 percent in the school year 1967-68.

A recent driver education innovation in Oregon is the Defensive Driving Course, a four evening course available to any registered driver, and offered in major cities in the state. The course is jointly sponsored by the Oregon Traffic Safety Commission and local business groups, predominantly associations of casualty insurance companies. The course is too new to be effectively evaluated, but experience so far indicates that enrollees are usually already good drivers. For this reason it appears to hold little promise of contributing to traffic safety except insofar as it may help already good drivers in their efforts to escape from dangerous situations created by deficient drivers untouched by the program.

b. Driver Licensing

Driver licensing apparently has a great deal of potential for traffic safety improvement, but there is not much evidence of its use for this purpose. The fundamental objective of driver licensing, as has been the case for decades, is to prevent under-age, patently incompetent and financially irresponsible persons from driving motor vehicles. Because standards of driver competency have not been revised along with increases in driving speeds, complexities and congestion, and because competency for purposes of obtaining a driver’s license has never encompassed emotional and attitudinal competence, driver licensing cannot be viewed as a real weapon in the over-all traffic safety campaign. And this is entirely apart from the fact that driver licensing requirements are not enforced, anyway. Several competent and knowledgeable witnesses before the Committee have testified that there are probably as many as 50,000 unlicensed drivers (never licensed or driving with revoked or suspended licenses) in the State of Oregon at the present time.
A few inroads into the deficiencies of driver licensing are being made, although to this point they are merely scratching the surface. Apart from suspensions because of driver violation convictions, the Motor Vehicle Division may require re-examination of any driver who it has reason to believe is no longer qualified to drive because of age, infirmity, physical or mental disability, etc. For several years physicians have been required to report all cases of epileptic type seizures, upon which driver licensing control is, for all practical purposes, transferred to the Oregon State Department of Health. Only recently, cooperation between the Oregon Blind Commission and the Motor Vehicles Division has resulted in license revocation of persons who have had licenses for many years, although legally blind.

2. Vehicle-Oriented Programs

Periodic motor vehicle inspection has been widely proposed and adopted as a traffic safety measure, although its efficacy has been a subject of dispute. Although some states have shown traffic accident reductions following the institution of such programs, other variables may have influenced the results, and there is, to the Committee's knowledge, no strongly convincing evidence of any substantial contribution of these programs to accident reduction or reduction of fatalities and injuries. Certainly, available statistics on death and injury causation in traffic accidents in Oregon do not attribute any significant role to vehicle defects. Some isolated studies have shown vehicle defects to be significant causative factors in fatal accidents, but interestingly enough, the defects disclosed in these studies were types not disclosed in typical inspection programs.

Design characteristics intended to reduce the severity of accidents have been incorporated in motor vehicles almost entirely as a result of recent federal legislation. The only significant voluntary overtures in this direction have been made by some foreign car manufacturers and for a limited period in the 1950s by Ford Motor Company. Ford's experience was short-lived, however. Although it retained some of its safety features, it abandoned further intensive efforts in this direction and ceased using them as selling points when it discovered that safety apparently didn't sell.

3. Environment-Oriented Programs

Although not included in the scope of this study, mention certainly should be made of the extensive programs carried on by traffic and highway departments over the nation designed to eliminate hazardous environmental conditions. Adequate signalization, elimination of dangerous grade crossings, divided highways and removal of sight obstructions are only a few examples of the types of activities which apparently have had significantly beneficial effects. Principal credit for the reduction in accident and fatality rates over the past few decades (while absolute numbers have generally increased) usually is given to these programs.

C. National Highway Safety Act of 1966

An important part of the background for this study has been the sharply increased attention directed to the problem of motor vehicle safety by the federal Congress. In the year of 1966, it passed, and the President signed into law, two acts which are having and will continue to have a significant influence on the direction of motor vehicle safety efforts. The Committee has mixed feelings about this legislation. It directs more attention on the part of the general public and state and local lawmakers to the over-all problem, and this is certainly to the good. On the other hand, it concentrates remedial efforts (and forces state legislators to do the same) in some areas which the Committee feels show some of the least promise of beneficial results. To the extent that energies and finances are devoted to these remedies, other more significant activities may very well be short-changed. It may be that, for political or other reasons, federal intervention could not be made effective in the more vital areas of motor vehicle safety. The Committee will not attempt to pass judgment on this political question, but merely notes its feelings about the directions of the activities the legislation imposes.

The basic purpose of the Highway Safety Act is to provide inducements for certain types of legislation and activities by state and local governments. Specifically, it provides that the Governor of each state shall be responsible for the administration of a program in which the state or local governments will
be required to establish or improve activities in specific areas related to traffic safety. Although the Secretary of the Department of Transportation has considerable discretion in the types of activities which will be acceptable, certain areas must be included in the programs under the terms of the Act. The obligatory areas are:

1. Driver education and training, for both students and adults, including retraining of selected deficient drivers.
2. Driver licensing, including driver testing and mental and physical examinations.
3. Motor vehicle inspection.
4. Record systems of accidents, with appropriate investigations to determine probable causes.
5. Surveillance of highway design, traffic control, and locations of potentially high accident frequency, and correction where necessary.

The Secretary is empowered to promulgate standards in these areas, to add to the general requirements, or to amend or waive standards temporarily for the purpose of evaluating experimental or demonstration programs. Some of the more significant regulations adopted to date are the following:

1. States may adopt, temporarily, experimental motor vehicle inspection programs, rather than full-scale, all-inclusive programs.
2. Drivers must be re-examined at least once every four years.
3. Implied consent laws are to be adopted and the maximum permissible blood alcohol level is to be reduced to 0.10 percent, replacing the now-prevalent 0.15 percent.
4. Emergency medical care provisions for accident victims must be established.
5. Operators of motorcycles must be specially licensed and must wear helmets and eye protectors.

It will be observed that some of these standards have already been met in Oregon, although the State is relatively slow in coming into compliance with the regulations. A recent U. S. Department of Transportation release ranks Oregon 44th among all states in degree of compliance.

The federal government will provide 50 percent of the financing for approved state programs. More significantly, as an incentive for state government cooperation, the Act provided that highway funds apportioned to the state after January 1, 1969 shall be reduced by 10 percent if that state does not have an acceptable program.

Fortunately for states which have been slow to adopt full-scale programs (and this includes most states), the Secretary is empowered to suspend the penalty temporarily, and it is anticipated that he will do so wherever the state seems to be moving in the prescribed direction. This discussion does not exhaust the provisions of the Act, but it does describe the provisions of apparent major impact. The full statement of the most important parts of the Act is found in Appendix F.

D. National Traffic and Motor Vehicle Safety Act of 1966

The basic purpose of the Motor Vehicle Safety Act is to assure that motor vehicles produced or sold in the United States will incorporate design features and devices designed to reduce the likelihood of accidents and to reduce the death rate and the severity of injuries resulting from accidents. This purpose is to be accomplished by the issuance of safety feature regulations by the Secretary of the Department of Transportation and by the requirement that owners of those vehicles found to be defective after sale must be advised of the defect. The Secretary is authorized to conduct research to help in determining proper safety standards.

Voluminous regulations have been issued pursuant to the provisions of this act. Some of the most important safety regulations, either currently in force or scheduled for implementation in the near future are the following:

1. Brake fluid and brake hose standards.
2. Seat belts required both front and rear. Three sets of belts required on any seat which is continuous from door to door. Seat belt and anchorage strength standards.
3. Shoulder harnesses required in front seat and hardware required for rear seats.
4. Locking front seat backs on two-door models.
5. Standardized gear shift sequence.
6. Windshield wiping, washing and defrosting devices required.
7. Laminated windshields which are resilient but which will not collapse on impact.
8. Standards for adequate braking by both service and parking brakes, including standards for brake lining.
9. Limits on reflectivity of metal components in driver's field of view.
10. Specifications for rear-view mirror visibility and coverage.
11. Impact protection from instrument panel, seat belts, handles, knobs, sun visors, arm rests, etc.
12. Collapsible steering columns, and specifications for rearward displacement of steering column in accident.
13. Standards for door hinges and latches designed to prevent opening in accident.
15. Rims required to hold flat tire on wheel at speeds up to 60 miles per hour.
16. Statement on vehicle of load original equipment tires designed to carry.
17. Elimination of dangerous exterior protrusions.
19. Standards for hood latching.
20. "Fail safe" requirements for headlight covers.

Regulations proposed and under study include a governor to prevent speeds over about 80 miles per hour, replacement of the gear shift with buttons or dials, "wrap-around" seats, padding of most interior surfaces, elimination of the horn ring, and the controversial accident-impact inflatable bag. The Committee is of the opinion that some of the most effective safety and design features (and the most revolutionary) have been left to the last for consideration. This matter will be discussed later in the report.

IV. MOTOR VEHICLE INSPECTION

A. General Discussion

As noted, some steps have been taken to improve the inherent safety of motor vehicles, and more improvements are either scheduled for adoption or are being considered by the National Highway Safety Bureau. Unfortunately, these improvements, of themselves, will never assure vehicle safety. The Committee is of the opinion that neglect is the primary cause of unsafe automobile conditions and vehicle defects. A careful owner will maintain his car in safe condition, but most drivers are either unfamiliar with the mechanics of modern motor vehicles, or are too busy or indifferent to see that proper maintenance programs are followed. Whatever the reason, studies have shown that many, if not most, of the cars on the highways today are, in varying degrees, unsafe.

In a recent Kiwanis-Portland Traffic Safety Commission sponsored vehicle inspection check, 22 percent of the cars tested were found to be deficient in some basic manner. Worn tires and leaky exhaust systems accounted for most of the defects. This check was not sufficiently comprehensive to disclose many defects which are not apparent upon visual scrutiny. Seventy percent of these autos had seat belts, but only 50 percent of the drivers admitted using them regularly.

Serious defects are found in new cars as well as old cars. In St. Louis a diagnostic clinic tested 10,000 autos and found that 45 percent of the defective cars had been driven less than 5,000 miles. Ninety percent of all cars less than
five years old were defective. The most common defect found was improper wheel alignment which appeared in 25 percent of the new cars and in 40 percent of those which were made since 1966. Faulty brakes were second, with three percent of the new cars and 30 percent of the older ones affected.

An unanswered question is whether a substantial number of accidents are caused by defective autos. Vehicle defects were stated as the "prime causative factor" in only 3.2 percent of all accidents and 2.3 percent of fatal accidents in Oregon in 1969. Where defects were involved but were not the "prime causative factor", other conditions, such as drunken driving or human errors, accounted for the accident in the first place, and defects only lessened the margin of safety. Oregon publishes no figures on this kind of contributory effect of vehicle defects where something else is the "prime causative factor".

In light of the available statistics on vehicle defects as accident causative factors and the dearth of information on effects of motor vehicle inspection on the incidence of serious accidents, the Committee feels that more information should be gathered by concentrated studies of accident causes and the actual contribution that defects can make, before states launch expensive motor vehicle inspection programs.

One means of financing and setting up such studies would be to implement that portion of the Highway Safety Act relating to accident investigation, and allocating federal funds to aid the states in setting up the studies, using a standard set of data to measure test results and to train personnel. A few accident causation studies are now underway under this program. If proof were obtained that certain defects contribute substantially to accidents, an inspection program could be tailored to disclose these defects.

Because of the absence of data on the effect of motor vehicle defects on serious accident causation, the value of motor vehicle inspection has been questioned by many experts in the field. Dr. B. J. Campbell, director of the University of North Carolina Highway Safety Research Center, testifying before the Senate Antitrust subcommittee early in 1970, said he knew of "no scientifically acceptable evidence showing that periodic motor vehicle inspection is worthy of an expanded share of our limited highway safety funds. No evidence exists that motor vehicle inspection reduces accidents commensurate with program costs." In response, Undersecretary of Transportation James Beggs said he could not prove Dr. Campbell wrong. He said, "We don't agree with that, but we have to admit the statistics we have seen confirm his view — at least they do not refute it."

B. History of Motor Vehicle Inspection

The first inspection was developed in 1926 in Massachusetts, Maryland and New York as a result of a voluntary "Save-a-Life" campaign. The results showed that only 42 percent of the vehicles inspected were safe for the road. After Pennsylvania adopted this program, public concern for safety led to the state's adoption in 1928 of the first motor vehicle inspection law providing for annual inspections. By 1930, all six New England states had programs. In the next ten years Virginia, Delaware, Colorado, South Carolina, Washington and the District of Columbia also adopted inspection programs. Delaware initiated a state-owned and operated system, while the others used licensed private garages. A few cities across the nation also set up their own inspection ordinances. Many of these programs were casualties of World War II, when unnecessary driving was curtailed, and there were more pressing demands for vehicle inspection resources.

Portland set up its own city inspection program during this period. Inspections were made at the City Testing Center located at the intersection of Milwaukie and Powell Boulevard. Each vehicle owner was required to bring his vehicle in once a year and received a sticker when the car passed. In the first six months, 71 percent of the cars were rejected. Later the average rejection rate dropped to 41 percent.

Congestion and long line-ups at the testing station just before an expiration period caused some inconvenience to automobile owners. Often they faced an equally long wait when they returned for a recheck after getting some minor adjustments on their cars. The program was very unpopular with the public, many auto repair shop operators felt the inspectors were too strict, and city financial officers were unhappy because the station was losing money.
Another problem developed in enforcement as there was no way of telling which unchecked car on the street belonged to a city resident, and which was a car from one of the surrounding areas. Enforcement of the law could only be applied to those persons who became involved in an accident or received a citation. The majority of the city's inhabitants did comply with the law, but most of the older and obviously defective cars were never brought in and so were never adequately repaired. The City Council repealed the ordinance, and compulsory motor vehicle inspection died in Oregon.

The obvious lesson to be learned from the Portland experience is that a statewide, compulsory inspection system is the only type that will reach all motorists, and is the only one which can be adequately enforced.

Other than spot checks permitted under 1969 legislation, the only inspections in Oregon today are voluntary. For example, the Portland Traffic Safety Commission has sponsored private inspections through the Kiwanis Clubs. One week in late spring, it sponsors motor vehicle inspection lanes in various parts of the city in shopping center parking lots. Qualified mechanics donate their time to make this project a success. The drivers are given a checkout list where any defects are listed, or certificates for the windshield if the car passes.

Between World War II and 1966, ten states without previous programs adopted motor vehicle inspections, while one — Arizona — dropped its program. Inspection plans were introduced in most legislatures during this period, but few survived committee consideration. Less than one-third of America's automobiles were inspected and the deep South and East coast contained the majority of the inspection states. Five of these states provide for semi-annual inspections — the rest require only annual inspections.

The few studies from inspection systems, spot checks and arrest and accident records have resulted in some presumably useful statistics. However, these data have not been built on standardized reporting procedures and are generally valueless for comparison purposes. It was partly out of this confusion and the spotty use of vehicle inspection that the demand for traffic safety reforms finally led to adoption of the Highway Safety Act.

C. Requirements of the Highway Safety Act

Among other traffic safety objectives, the Highway Safety Act was intended to impose motor vehicle inspection upon the three-fifths of the states that did not have it. It is intended that these inspections be specific enough to discover existing or potential vehicle defects that might cause an accident or increase the severity of accidents which do occur. Further, it will encourage the development of some means of assuring that needed repairs are actually made. To qualify for the program, the state must do the following:

1. Inspect each motor vehicle, motorcycle, trailer and semi-trailer (except mobile homes) that is registered within the state. Although these inspections may be annually at first, semi-annual inspections will be required later. Each vehicle shall carry a visible evidence of inspection approval.

2. There must be an inspection of all vehicles prior to the first registration within a state.

3. There will be an inspection of all vehicles which have been involved in fatal accidents. The state will be encouraged to inspect vehicles after any serious accident, and to require such inspection before permitting the vehicle to be used upon the highways again.

4. This act will also require inspection of all automobiles upon sale, whether new or used.

The inspections must be equal to the standards set by the American Standards Association in its publication D7.1, entitled American Standard Inspection Requirements for Motor Vehicles, Trailers, and Semitrailers Operated on Public Highways. This publication sets the standards of allowable deviation in such matters as steering, alignment and suspension, tires, exhaust, brakes, lighting, glass, and safety equipment.

Fleet owners will be allowed to inspect and issue certificates themselves. Dealers will also have special authority to make and issue inspection certificates
after sales of their own new and used automobiles. The State is to set up its own
inspection training programs for inspectors and personnel, with the certification
of those persons completing this training. The State is to set up a record of
inspections, including the model and make of car, the date of inspection, and the
defects found by category. These will then be compiled into monthly and annual
summaries showing the results of the inspections.

The individual state will be left to develop its own program in accordance
with the standards set forth in the Act. As long as the program meets with the
requirements of the Highway Safety Act, or satisfactory progress toward these
requirements is being made, money will be allocated to fund it on a matching basis.

D. Types of Inspection Systems

One of the first choices the state must make is the manner of administering
the inspection stations. Choices will be restricted to the following plans:

2. Privately-operated stations.
3. Combination of both, depending upon local needs.

1. State-Operated Stations

Each type has its advantages and drawbacks. Under the first option, state
personnel operate the stations. Such a program is conducted in New Jersey, Dela-
ware and Washington, D.C. at the present time. To spread the load throughout
the year, inspection might be required on the anniversary date of the vehicle
registration, as is the case in New Jersey. This state has some 40 stations, employ-
ing a field staff of 610 persons to handle 2,700,000 vehicles. Some of these
stations are also used as motor vehicle branch offices, driver improvement confer-
ence centers, and for driver license examinations.

The main disadvantage of the present state-operated systems is that there are
not enough stations to prevent periodic rush periods, causing drivers to be greatly
inconvenienced while waiting their turns. This system seems to be most effcient
in the more densely populated sections of the country where stations can be
geographically close to most of the driving population and still be fully utilized
the year around.

2. Privately-Operated Stations

Most of the other motor vehicle inspection states license private garages to
perform the inspections. This is quite efficient in the less densely populated states.
Under this program, the private stations are licensed directly by the state and
must operate under a given standard of performance or lose their right to issue
inspection stickers. In a few states, any service station can inspect and certify
vehicles. In these states, some checking system has to be set up to see that the
stations actually do the inspection properly, thus maintaining the legislative stand-
ards. The main expense in such a control program is the training and maintenance
of the team of state inspectors who supervise the stations and investigate complaints.

The drawback to this system is the reluctance of some stations to reject
vehicles of their own customers and the tendency of some stations to take advantage
of their inspection powers by making rejections on inconsequential items in hopes
of obtaining the repair work.

3. Combination Systems

A few states, such as Maine, use a combination system by establishing state
centers in the populous cities and private garages in the rural areas. Under this
system, well-equipped state-operated stations are used where population density
permits them to be fully utilized. In rural areas, where state-operated stations
cannot be economically justified, private stations fill the gap, eliminating the need
for rural residents to drive long distances to urban testing centers.

E. Administrative Problems

A common denominator of all systems is that the degree of care in inspection
and the number of actual defects discovered is proportionate to the fee charged
for the service. In states with existing systems, the fee ranges from $1.00 to $6.00
(In Hawaii) and the average is about $4.00. Defects discovered are generally those which can be determined in a very few minutes. An average inspection lasts about twenty minutes — certainly not adequate for any but a very superficial check. An Alabama study has indicated that it would cost $25.00 to conduct a meaningful inspection — even this, of course, would provide no assurance of a reduction in the traffic toll.

One actual or potential problem is that of "gouging" or excessive repair charges by the inspection stations, or the nearby garages in those states where the state handles the inspections. The primary way of limiting abuses in car repairs is by providing trained and efficient personnel to supervise the stations. Many states qualify mechanics by written examinations on the rules and regulations as well as requiring proof of their competency, and levy severe penalties against offenders. The costs of policing private stations are covered in the cost of materials sold to the stations and are, in turn, passed on to the owner as part of the inspection fee.

States with motor vehicle inspection systems have found that public acceptance and support is contingent upon several factors. Important among these are the following:

1. The system should involve as little inconvenience and expense as possible.
2. The public should be educated to the need for inspections and the benefits provided.
3. Gouging and superficial inspections must be prevented through frequent station inspections and a tight control system.

F. Oregon State Legislation

In its last two sessions (both subsequent to the federal legislation of 1966), the Oregon State Legislature has had many opportunities to enact laws in compliance with the federal traffic safety legislation or to otherwise contribute to motor vehicle safety. Its actual accomplishments, however, have been negligible.

Specifically regarding motor vehicle inspection, Senator Ted Hallock introduced in the 1967 Session one of the most comprehensive bills ever to be submitted for this purpose. His bill required annual inspections of all motor vehicles and trailers. Any vehicle not bearing a current Oregon sticker or a vehicle inspection sticker from the vehicle's home state would be barred from the highways. Each county would arrange for sufficient inspection stations, with a fee of $2.50 being charged for each motor vehicle inspection, and $1.50 for every other vehicle. No additional charge would be made if the car owner had repairs made and the car was returned for re-inspection within five days. The state would charge a fee of 25 cents for each certificate provided to the stations, and the unused ones could be returned for refund. This bill died in committee.

The 1969 Legislature passed a law providing for random vehicle inspection by the State Police anywhere on Oregon highways. A vehicle which doesn't pass must be repaired with 15 days and proof submitted to the police. Ninety-two additional state policemen were requested to help implement this law. Although the opponents said the law would cause massive traffic jams, be a hazard to other drivers and be considered by the public as police harassment, the bill passed with the number of additional officers cut down to 70.

State Police Superintendent H. V. Holcomb has expressed reservations about the value of this program. He told the House Task Force on Government Reorganization he doubts that equipment violations encountered in these inspections are really hazardous, and that spot checks cannot be made on heavily-traveled roads, or at night, because of the traffic hazards that would result.

G. Conclusions and Recommendations on Motor Vehicle Inspection

The Committee was faced with a seemingly insurmountable dilemma in reaching its final recommendations on the subject of motor vehicle inspection. Pulling in one direction is the threat of punitive action by the federal government if the State fails to adopt an acceptable inspection program. Although the Highway Safety Bureau has relaxed its original time limitations and may further relax them in the future, the fact remains that the enabling legislation provides that a
state which does not adopt a full safety program, including motor vehicle inspection, or fails to make adequate progress toward an acceptable program, will forfeit not only federal funds for the state safety program, but ten percent of its federal highway fund allocation as well. Several states have been advised that their progress is unsatisfactory and that consideration is being given to a reduction in their highway allocations.

On the other hand, the Committee is not convinced, based on evidence currently available, that the case for motor vehicle inspection as a high priority traffic safety measure has been established. That motor vehicle inspection would reduce the number of severe accidents is not questioned. That motor vehicle inspection would reduce such accidents enough to justify its cost and inconvenience, when viewed in the light of other apparently more promising traffic safety measures and in light of the necessity to establish some rough measure of priority among these measures, is seriously questioned.

Comprehensive studies should be conducted to determine the contribution of ascertainable and correctible defects to serious automobile accidents. The Federal Highway Safety Bureau must in some way be convinced that this study should be a prelude to the strict enforcement of its motor vehicle inspection standards. If these studies provide convincing evidence of the value of motor vehicle inspection, the State of Oregon should adopt such a system along the following lines:

1. The State should use a combination system, with state-operated stations in densely-populated areas and licensed private stations in lightly-populated areas. The number and capacity of the stations should be sufficient to result in minimum inconvenience to the public.
2. All cost should be borne by the vehicle owner, so that none of the cost will be a burden on the general funds of the State.
3. Inspections should be required annually during the month in which the automobile license expires, and passing of inspection should be required as a condition of license renewal.
4. The program should cover all types of motor vehicles.
5. The best agency in Oregon to handle the administrative records necessary to carry out and enforce inspection is the Motor Vehicles Division. It should also have the responsibility for training and certifying the stations and the inspectors and other personnel necessary to carry out the law.

If it becomes apparent that the Highway Safety Bureau will no longer delay implementation of its motor vehicle inspection requirements, the Committee would recommend adoption of the above program, even in the absence of convincing evidence that it has been given proper priority. Motor vehicle inspection will certainly have some beneficial effect, and the financial loss to the State, if it were not adopted, would be severe.

V. DRIVER LICENSING

A. Current Requirements

As is clearly evident, the deficient driver—not the unsafe automobile or environmental condition—is the major element in motor vehicle injuries and fatalities. It is therefore entirely plausible to look to driver licensing procedures for controls designed to remove the inadequate driver from the public roads. To date, this has been accomplished to only a very limited degree. Oregon's driver licensing laws and regulations, typical of those of all other states, simply have not been kept abreast of the increasing complexity and congestion of modern driving.

As is well known to all drivers, licensing is a very simple process. Initial licensing involves a road test for driving ability, a vision test and a written examination on signs and driving laws and regulations. License renewal in Oregon is by mail, and no testing of any kind is required except in cases of obvious physical limitation, complaint, revocation, or repeated accidents. Committee witnesses indicated that even these limited renewal requirements are not always strictly enforced. Several states have adopted some form of routine re-examination require-
Five states now require complete re-examination upon renewal, and ten other states require at least a vision test. Ten states require complete re-examination after age 65, 70 or 75. Thirty-two states require re-testing after conviction of negligence or suspension of license. Oregon has no such requirement.

**B. Proposal for Improvement**

The Highway Safety Act specifically mentions driver licensing and examination requirements as appropriate parts of required state improvement programs. Oregon already complies with almost all of the requirements in the standards published by the National Highway Safety Bureau pursuant to the Highway Safety Act. The most significant discrepancy is in the area of routine re-examination. Federal standards call for re-examination for at least visual acuity and knowledge of rules of the road no less frequently than once every four years.

Several bills were introduced in the 1969 Oregon State Legislature but either died in committee or were tabled. These were:

1. House Bill 1044, which would have increased the term of driver licenses from two to four years and require re-examination for renewal; it would also have increased the fee to $10.

2. House Bill 1749, which would have prevented issuing driver's licenses to anyone under 18 years of age unless an approved driver training course has been completed.

3. Senate Bill 262, which would have required a colored photo to appear on the driver's license and would also have required renewal in person.

4. Senate Bill 292, which would have required drivers and chauffeurs to be examined by a physician as to vision, mental capacity and physical capacity before a driver's license would be issued.

A 1966 Oregon Traffic Safety Commission survey showed that almost 62 percent of Oregon drivers questioned favored a requirement to appear in person for renewal of driver licenses. This survey also indicated that 58.9 percent agreed that persons under 18 years of age should be required to complete a driver education course before receiving a driver's license; 81.5 percent believed drivers who have repeated traffic convictions or accidents should have their licenses suspended. Apparently the public is ready to support stricter licensing requirements.

**C. The Problem of the Unlicensed Driver**

Driver licensing, examinations and re-examinations comprise only one-half of the total driver licensing problem. Once granted, the driver's license is always subject to suspensions or revocation for any of a number of causes, and through either administrative action by the Motor Vehicles Division or judicial action upon conviction of driving violations. If there is reason to question the quality of licensing and examination procedures, there is far more reason to have serious doubts about the quality of enforcement of suspension and revocation practices.

There are two reasons for questioning these procedures. In the first place, courts seem to be prone to reduce charges where conviction of the more serious offense will result in automatic driver license suspension. This is especially apparent when a charge of driving under the influence of liquor is reduced to the lesser charge of reckless driving. In the second place, there is entirely inadequate enforcement of suspensions or revocations once they occur. As noted earlier, witnesses before the Committee have estimated that there are about 50,000 unlicensed drivers on the roads in Oregon. Of course, these are not all persons with revoked or suspended licenses. Many never have been licensed and many more have merely permitted their valid licenses to lapse. The problem of enforcement of suspensions and revocations will be treated in another section of this report.

**D. Driver Licensing — A Right or A Privilege**

It is a widely held view that every citizen has a "right" to operate motor vehicles on the public roads, in much the same way as he has a right to life, liberty and the pursuit of happiness. This attitude has contributed to the motor vehicle safety problem in many ways. For example, this viewpoint is clearly
evident in the remarks of some legislators who oppose re-examination of all drivers above certain age limits. It is also evident in the judicial reduction of charges from drunk driving to reckless driving to avoid the automatic suspension of the “right” of drivers to use motor vehicles to get to and from work or to use in their work. An objection raised to “implied consent” legislation in states (such as Oregon) where it has been proposed or adopted is that such legislation is based on the assumption that driving is not a “right,” but a privilege granted only to qualified persons who voluntarily put their privilege on the line whenever they slip behind the steering wheel.

The use of the words “right” and “privilege” in this connection is actually very inappropriate. Any social “right” must be hedged about by restrictions to avoid infringement on the rights of others.

No responsible persons would profess that the right to liberty, for example, should be inviolate. Restrictions must be imposed on those whose complete liberty endangers the lives and property of others in society. To this extent, liberty is a privilege which may be restricted whenever behavior proves to be socially irresponsible. The “rights-privilege” controversy, then, really boils down to a debate on the degree to which society may restrict a person’s right to drive.

The advocates of the “right” to drive simply feel that driving restrictions should be imposed only when a person has conclusively proven by a serious record of accidents and violations that his driving is a menace to society.

Those who advocate that driving is a “privilege” feel that any compelling evidence of serious driving deficiencies is adequate grounds for license restriction. The evidence may be a violation record, obvious physical or mental incompetence, or, in reference to implied consent legislation, refusal to cooperate with a police officer where the officer has valid reason to suspect the driver is under the influence of liquor. The Committee clearly is of the “privilege” school (inappropriate as this term may be), as its recommendations will show.

When asked to respond to the question, “Is driving considered to be a right or a privilege?” in a questionnaire (See Appendix D) mailed by one of the Committee members to motor vehicle departments in the various states, thirty of thirty-one respondents said that it was a privilege revokable for cause, although the nature of the causes was not identified. In the one instance (New York State) where the driver’s license was characterized as a “right,” it was only because the state courts had called it a “valuable property right.” The courts had also indicated, however, that it was a right subject to revocation — another indication of the elusiveness of the concept of a “right” as opposed to a “privilege.”

E. Potential Remedies

A variety of proposals have been put forth designed to screen out incompetent drivers through the licensing process, as described below:

(1) Increase the minimum licensing age. The ground for the proposal is that the highest accident, injury and fatality rates are found in the low driving-age brackets. Statistics cited earlier in this report verify this, but also show that the highest rates do not occur until the driver reaches age 17, that they do not diminish until after age 20, and that fatality rates do not diminish significantly until after age 25. These statistics suggest that increasing the driving age to 17 would only eliminate a moderately safe driving age, and that to have significant effects, the minimum licensing age would have to be raised to somewhere between 20 and 25. It is not suggested that this should not be considered, but the Committee feels that it would be an impractical limitation. Typical proposals for raising the driving age suggest 18 as the appropriate minimum. Only one state—New York—currently has a minimum this high.

An interesting hypothesis is that the moderate accident rate among 15 year olds results from the fact that they recognize their inexperience and derive their “thrills” just from driving itself, and without the necessity of driving fast or recklessly. The high involvement rate for ages 17 to the early twenties is accounted for by the growing awareness on the part of the driver that he is now “experienced” and that he must demonstrate his expertise through fast and reckless driving. If this kind of transition in attitude could
be shown to be related to the extent of driving experience and not to age, it
would be reasonable to expect an increase in minimum driving age to 18 to
have the effect of deferring the high accident age two full years, thereby
reducing the total number of high accident ages by the same amount (assum-
ing the age at which the drivers developed mature driving habits did not
also increase). If this hypothesis could be shown to have merit, there would
be an excellent argument for raising the driving age to 18 years.

(2) Require higher degree of proficiency in driver examinations. Although
the comparison may not be entirely valid, it is interesting to make compari-
sions between licensing requirements for motor vehicles and aircraft. Although
there are good reasons for requiring more proficiency in licensing for the
aircraft operator, their examination procedures and proficiency standards
certainly put the lie to those who claim it is impossible or impractical to
screen driver license applicants more intensively. Probably the most serious
drawback in present driving licensing examinations is the failure to test for
proficiency in emergency situations. It takes only a bare minimum of skill to
operate a motor vehicle in non emergency situations, and these are not the
conditions under which serious accidents and fatalities occur.

(3) Provide that every driver's first license be probationary only. The
State of Iowa has such a program in which the first year driver's license
remains valid only if the driver remains free of any moving traffic violation. If
there is a conviction during this probationary period, the driver's license is
cancelled for a 30-day period, during which the driver must successfully
complete a driver improvement program and again pass the standard licensing
examination. Apparently the Iowa program has had some preventive effect.
During a recent six-month period during which 13,000 probationary licenses
were issued, there were only 141 invalidations. Our statistics suggest that
a two year probationary period, encompassing both 16 and 17 year old new
drivers, might be more effective.

(4) Provide for more rigorous physical and mental screening of driver
license applicants. Although there is certainly reason to question the adequacy
of the relatively simple physical test of visual acuity and hearing, and the
mental test of comprehension of basic driving laws and regulations, there is
also reason to question the economy and effectiveness of more rigorous testing
in these areas. Rigorous testing would be very expensive, would probably
encounter the need to apply certain arbitrary standards which would unfairly
eliminate many driver license applicants, and could not really be justified
without more evidence that physical or mental impairments (other than alco-
holism) are significant factors in serious motor vehicle accidents.

(5) Provide for emotional and attitudinal evaluation of driver license
applicants. There appears to be no disagreement whatsoever among experts
on the highly significant role of emotional disturbances and instability and
driver attitudes in motor vehicle accidents and fatalities. Although it would
be clearly advisable to eliminate from the road those persons with emotional
and attitudinal deficiencies, the available mechanics for doing so are appar-
etly lacking. In the survey of departments of motor vehicles previously
referred to, one question asked whether psychological examinations to deter-
mine individual attitudes were feasible, and whether there were methods
currently available for appropriate attitude testing for driver licensing pur-
poses. The response to this question was mixed. Some administrators rejected
the possibility of attitude testing on the grounds that no adequate tests were
available, the cost would be excessive or that the concept of such testing
was ridiculous. Other administrators praised the idea although with some reser-
vations about cost. Surprisingly, few administrators suggested that such test-
ing would be unacceptable to the public, although the Committee feels that
a proposal for psychological testing would probably meet with extensive public
resistance.

(6) Regular, systematic review of the records of licensed drivers as a basis
for suspension or revocation. This could be accomplished through a "point"
system, whereby every form of driving offense is assigned an appropriate
number of points, and the accumulation of a pre-determined number of points
will result in automatic suspension. Another technique would be to provide that the drivers' record be reviewed at the time of every license renewal, with automatic administrative suspension whenever the record indicates some pre-determined maximum degree of violation.

F. Recommendations on Driver Licensing

From among these proposals, the Committee has selected elements which it feels provide the combination of effectiveness, reasonable cost and public acceptability, and makes the following recommendations regarding driver licensing procedures:

1. The examining procedure for the initial driver's license should include, in addition to the examination as presently conducted, a road test or simulated driving test involving a variety of emergency situations. Presumably, because of the hazards of contrived emergencies in actual road tests, this would have to be done through the use of driving simulators. The Committee has not conducted research on the availability of adequate simulators; it believes, based on its interviews, that effective simulators are available.

2. If driver training recommendations found elsewhere in this report, (expansion of high school programs, and state certification of private driver training schools) are implemented, completion of a driver training program should be a requirement for initial licensing.

3. Driver licenses should be valid for a four-year period and an examination should be required at the time of each renewal. This examination should consist of all elements in the initial examination except for the driving test, although the driving test would also be required whenever the examiner has reason to believe, because of either apparent physical condition or driving record, that there is a question about the applicant's driving ability.

4. A point system, or similar system should be established and the Motor Vehicles Division should be provided with authority to administratively suspend or revoke driver's licenses, following a hearing, to call drivers in for interviews, to require retesting, or to require driver training as a condition of continued licensing, based on the driver's record. Procedures should provide for continual surveillance of driving records, rather than review only at the time of a license renewal application. Although some of these elements are currently in use, they should be expanded, formalized, and well publicized.

5. Driver license applicants should be required to provide proof of the date and place of birth and should be required to surrender any current driver's license issued by any other state. Such license would be returned to the issuing state.

6. There should be established a medical advisory board or other group which shall:
   (a) Advise the Motor Vehicles Division on medical and visual standards for driver licensing.
   (b) Establish a system for medical evaluation of applicants whom the Division has reason to believe may have mental or physical conditions which might impair driving ability.
   (c) Establish a procedure to keep the Motor Vehicles Division informed of any licensed driver who is currently applying for or receiving any type of tax, welfare, or other benefits or exemptions for the blind or nearly blind.

7. The driver license should include a photograph of the licensee.

8. Added cost resulting from these recommendations should be covered by an increase in the license fee.

9. Procedures should be established to regularly audit license suspensions to assure that they are actually being enforced. The Committee makes no specific recommendation on techniques, but emphasizes that its recommended programs depend very heavily on the strict enforcement of suspensions.
VI. DRIVER EDUCATION

Along with motor vehicle inspection, driver training — especially for high school students — has received the greatest emphasis in recent years as a potential panacea for the nation's traffic accident sickness. Although driver education was being pushed long before there was even a shred of evidence that such training would have the desired effects, recent studies have convinced the Committee that there are likely to be significant benefits from a comprehensive driver training program.

A. Studies of Driver Education Effectiveness

One extensive study conducted in Illinois in 1963 reported on data obtained from the State's driver license files covering all of the more than half million drivers between 16 and 20 years of age. The study showed that those drivers not having received a driver education course were involved in 493 traffic violations and 111 accidents per 1,000 drivers. The corresponding figures for the driver education students were 171 and 56 respectively.

Although the comparison sounds impressive, the reader should note two drawbacks to the Illinois study. First, the study covers one year's experience only and sheds no light on comparative driving records as the drivers aged and the driver training experience became more remote. Second, because driver training was an elective option, the Committee feels there was a pre-selection factor operating. Although the Committee cannot support this contention with convincing evidence, it feels that there is a tendency for the more stable, conscientious students to elect a driver training course and for the more unstable and unconcerned student to reject such an offering. If this is correct, there is no way of knowing whether the differential driving record in Illinois resulted from the driver training courses or from the tendency of those electing the courses to be better drivers with or without training.

Another study conducted in the early 1960s in the public schools in Lansing, Michigan, represented a situation in which virtually all students complete a driver education course, thereby eliminating the pre-selection factor. The city's official traffic accident records over a three and one-half year period produced two significant findings: (a) the Lansing driver education teenagers experienced only half as many traffic accidents as the national average for their age group; and (b) those teenagers had 20 percent fewer accidents than Lansing's older drivers — a complete reversal of national statistics.

A 1967 report by the research division of the State of Washington Department of Motor Vehicles states:

"In general, drivers with high school or commercial driver training have lower accident and violation rates than those with no driver training. Drivers under 21 years of age with high school driver training have lower rates than those of the same age with commercial driver training."

An Oregon Department of Education study indicates that effects of driver training may be short-lived, although this study — like the Illinois study — involves the factor of pre-selection. This study showed that:

1. Students who complete public school driver training programs involving both classroom instruction and behind-the-wheel training have better accident records than students who have taken no public school driver training at all.

2. Students trained by commercial driver training schools, or in public school programs involving classroom training only, have worse accident records than those with no formal training at all.

3. Any effects, either good or bad, from formal driver training seem to disappear a few years following training.

B. Development of Driver Education

In 1934, a high school in the city of State College, Pennsylvania, offered the first course in the United States to be called driver education. A young engineering professor at the Pennsylvania State College, after several years of
planning and with the use of his personal car, a 1929 Graham-Paige which had been equipped with dual brake and clutch, provided the nation with the first classroom driver instruction course offered during school hours.

The subsequent spread of driver education has been both slow and sporadic. It did not reach Portland until 1952 when Portland School District No. 1 instituted a classroom program as part of its regular sophomore health and safety education classes. The program required between 25 and 30 class periods. The 1957 Oregon Legislature enacted a state driver education reimbursement law providing for a course of instruction to be devoted to the study and practice of rules of the road, the safe and proper operation of motor vehicles, accident prevention, and other matters which promote safe and lawful driving habits. The legislation provided that school districts participating in the program must require classroom instruction and instruction in dual controlled automobiles.

1. Administration and Financing of the Oregon Program

The State of Oregon reimburses local school districts offering driver education courses, with funds generated from an additional $1 fee charged for licensing of drivers or the renewal of driver licenses. The reimbursement may not be greater than 90 percent of the cost of conducting the course nor may the reimbursement exceed $50 per pupil completing the course.

From 1958-59 through 1967-68, total receipts in the Oregon driver training fund were $5,726,000 with administrative costs of $174,000 and a reimbursement to schools participating in the program of $3,482,000. The balance of $2,069,000 has been transferred to the highway department. While participating in the program since 1962, Portland School District No. 1 has received a total of $139,037 from the fund. A breakdown of the State figures by fiscal year is shown in the following table:

<table>
<thead>
<tr>
<th>Fiscal Period</th>
<th>Receipts (from License Fee)</th>
<th>Administrative Expenses</th>
<th>Reimbursement to Schools</th>
<th>Transferred to Highway Dept.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958-59</td>
<td>$ 861,293.00*</td>
<td>$ 23,122.12*</td>
<td>$ 118,444.10</td>
<td>$ 719,712.78</td>
</tr>
<tr>
<td>1959-60</td>
<td>437,333.00</td>
<td>11,655.86</td>
<td>117,500.00</td>
<td>308,177.14</td>
</tr>
<tr>
<td>1960-61</td>
<td>563,141.76</td>
<td>14,015.29</td>
<td>124,372.04</td>
<td>424,754.43</td>
</tr>
<tr>
<td>1961-62</td>
<td>501,177.24</td>
<td>14,997.66</td>
<td>190,077.24</td>
<td>296,102.34</td>
</tr>
<tr>
<td>1962-63</td>
<td>504,985.00</td>
<td>16,918.87</td>
<td>251,304.44</td>
<td>236,760.69</td>
</tr>
<tr>
<td>1963-64</td>
<td>526,067.00</td>
<td>16,777.70</td>
<td>440,928.43</td>
<td>68,960.87</td>
</tr>
<tr>
<td>1964-65</td>
<td>547,959.00</td>
<td>17,718.12</td>
<td>515,258.32</td>
<td>14,982.56</td>
</tr>
<tr>
<td>1965-66</td>
<td>564,351.00</td>
<td>19,225.81</td>
<td>546,125.19</td>
<td>---</td>
</tr>
<tr>
<td>1966-67</td>
<td>614,943.57</td>
<td>21,775.76</td>
<td>593,167.91</td>
<td>---</td>
</tr>
<tr>
<td>1967-68</td>
<td>604,907.02</td>
<td>19,644.41</td>
<td>585,250.34</td>
<td>12.27</td>
</tr>
</tbody>
</table>

$5,726,127.59 $174,261.60 $3,482,432.91 $2,069,463.08

*August 20, 1957 - June 30, 1959

Nationally, from a beginning with 18 students in one public school in 1934, driver training programs in the school year 1967-68 were conducted for almost 2 million students in almost 14,000 public high schools. This represents 81 percent of the schools and 65 percent of the public school students eligible for such instruction.

2. Growth of the Oregon Program

Statistics from the Oregon State Board of Education indicate a significant increase in the number of eligible Oregon students taking driver education courses, but also show that such education is not as widespread in Oregon as in the nation as a whole. A total of over 11,000 students have received driver education in Oregon. The following table shows how the number trained as a percentage of all students eligible has increased from 8.5 percent in 1958 to 24 percent in 1967-68:
TABLE IV

NUMBER OF OREGON PUPILS RECEIVING DRIVER EDUCATION
PROJECTED ENROLLMENT OF ELIGIBLE PUPILS, AND
PERCENTAGE OF ELIGIBLE PUPILS TRAINED, 1958 THROUGH 1967

<table>
<thead>
<tr>
<th>Fiscal Period</th>
<th>No. Pupils Trained</th>
<th>Projected Enrollments</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958-59</td>
<td>5,960</td>
<td>70,353</td>
<td>8.5%</td>
</tr>
<tr>
<td>1959-60</td>
<td>5,875</td>
<td>72,131</td>
<td>8.1%</td>
</tr>
<tr>
<td>1960-61</td>
<td>6,233</td>
<td>71,268</td>
<td>8.7%</td>
</tr>
<tr>
<td>1961-62</td>
<td>6,631</td>
<td>72,629</td>
<td>9.1%</td>
</tr>
<tr>
<td>1962-63</td>
<td>8,677</td>
<td>80,495</td>
<td>10.8%</td>
</tr>
<tr>
<td>1963-64</td>
<td>10,800</td>
<td>85,711</td>
<td>12.6%</td>
</tr>
<tr>
<td>1964-65</td>
<td>12,124</td>
<td>88,024</td>
<td>13.8%</td>
</tr>
<tr>
<td>1965-66</td>
<td>15,953</td>
<td>85,583</td>
<td>18.6%</td>
</tr>
<tr>
<td>1966-67</td>
<td>18,619</td>
<td>86,137</td>
<td>21.6%</td>
</tr>
<tr>
<td>1967-68</td>
<td>20,675</td>
<td>88,069</td>
<td>23.5%</td>
</tr>
<tr>
<td></td>
<td>111,547</td>
<td>800,069</td>
<td>13.9%</td>
</tr>
</tbody>
</table>

C. Nature of the District No. 1 Program

The classroom instruction offerings in Portland School District No. 1 include the following subjects:

a. Causes of accidents
b. Local traffic and accident problems
c. The automobile and its uses
d. The importance of proper attitude toward safety and courtesy on the part of the driver
e. The effect of alcohol and narcotics on the individual
f. Traffic laws
g. Attitudes toward enforcement of traffic laws
h. Importance of driving as a privilege
i. Cooperation with safety programs
j. Individual responsibility for safe practices as pedestrians or drivers
k. Responsibility for keeping the car in good working condition.

This course outline meets the minimum standards and general requirements of the Oregon Driver Education Program. The thirteen high schools in Portland which participate in the program provide classroom instruction during the regular school year but offer practice driving only during the summer months.

D. Provisions of the Highway Safety Act

Driver education is one of few safety programs specifically identified in the Highway Safety Act as a required part of any approved state program. Under the regulations promulgated by the National Highway Safety Bureau, a state's highway safety program must include:

1. the initiation of a state program for driver education in the school systems with a significant expansion and improvement of such programs already in existence, to be administered by the appropriate school officials under the supervision of the governor of the state;
2. the training of qualified school instructors and their certification;
3. appropriate regulations of other driver training schools, including licensing of the schools and their certification;
4. additional driver training programs and programs for the re-training of selected drivers; and
5. adequate research, development and procurement of practice driving facilities and simulators and other similar teaching aids for both school and other driver training use.
E. Conclusions and Recommendations on Driver Education

Despite the inadequacy of supporting data, the Committee feels that high quality driver education probably does improve the driving record of a significant number of teenagers and therefore merits the Committee's support. The Committee makes the following specific recommendations:

1. Efforts should be made to extend driver training courses to all high schools in the state. It is currently offered in only about one-third of the high schools.

2. Efforts should be made to upgrade marginal programs to a realistic state minimum standard. Only 215 high schools in Oregon meet the currently-applicable state minimum standards. Upgrading of programs will necessitate such measures as (a) special teacher training, (b) state-operated seminars for driver education instructors, and (c) more extensive use of on-the-road training and driving simulators.

3. To facilitate the first two recommendations, school districts should receive a greater amount of state government reimbursement per pupil. There is a strong case for state government financing, as opposed to local government financing of driver education. In addition to the arguments raised for state support of general local education (school district financing problems, greater reliability of state financing sources, etc.), there are the arguments specifically regarding driver education that the entire field of driver and vehicle regulation and control has always been primarily a state rather than a local problem, and that any benefits from better driving records of trained drivers will inure to the entire state rather than exclusively to the locality in which the drivers were trained. The state funds used to reimburse school districts would logically be derived from motor vehicle usage, through tapping such sources as vehicle or driver license fees, or gasoline taxes.

4. To relieve a serious load on available regular school class time, it is recommended that schools be encouraged to offer driver training during extended days, evenings, Saturdays and summers.

5. There should be an expanded, continuing research program to assist administrators in the appraisal of the effectiveness of driver training, the relative values of on-the-road training versus use of various types of simulators, the advisability of making driver training a required course for all high school students, etc.

6. In light of the recommendation in the driver licensing section of this report that driver training eventually be required as a condition of initial licensing, the State should institute a program of examination and certification of private driver training schools. Programs of such schools should be certified as acceptable for purposes of meeting this licensing requirement only if they meet minimum State standards for high school driver training programs.

VII. SAFETY AND DESIGN FEATURES IN MOTOR VEHICLES

It has been noted that the Motor Vehicle Safety Act was designed primarily to provide for regulation of safety and design features in vehicles manufactured or sold in the United States. It was pointed out that many such regulations have been put into effect or are scheduled to become effective in the near future.

Because motor vehicles are produced for a national or international market, regulations of safety and design features should continue to be the exclusive province of the federal government. The Motor Vehicle Safety Act explicitly provides that state governments may not enter into this field of regulation. For this reason, the Committee feels that any recommendations for action which it might make in this area would have negligible effect, if any effect at all. The Committee does feel, however, that some things need to be said. These statements should probably be considered more as expressions of sentiment than as recommendations for action.
A. Inadequacy of Federal Program

Whether for reasons of political expediency or because of a recognition of some serious practical problems of engineering and production, it seems that the National Highway Safety Bureau has chosen to devise its initial regulations around those vehicle components which are the easiest to adapt to new standards but which, because they are not basic structural elements, probably hold the least promise for fatality reduction. This statement is not made with the intention of any criticism of the Bureau. After all, political, engineering and production problems are real problems, and the Bureau certainly had to take them into consideration. The only point the Committee wishes to make is that the kind of priorities established by the Bureau are not the kinds of priorities which will most rapidly contribute to the significant reduction of fatal and serious injury accidents.

Nor does the Committee wish to belittle the probable effects of some of the regulations currently in force. Certainly required seat belts and safety harnesses, collapsible steering columns and headrests, among other innovations, will make a dent in the record of fatal automobile accidents. The only problem with these efforts is that something more than a "dent" is needed. A comparison with aircraft has been made before in this report, and it seems to be appropriate again. If structural defects in aircraft are contributing causes in serious accidents, whether they are the "prime causative factors" or not, aircraft of that type are grounded until the defect has been clearly identified and corrected. Although the Committee recognizes there are differences in the aircraft and the motor vehicle accident problem, it also sees some similarities. For example, studies have shown that deficiencies in the design of the front wheel suspension of the Corvair were significant in many serious accidents. However, production and sale of the Corvair continued well after there was reason to suspect the suspension system. This would certainly have been an appropriate occasion to apply the aircraft technique—an absolute halt to production and sale until the deficiency was either verified and corrected or discounted following extensive testing. There seems now to be little question but that such a technique would have saved many lives and many more serious personal injuries.

The Committee feels that the Bureau should be concentrating more effort on the development of regulations designed to strike at those design and structural deficiencies whose correction gives the greatest promise of improvement in the fatality and injury record. For example, it should concern itself with the development of energy-absorbing front and rear bumpers to help in the absorption of collision shock, crash-proof passenger compartments, roll-over strength in roof and roof supports, improved suspension systems, and vehicle balance and weight distribution for greater stability and better road handling.

Mr. Douglas Toms, who took over as director of the National Highway Safety Bureau in January 1970, appears to be less interested in producing a long list of standards requiring relatively minor changes in vehicle design. He says he is more interested in attacking major problems which are likely to have greater impact on fatality statistics. In line with this philosophy, he has proposed a major attack on drunk driving, and, in the field of vehicle design, the development of air bags or nets to restrain passengers at the time of accident impact. He has suggested that such a device may be required in all vehicles manufactured after August 1973. Your Committee applauds this new approach.

Other less important improvements the Bureau has considered and should implement as soon as possible are requirements for standard bumper heights, with the requirement that bumpers be wider, stronger and have concave surfaces; improved design and placement of pedals to eliminate likelihood of confusion between the brake pedal and the accelerator; anti-lock brake systems; visual and auditory speed warnings systems; drop design for rear shelf; a rear signal to indicate that the foot has been removed from the accelerator, and a carbon monoxide detector inside the automobile.

Considering the extreme importance of the work of the Highway Safety Bureau and the extended activities in which the Committee would like to see it engage, the current financing provisions are woefully inadequate. The Bureau's annual budget is about $25,000,000 — about the same amount as the Defense
Department spends just on public relations. As of December 1969, the Bureau had a staff of only 518. This compares with a Federal Aviation Administration staff of 48,000. Although the FAA has many other functions, a major concern is aircraft safety.

It doesn't necessitate a detailed study to conclude that such funds and staffing are inadequate to carry out the extensive research and to finance the administration of what the Committee feels should be an accelerated program of automobile redesign.

B. Recommendation for State Regulation

As noted earlier, it is not the province of a state to regulate safety and design features of motor vehicles.

However, a state has the authority and responsibility to prohibit unsafe redesign by vehicle owners. Committee members are aware of serious accidents which have resulted directly from such redesign.

The most obvious example of such redesign is the rebuilding of the suspension system to elevate the body of the vehicle. This has the effect of reducing the stability of the vehicle, hindering the driver's control of the vehicle and putting its bumpers completely out of line with other vehicles.

The Committee therefore recommends that state legislation be enacted to prohibit vehicle redesign (for vehicles to be operated on public roads) which hinders the effectiveness of safety or design features required by federal or state law, or which otherwise contributes to unsafe vehicle operation.

VIII. ALCOHOL AND MEDICAL FACTORS

It appears from evidence presented in previous sections of this report that human factors — as distinguished from the vehicle and the environment — are overwhelmingly responsible for traffic injuries and deaths. One broad class of human factors is that of health, including disease conditions which could alter consciousness or manual dexterity, and temporary conditions affecting the mind through fatigue, drugs, intoxication or distraction. This section of the report will be concerned with medical conditions which contribute to increased probability of accidents and fatalities and with an estimate of the seriousness of each of several problems.

A. Alcohol

1. Evidence on the Role of Alcohol in Traffic Fatalities

As noted earlier, many reports in recent years have indicated that alcohol consumption has been associated with 50 percent or more of traffic fatalities and a high proportion of pedestrian deaths. The 1967 edition of Accident Facts, published by the National Safety Council, describes a California study which disclosed that nearly three out of five of the fatally injured drivers tested, who were responsible for accidents, had been drinking. The results of this year-long study conducted in 41 counties in that state were presented in a table showing the total number of drivers tested, numbers responsible and not responsible, and the total number of pedestrian fatalities, by age brackets. These factors were tabulated by the number of alcohol positive victims at various blood alcohol levels. In modified format, these figures are reproduced in the following table:
TABLE V
DRINKING AMONG FATAL ACCIDENT VICTIMS, CALIFORNIA, 1966
In Percent, by Responsibility and Alcohol Reading

<table>
<thead>
<tr>
<th>Alcohol Positive</th>
<th>Number Tested</th>
<th>Alcohol Negative</th>
<th>Total</th>
<th>.01-.09</th>
<th>.10 and Over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Drivers</td>
<td>1510</td>
<td>47%</td>
<td>53%</td>
<td>9%</td>
<td>43%</td>
</tr>
<tr>
<td>Responsible Drivers</td>
<td>1243</td>
<td>42</td>
<td>58</td>
<td>9</td>
<td>49</td>
</tr>
<tr>
<td>One-Car Accidents (included in above—all assumed to be responsible)</td>
<td>790</td>
<td>37</td>
<td>63</td>
<td>8</td>
<td>55</td>
</tr>
<tr>
<td>Drivers Not Responsible</td>
<td>173</td>
<td>72</td>
<td>28</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Responsibility Underetermined</td>
<td>94</td>
<td>71</td>
<td>29</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>442</td>
<td>51</td>
<td>49</td>
<td>7</td>
<td>42</td>
</tr>
</tbody>
</table>

Note in this table that, of all drivers involved in fatal accidents, 53 percent had positive blood alcohol determinations, and 43 percent of all drivers tested were at the level of .10 percent blood alcohol or above. Only about nine percent were in the blood alcohol range of .01 to .09 percent. For our purposes, and for reasons discussed later in this section of the report, the latter group will be called the "moderate" drinking group, and the group at .10 percent and above will be called the "heavy" or "problem" drinking group. The findings in this study are representative of results of many studies conducted throughout the United States in the last few years, including the 1969 Oregon study mentioned in the introduction of this report.

The trained observer will note that nothing in the study proves that drinking is a factor in fatal accident causation. To be certain that the drinking driver is over-represented among accident victims, one would have to compare the drinking experience of the tested fatal drivers with the drinking experience within that population of drivers which is not involved in fatal accidents. For example, if all drivers on the highway were tested and it was found that 50 percent had been drinking, then it could be seen that drinking is associated with fatal accidents no more than would be expected by chance. Common experience and observation indicate that the total proportion of drivers who had been drinking is probably considerably below this level.

This presumption is borne out by a number of studies. The average results of four different studies in four different areas in the United States and Canada, involving a total of more than 12,000 drivers, shows the following frequency distribution of blood alcohol concentration for drivers using the road but not involved in accidents:

TABLE VI

<table>
<thead>
<tr>
<th>Blood Alcohol Level</th>
<th>Percentage of All Drivers Not Involved in Accidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>88%</td>
</tr>
<tr>
<td>.01-.04</td>
<td>6</td>
</tr>
<tr>
<td>.05-.09</td>
<td>4</td>
</tr>
<tr>
<td>.10-.14</td>
<td>1.4</td>
</tr>
<tr>
<td>.15 and higher</td>
<td>0.6</td>
</tr>
</tbody>
</table>

(Source: Alcohol and Highway Safety, U. S. Dept. of Transportation, August, 1968)

When the percentage of drivers fatally injured is divided by the percentage of drivers not involved in accidents in each of the blood alcohol categories, it is possible to determine an index of relative probability of fatal injury accident involvement by blood alcohol category. Arbitrarily assigning an index of (1) to alcohol negative, the index of relative probability is as follows:
TABLE VII

<table>
<thead>
<tr>
<th>Blood Alcohol Level</th>
<th>Index of Relative Probability of Fatal Injury Accident Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>1</td>
</tr>
<tr>
<td>.01-.04</td>
<td>2.2</td>
</tr>
<tr>
<td>.05-.09</td>
<td>6.5</td>
</tr>
<tr>
<td>.10-.14</td>
<td>23</td>
</tr>
<tr>
<td>.15 and higher</td>
<td>160</td>
</tr>
</tbody>
</table>

These data are graphically portrayed in the following charts.

The results of this type of analysis are indeed striking. Although the general pattern should be no surprise, the magnitude of the differences in relative probability of fatality is so great as to make one ponder whether the heavy drinker should ever be permitted to roam the country-side free from his keeper.

The index also places extreme strain on the credibility of the current Oregon presumptive blood alcohol limit of .15. In the range .10-.14, the fatality propensity is still exceedingly high, and even in the range .05-.10 the driver is, relatively speaking, a menace to society. On the rational presumption that relative fatality probability increases continually at higher blood alcohol levels within each of the above ranges, it is safe to suggest that as far down the scale as .08-.10, the driver probably has about ten times the likelihood of being involved in a fatal accident as does the alcohol negative driver. This makes sound justification for some of the European standards of .08, and suggests that this standard should be given serious consideration in the United States.

Dr. Julian Waller of the California Department of Public Health confirms these findings. In a booklet published by the American Association of Motor Vehicle Administrators, he states that:

"... several studies have shown that a blood alcohol level of 100 mg./100 ml. (.10) is associated with a 6- to 10-fold increase in accident risk per mile. At a level of 150 mg./100 ml. (.15) the risk increases to 25- to 50-fold. With even higher alcohol levels, the accident risk continues to climb."
2. Effects of Blood Alcohol Content

Because the Committee feels it would be of interest to the reader, and because the Committee's final recommendations cannot fully be appreciated without it, the nature and effects of blood alcohol content and the significance of different levels will be discussed at some length. This discussion is designed to answer such questions as why your Committee classifies a person with blood alcohol level of .10 percent or higher as a heavy drinker, and why the Committee will recommend a sharp reduction in the present legal intoxication limit of .15 percent.

a. Nature of Physiological Effects

The alcohol level in the blood is affected by several factors: (1) the amount of alcohol consumed; (2) the size of the body; and (3) the time over which the alcohol is consumed. The time factor may be influenced by the presence of food in the stomach slowing absorption of alcohol, thus keeping blood levels lower. To give an example, a 150-pound man consuming six ounces of 100 proof whiskey as fast as he can will achieve an approximate alcohol concentration of .15 percent. A 100-pound person would achieve the same level by drinking four ounces, while a 200-pound person would require eight ounces. Because alcohol is being burned up by the body from the time it is absorbed, a certain correction must be applied for the time over which the alcohol is consumed. This burning up process reduces the alcohol level by about .015 percent per hour. Thus, if the 150-pound man consumed his six ounces in a two-hour period, his alcohol level would be .15 percent, but would be .12 percent, (.15-.03). On page 400 is a blood alcohol chart which shows the estimated percent of alcohol by the number of drinks and body weight.

It is apparent that the .15 percent level of alcohol really constitutes a heavy intoxication. Even .10 percent represents considerable influence of alcohol. The American Medical Association now states that .10 percent blood alcohol, regardless of drinking experience, is "under the influence" and driving ability is greatly handicapped in all drivers at this level. The figures from the California survey bear this out.

b. A Practical Experiment

One of the Committee members had an opportunity to experience at first hand a social experiment among a number of health officials having access to a breathalyzer at a cocktail party. This particular group had been accustomed to socializing together over a number of years where alcoholic beverages were served and consumed freely, but where "drunkenness" was rarely experienced and certainly not condoned. It was the type of cocktail hour that is frequently seen in society among business and professional people in which two or three or even four drinks are consumed before dinner. In this experimental setting, no food was offered, although some participants had a few potato chips. The cocktail hour had proceeded for about one and a half hours prior to the time of the breath testing. Although a number of the participants seemed to try to attain the legal intoxication limit, none of them succeeded. Others were interested in what the blood alcohol level would be after consuming their usual amount at a social gathering. The results of the Breathalyzer testing showed that the group range went from .02 percent to .075 percent, with the median being in the range of .05 percent to .06 percent.
Figure 1.

**BLOOD ALCOHOL CHART**

**SHOWING ESTIMATED % OF ALCOHOL IN THE BLOOD BY NO. OF DRINKS IN RELATION TO BODY WEIGHT**

<table>
<thead>
<tr>
<th>DRINKS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 lb.</td>
<td>.038</td>
<td>.075</td>
<td>.113</td>
<td>.150</td>
<td>.188</td>
<td>.225</td>
<td>.263</td>
<td>.300</td>
<td>.338</td>
<td>.375</td>
<td>.413</td>
<td>.450</td>
</tr>
<tr>
<td>120 lb.</td>
<td>.031</td>
<td>.063</td>
<td>.094</td>
<td>.125</td>
<td>.156</td>
<td>.188</td>
<td>.219</td>
<td>.250</td>
<td>.281</td>
<td>.313</td>
<td>.344</td>
<td>.375</td>
</tr>
<tr>
<td>140 lb.</td>
<td>.027</td>
<td>.054</td>
<td>.080</td>
<td>.107</td>
<td>.134</td>
<td>.161</td>
<td>.188</td>
<td>.214</td>
<td>.241</td>
<td>.268</td>
<td>.295</td>
<td>.321</td>
</tr>
<tr>
<td>160 lb.</td>
<td>.023</td>
<td>.047</td>
<td>.070</td>
<td>.094</td>
<td>.117</td>
<td>.141</td>
<td>.164</td>
<td>.188</td>
<td>.211</td>
<td>.234</td>
<td>.258</td>
<td>.281</td>
</tr>
<tr>
<td>180 lb.</td>
<td>.021</td>
<td>.042</td>
<td>.063</td>
<td>.083</td>
<td>.104</td>
<td>.125</td>
<td>.146</td>
<td>.167</td>
<td>.188</td>
<td>.208</td>
<td>.229</td>
<td>.250</td>
</tr>
<tr>
<td>200 lb.</td>
<td>.019</td>
<td>.038</td>
<td>.056</td>
<td>.075</td>
<td>.094</td>
<td>.113</td>
<td>.131</td>
<td>.150</td>
<td>.169</td>
<td>.188</td>
<td>.206</td>
<td>.225</td>
</tr>
<tr>
<td>220 lb.</td>
<td>.017</td>
<td>.034</td>
<td>.051</td>
<td>.068</td>
<td>.085</td>
<td>.102</td>
<td>.119</td>
<td>.136</td>
<td>.153</td>
<td>.170</td>
<td>.188</td>
<td>.205</td>
</tr>
<tr>
<td>240 lb.</td>
<td>.016</td>
<td>.031</td>
<td>.047</td>
<td>.063</td>
<td>.078</td>
<td>.094</td>
<td>.109</td>
<td>.125</td>
<td>.141</td>
<td>.156</td>
<td>.172</td>
<td>.188</td>
</tr>
</tbody>
</table>

HAS ALCOHOL AFFECTED YOUR DRIVING ABILITY

This can be determined by the % of alcohol in your blood. You can estimate your blood-alcohol level by counting your drinks (1 drink equals 1 volume oz. of 100 proof alcohol or 1-12 oz. bottle of beer.

Use alcohol chart shown above—and under No. of drinks and opposite your body weight—find the % of blood-alcohol listed.

Subtract from this number the % of alcohol "burned up" during the time elapsed since your first drink.

HRS. SINCE 1ST DRINK .......... | 1 | 2 | 3 | 4 | 5 | 6

SUBTRACT ................. | .015% | .030% | .045% | .060% | .075% | .090%

The remainder is an estimate of the % of alcohol in your blood.

Example 160 lb. Man, 8 drinks in 6 hours .188% minus .090% = .098%

**INTERPRETATION OF RESULTS**

<table>
<thead>
<tr>
<th>% OF BLOOD-ALCOHOL</th>
<th>INTOXICATED?</th>
<th>IF YOU DRIVE A CAR—</th>
</tr>
</thead>
<tbody>
<tr>
<td>.000 TO .050</td>
<td>YOU ARE NOT</td>
<td>TAKE IT EASY</td>
</tr>
<tr>
<td>.050 TO .100</td>
<td>YOU MAY BE</td>
<td>USE EXTREME CAUTION</td>
</tr>
<tr>
<td>.100 &amp; ABOVE</td>
<td>YOU ARE</td>
<td>DON'T YOU'VE HAD IT!</td>
</tr>
</tbody>
</table>

FOR BEST RESULTS—DON'T DRINK AND DRIVE
3. Characteristics of the Problem Drinker

The observations of this experimental situation have quite important implications in traffic safety programs geared to the drinking driver. The conclusion here is that the social or moderate drinker does not ordinarily reach blood alcohol levels of legal intoxication. It follows that the person exceeding the .10 percent level is usually a problem drinker. Safety efforts concerning drinking drivers would be far more effective if they were aimed at the problem drinker rather than the social drinker. The problem drinker is much easier to identify. He is a recidivist, a repeater, and he comes to light frequently through activities other than driving while intoxicated.

An Oregon Motor Vehicles Division study of drivers convicted of driving under the influence of liquor between mid-September and mid-November 1968 revealed several interesting characteristics of drinking drivers. Among other findings, the study showed that:

a. Drivers arrested for DUlL had significantly more prior accidents and nearly three times as many traffic citations as typical Oregon drivers. About one in seven had been previously convicted of DUlL at least once, with a maximum of eight previous convictions.

b. Thirty-three percent of the drivers in the study were not validly licensed to drive in Oregon.

c. One in four drivers convicted of DUlL had a past criminal record. Three in eight had a previous charge of drunkenness in public not associated with driving.

d. Drivers who had two or more DUlL convictions on their records as contrasted to first-time offenders generally had poorer driving records, more extensive drinking records, and worse past criminal records.

e. Credit ratings and state welfare contacts revealed this group to be lower on the socio-economic scale than the typical citizen.

f. Four percent of the drivers in this study had been committed to mental hospitals in Oregon.

g. The average percentage of blood alcohol concentration was 0.21. This is a level rarely found among social drinkers and is unquestionably associated with marked deterioration of psycho-motor coordination regardless of personal drinking habits.

If control measures are directed to the problem drinker, they would be directed to the greatest contributor to the accident problem. A jury could be led to realize that the old adage, “There but for the grace of God go I”, does not apply to the problem drinker. The average juror need not identify with the defendant in these cases.

Unfortunately, “problem” drinkers and alcoholics apparently constitute a significant percentage of the total driving public. On the basis of a 1964 California study, it was estimated that about 650,000 of the 10 million California drivers were alcoholic. Of this 6½ percent of all drivers, it was estimated that no more than one-fourth (and probably somewhat less than one-fourth) had been identified by governmental agencies as problem drinkers.

It is not to be inferred from the above that the person who drinks in moderation is as safe as a sober driver. Carefully controlled studies have shown definite impairment in judgment, coordination and reaction time at levels considerably below .10 percent alcohol level. In fact, some impairment is recognizable at the level of .03 percent alcohol in many individuals. At .05 percent even experienced drinkers and experienced drivers often show impairment of judgment and coordination. However, the laboratory model is not the highway model. It is believed that more meaningful conclusions can be drawn from studies of actual experience on the highway, such as the California figures cited above.

4. An Alcohol Level — Driving Ability Model

Although the relationship between alcohol (and other driver impairments) and accident propensity is not known precisely, it is suggested by the Committee that the relationship can be explained in the following manner: The usual quali-
fied driver possesses driving skills which are adequate to meet traffic requirements perhaps 95 percent or more of the time, with no difficulty whatever. The remaining five percent of traffic situations probably constitute the major fraction of the demands upon his driving skills. Most drivers probably have a wide factor of safety in meeting the driving demands most of the time. There is some very small fraction of one percent of traffic situations in which even the most skilled of drivers under the most ideal conditions could not avoid an accident. Between these two extremes, one can conceive of a wide variety of conditions in which the ability to avoid the accident depends upon the driver's ability to handle the car.

This concept may be visualized by reference to the following hypothetical figure. In this graph the probability of an accident is laid out in a scale of 0 to 100 percent on the vertical axis, and the degree of difficulty in traffic situations is laid out in an arbitrary scale of 0 to 100 on the horizontal axis. The lower curve in the illustration represents the skilled, sober driver. His probability of becoming involved in an accident is virtually unchanged until the degree of difficulty exceeds about 90 on this arbitrary scale. After this, the curve rises increasingly rapidly as it approaches 100, at which point the probability of an accident would

Figure 2
DRIVER IMPAIRMENT AND ACCIDENT PROBABILITY
(Hyphothetical Concept)
be 100 percent; in other words, unavoidable by any driver. The upper curve in
this figure represents the impaired driver. In this case it is to be assumed this
impairment is alcoholic intoxication. The curve is conceived to be "S" shaped. Up
to about 30 degrees of difficulty, the probability of being involved in an accident
is little or no greater for the alcoholic driver than for a sober driver. As the diff-
culty becomes greater, the impaired driver's probability curve rises rapidly and
and approaches 100 percent at a point considerably below the degree of difficulty
at which the skilled driver would encounter an increased probability of accident.
Thus it is possible to conceive that a seriously impaired driver may not be able to
avoid an accident more than once or twice out of one hundred situations with a
degree of difficulty of 80.

This model may help to conceptualize various factors which bear upon traffic
accidents. Ideally, a driver's curve would not rise until it reached the lower right
hand corner of the graph: That is, a driver could maintain probability of accident
at zero in all cases except where the accident is absolutely unavoidable. The actual
point of rise on the curve for any driver would be somewhere to the left of this.
The farther to the left, the more the impairment of the driver. This impairment
might be due to drugs, alcohol, fatigue, orthopedic defects, neuro-muscular defects,
emotional state, distractions, lapses of consciousness, or any other influence upon
the driver's ability to handle his automobile. These factors can be considered
"driver-affecting" factors. Theoretically each of these would be subject to measure-
ment so that accurate curves could be drawn for various driver-impairment in-
fluences.

One other aspect of the problem of alcohol and driving is the influence on
judgment of the driver, quite apart from coordination and reaction time. The
difference here is often the difference between an accident which is merely a
"fender-bender," and a deadly high-speed collision. In many individuals, impair-
ment of judgment under the influence of alcohol leads the driver to fail to appre-
ciate the speed that his car is travelling. Speed, plus slowed reaction time, plus
lack of coordination make up the deadly trio of circumstances which so often
involve inebriated drivers in fatal accidents.

B. Fatigue

Fatigue, either physical or mental, but especially the latter, is a factor to which
any driver may be subject on occasion. It is particularly insidious in that it will not
cause the driver to seek medical opinion. It may not be anticipated or even ade-
quately recognized. However, its effect on driving skills has been likened by many
authorities to that of alcohol: it will impair judgment; it will slow reaction time,
and it will impair coordination. Monotonous freeway driving may be particularly
hazardous to the fatigued individual, because a sort of hypnosis may develop
leading to complete driver impairment and loss of control. This problem is prob-
ably best handled through public education efforts alerting the driving public
to the dangers of fatigue and providing suggestions for alleviating fatigue, such
as having adequate rest before undertaking extended trips, stopping to rest for a
moment if the driver feels particularly drowsy, or, if it is imperative that through
driving be undertaken, suggesting a mild stimulant, such as coffee or caffein type
tables.

C. Carbon Monoxide

Motorists are often cautioned about the dangers of carbon monoxide creep-
ing into an automobile, particularly if there is a faulty or leaking exhaust system.
Drivers are warned to keep adequate ventilation through their cars at all times,
particularly in the winter months when there is a tendency to close out the
cold air, as the presence of carbon monoxide gives no warning. It cannot be
seen, smelled, or otherwise sensed. Another source of carbon monoxide in a poorly
ventilated automobile is from excessive smoking. Such activities may lead to
sufficient carbon monoxide levels to impair visual sensitivity in areas of low illumi-
nation. This consideration is especially important in driving at night and at high
altitudes.
D. Vision

Vision testing is routine upon initial licensing of drivers in the State of Oregon. There is no requirement that vision testing be repeated after this initial licensing, unless specific disability brings it to the attention of licensing authorities. The limit of visual acuity in Oregon at the present time is 20/40 vision, using both eyes together, which may be accomplished through the use of corrective glasses. Visual acuity between 20/40 and 20/70 requires referral to a vision specialist. No applicant with corrected vision less than 20/70 may be licensed. The permissible limit ranges between 20/30 and 20/70 among various states, although some states establish no limits. Oregon appears to be rather liberal in its requirement on testing of visual fields and peripheral vision. A minimum field of 100 degrees, using both eyes, is required. Since normal peripheral vision is between 140 degrees and about 180 degrees, it would appear that this is a much more liberal limit than that of visual acuity. The limit recommended by the American Medical Association is 110 degrees.

It is interesting to note in this connection that it has been only a few years since it became necessary for persons obtaining tax relief because of blindness to be reported to the Motor Vehicles Division, making license suspension possible. Even now there is no legal provision for a physician or other person knowing of marked visual impairment to report this finding to the Motor Vehicles Division. Thus, if a physician finds his patient has marked visual impairment, he may not report this except at the risk of disclosure of confidential information.

E. Other Physical and Mental Impairments

Under current Oregon law, when a driver is reported as having "convulsive disorders, fainting spells, or has had 'blackouts' or any loss or disturbance of consciousness or control from whatever cause" (See Appendix H) or other condition which may lead to temporary loss of consciousness, examination must be made by a competent physician to determine capacity to drive. In the case of epilepsy, this determination hinges upon freedom from seizures for at least one year prior to issuance of a license. Other conditions are left to the discretion of the examining physician.

The American Medical Association has prepared a booklet intended to serve as a guide for physicians in determining fitness to drive a motor vehicle by their patients. It is not the intention of this Committee to review the various recommendations for different disease entities contained in the AMA booklet. Rather it is urged that physicians familiarize themselves with the various recommendations in the booklet and retain a continued consciousness of responsibility to protect the patient and the public from the dangers which may result from impaired driving either due to a disease condition or to the possible effects of a drug or combination of drugs which may be prescribed.

F. Emotionally Disturbed Drivers

Repeated testimony before the Committee indicates that "emotionally disturbed" drivers create a serious but apparently untouchable hazard. The expression "emotionally disturbed" has been given different connotations by witnesses and Committee members, ranging all the way from the kind of temporary preoccupation with knotty personal problems to which all drivers are subject, to severe psychoses with loss of contact with reality. The Committee would like to think there were tests or interviews which could weed out drivers with the more serious problems of immaturity and emotional instability without also weeding out safe drivers. Although promising work has been done in this field, your Committee does not believe the state of the art has developed to the point where it could justify recommending such procedures except in those cases where the driving record already indicated serious problems and the tests were used only as a supplement to the traffic record.

G. Summary of Findings

It is generally conceded that human failure overshadows all other factors in the production of highway accidents. Of all causes of human failure, alcohol consumption seems to be the single predominant factor. Alcohol contributes to
accidents and fatalities by impairing judgment, reaction time, and coordination. However, a driver may be impaired in any or all of these factors through means other than the consumption of alcohol, such as inexperience or inadequate training, borderline intelligence, excessive fatigue, the effect of other drugs or perhaps a combination of fatigue and drugs with a low alcohol intake. The medical profession must assume a greater responsibility in the control of the human factors which bear upon accidents and fatalities. The physician must advise his patients on the limits which physical impairment of certain drugs may impose upon driving. He must be willing and able to report disabling conditions to the suitable licensing and control agencies. He must be aware of the responsibility to the public as well as to his patient in making these considerations.

Where alcohol alone is concerned, it is becoming increasingly apparent that it is the heavy drinker, most usually the problem drinker, who is probably the single greatest contributor to serious or fatal accidents. Efforts directed at the control of drinking and driving would probably be more effective if they were directed at the heavy drinker group rather than the drinking and driving behavior of the social or moderate drinker. Reporting procedures should be instituted whereby any private or public agency or individual who has a responsibility for dealing with the problems of alcoholism or its consequences would be required to report problem drinkers to licensing officials.

1. Punishment and Treatment of the Problem Drinker

The best means of handling these problem drinkers is evidently still very much open to question. A number of authorities claim that punitive measures have been failures in the past. However, a legitimate question may be raised as to whether this is due to a failure of punitive measures or rather to a failure to apply true punitive measures. This places the problem of the alcoholic driver with the problem of court procedures for handling these people, license revocation and reinstatement procedures, referral to trial before a jury, the effect of a fine and/or imprisonment upon the drinking pattern of the driver himself, and a host of other problems which are deserving of much greater study.

Fortunately, some promising studies are under way. The Alcohol and Drug Section, Mental Health Division, Oregon State Board of Health has embarked on a three-year, $2.15 million comprehensive demonstration project directed toward the problems of alcohol abuse and driving safety, under contract with the U. S. Department of Transportation. Many public agencies will be involved in the project, including the Mental Health Division, Oregon State Police, Portland Municipal Police, State Motor Vehicles Division, Oregon State System of Higher Education, and Portland's Municipal Courts which have already expanded their facilities to accommodate the program. Because of the potential of this project, a statement of its objectives and methods is included in this report as Appendix C.

It would appear that for the typical driver apprehended for a violation of the law and found to be under the influence of alcohol, even at less than legal limits, punitive measures might be quite effective in preventing the further development of the drinking problem. However, the chronic alcoholic is notoriously resistant to changing his habits by virtue of fine or imprisonment. Such a person should probably have his license revoked and at the same time be offered the ability to earn back his driving privilege by undergoing a rehabilitative course and subsequently demonstrating responsibility in handling his drinking problem.

2. Reduction of the Blood Alcohol Limit

Because overwhelming evidence clearly indicates that driver impairment is serious and extremely dangerous whenever the blood alcohol level exceeds .10 percent, and that any person with such a blood alcohol level is not merely a casual social drinker, there can be no justification for the continuance of any higher legal intoxication limit, such as the Oregon limit of .15 percent. This archaic limit was established at a time when scientific measuring devices were not as readily available to law enforcement officers as they are today, when the effects of alcohol on driver impairment and fatal accident propensity were not as well known as they are today, and when prosecutors were reluctant to try a case against a driver unless he was obviously (to anyone) an incoherent, staggering
drunk, or completely unconscious. The National Highway Safety Bureau was
provided by regulation that state highway safety programs will not be acceptable
unless they provide for a legal intoxication level no higher than .10 percent. Many
states have already reduced the legal intoxication level to .10 percent, and at
least one state (Utah) has reduced its level to .08 percent.

Although the Committee believes that a limit of .08 percent represents a bet-
ter measure of significant driver impairment than a limit of .10 percent, it also
recognizes some problems with a limit below .10 percent. There is very clear evi-
dence that blood alcohol levels of .10 percent and above involve significant im-
pairment for anyone. No one, in the Committee's opinion, could rationally argue
that he was not under the influence of alcohol at these levels, so there should be
no escape. Lowering the presumptive limit to .08 percent, on the other hand, may
create ticklish problems of determining whether there actually is significant
alcohol influence, thereby weakening the confidence of the courts and juries
in the presumptive limit as a real measure of intoxication. The higher limit of .10
percent will cover virtually all alcoholics and problem drinkers, who should be the
major targets. Also, whatever limit is selected, it is a "disputable presumption"
limit and does not foreclose conviction of driving under the influence where the
reading is lower than this limit. For example, under the current statutes, any
reading between .05 percent and .15 percent may be used as "indirect evidence"
to determine whether the driver is under the influence.

H. Remedial Proposals and Legislation

1. Oregon Legislative Proposals

Among the flood of bills introduced in the 1967 Session of the Oregon Legis-
lature, only three had to do specifically with the drinking driver, and only one
of these was passed into law. The bills that failed would have required that a
blood sample be taken from deceased automobile accident victims to determine
the blood alcohol level, if any, and would have created a minimum sentence of 10
days for persons convicted a second time of driving under the influence of alcohol.
The bill that became law provided that the Motor Vehicles Division may issue
occupational licenses for professional drivers to use only in their employment,
when their regular license has been suspended because of a first conviction for
drunken driving. The convicting judge must recommend issuance of the special
license and the Motor Vehicles Division must concur. Although this law may
appear to be moving in the wrong direction—promoting rather than discouraging
the drinking driver—its rationale is based on the assumption that there will be
fewer instances where a charge is reduced from drunk driving to reckless driving
to prevent loss of livelihood to a driver whose license would automatically be
suspended for 90 days under a drunk driving conviction. The Governor has
directed the Motor Vehicles Division to use extreme discretion in issuing these
occupational licenses.

The 1969 Oregon Legislative Session was even less productive than the 1967
Session in this area, and no bills of any import were passed. Judged by its record,
the Legislature apparently was little concerned with the problems created by the
drinking driver.

House Bill 1216, being considered in the 1971 Legislative Session, would
require a motorist to submit to a breathalyzer test following collision or arrest for
a moving violation (if the police officer so requests), would lower the disputable
presumptive limit for driving under the influence of liquor from .15 to .10 blood
alcohol level, and would make it illegal to drive with a blood alcohol level of .15
or higher.

2. Highway Safety Bureau Proposals

Some interesting proposals have recently been disclosed by the National High-
way Safety Bureau, some of which will become the subject of pilot studies in
various localities. One such proposal is that a person convicted of drunk driving
be placed on parole and that his automobile be equipped with a device to prevent
ignition if he is intoxicated. One possible device would be an "alcohol sniffer."
Another would be a unit with a requirement that certain buttons be pushed in a
complex sequence before the engine could be started. The paroled driver would
Another proposal is that a convicted driver be required to take drugs designed to make him violently ill when he consumes alcohol, with the added protection that he would have to submit to regular blood tests to assure that he was faithfully using the drug.

It is clear that simple license suspension, relied upon so heavily in the past, is an insufficient deterrent. The Oregon State study referred to above showed that one-third of all drinking driver convictions were of persons with no driver licenses or suspended driver licenses.

I. Recommendations on Alcohol and Medical Factors

The Committee specifically recommends the following changes in law and procedures related to the drinking driver and the driver impaired by other medical factors:

1. The legal limit for "driving under the influence of liquor" should be reduced from .15 percent to .10 percent blood alcohol level. The lower level is far more realistic as a measure of serious driver impairment and will bring a far greater number of problem drinkers to the attention of the courts. As noted above, a bill to accomplish this reduction is currently under consideration in the Oregon Legislature.

2. Penalties for driving under the influence of liquor should be changed to reflect the evidence that the vast majority of offenders are problem drinkers rather than social drinkers, and that traditional penalties involving punitive measures only are inadequate. Specifically:

   A. For first offenses, there should be complete judicial discretion. The reasons for this recommendation are fully explored in the section of this report on law enforcement. As noted in that section, the current mandatory jail sentence, fine, and license suspension have almost eliminated convictions of first-time offenders. The Committee feels a more realistic conviction record would result from greater judicial discretion.

   B. For a second offense, mandatory penalties should be imposed, including jail sentence, fine, and license suspension for a period of at least 90 days. However, reinstatement of the driving privilege should be contingent upon the following:

      (1) No further court appearance involving use of alcohol (whether driving or not).

      (2) Completion of a full course of instruction on the effects of alcohol and driving.

      (3) Evidence of improvement in attitude and drinking problems acceptable to the Motor Vehicles Division.

   C. For a third or subsequent offense, in addition to a jail sentence and fine, the driver's license should be suspended for a period of at least one year, after which it may be reinstated only if all of the above requirements have been met and only if the subject has documented evidence that his drinking problem is under control.

   D. In the event a court decrees it is necessary and desirable for the subject to drive to retain his employment and his means of livelihood, but only so long as the subject maintains a record free of conviction of drinking offenses of any type, a limited license may be made available which restricts his driving to times and places of minimum driving hazards during normal working hours and which requires that any vehicle driven by the subject bear a prominently displayed emblem to the effect that the driver has such a restricted license. Penalties for violation of this provision would be those of conviction of a felony.

   E. Procedures should be established to regularly audit driver license suspensions to assure that they are actually being enforced. The Committee makes no specific recommendations on techniques, but wishes to emphasize that its recommended program depends almost entirely on the absolute enforcement of suspensions.
3. Any person, agency or organization dealing with the medical or social problems of a person considered to have a drinking problem should be required to report such information to the State Health Officer, who would be required to make inquiry and report to the Motor Vehicles Division on its findings. The Motor Vehicles Division should then be empowered to restrict the license of such a person and to require the subject to display a limited emblem on any vehicle he drives, subject to suspension of his license for a 90-day period.

4. State and local governments should greatly expand their facilities and resources for rehabilitation and treatment of problem drinkers. The major portion of revenues from liquor sales in the State of Oregon should be allocated to this purpose.

5. Physicians should be required to report to the Motor Vehicles Division any driver-impairing conditions, such as visual acuity, mental incompetence, either due to insanity or mental deterioration from any cause, lapse of consciousness or any condition which may impair the driver's ability to drive safely.

6. Legislation should require labeling of drugs and prescriptions which may cause drowsiness or affect driver judgment or coordination, alone or in combination with alcohol or other groups of drugs.

IX. TRAFFIC LAW ENFORCEMENT

Although traffic laws and regulations were specifically excluded from the purview of the Committee, the members feel that a study of the enforcement function is an essential part of the story of motor vehicle safety. It is directly related to the licensing function, the problem of the drinking driver, and the effectiveness of the whole body of traffic law.

The enforcement function encompasses both the police function and the judicial function. In theory, the two should work together for the greatest impact, but in reality they often work separately and in opposition to each other. This is a waste of both time and public funds and can contribute to loss of lives of accident victims.

Each year there are approximately 30 million traffic tickets issued to American drivers. The charges range from common parking violations to manslaughter, the most serious driving offense. Of all persons cited, only one in six will ever make an appearance in court. The others will pay a fine or bail which they will forfeit in accordance with a published schedule. They will have no further contact with the courts.

In Portland, traffic citations are issued at the rate of about 300,000 per year, of which approximately one-sixth are for “moving” violations. In conformity with the national statistics about one-sixth of all citations result in court appearances, but about one-half of the citations for moving violations result in court appearance.

A. The Traffic Court System

1. Traffic Court Structure in Oregon

In Oregon, original traffic jurisdiction is vested in the minor courts—either a justice, a municipal, or a district court. Each has concurrent jurisdiction over non-felony and traffic charges. The District Attorney staffs the district courts, while special prosecutors and city attorneys prosecute the traffic cases in the other courts. In many of the justice courts as well as the smaller municipal courts, the arresting officer might act as prosecutor as well as the chief witness against the motorist.

Justices of the peace and judges in some municipal courts are not required to be attorneys. Although district court judges are required to be attorneys, they are often newly-appointed without much prior judicial experience. Unfortunately, the minor courts generally carry far heavier case loads than circuit courts, and their influence on the public is increased because of the large number of persons touched by these cases.
2. Defects of the System

a. Unequal Penalties

The Committee was informed that there is a substantial difference between the penalties levied by the courts in different parts of the state. In one jurisdiction certain violations would freely be reduced to lesser charges, while severe jail sentences might be imposed for the same violation in the next jurisdiction. This may produce spotty enforcement, especially by a State Police officer who may patrol both districts. He will usually make arrests only for those offenses which he knows the courts of the district will enforce. Lack of uniform enforcement produces public criticism of traffic enforcement, court criticism of police for non-enforcement, and police criticism of the courts for leniency toward violators. This fault-finding hampers a responsible program for minimizing these deficiencies. Ultimately, the enforcement of the laws within a jurisdiction seems to depend largely upon the personalities involved.

The traffic courts will provide many citizens with their only contact with the law and the court system. The impact of this system on them can have a far greater influence for traffic safety than the penalties imposed. Because the offender's attitude is shaped by this experience, for months or years to come, it is important that the public have confidence in the traffic courts. Although the avowed purpose of traffic court procedure is basically that of educating the offender and attempting to enlist his voluntary cooperation, the public usually complains that the purpose is only punitive or financial—that is, to raise money for the courts. This attitude is hardly conducive to public support of traffic safety programs. Judges have a major responsibility to explain the purposes of fines and sentences, to attempt to change this attitude.

b. Avoidance of Court Appearances

Almost every reported non-traffic crime is investigated by the police, and the apprehended suspect is almost certain to be indicted and brought before the courts. In a traffic case, however, an offender usually must either commit the offense in front of an officer or be involved in an accident before he will receive a citation, although police officers do have the authority to make an arrest without witnessing an offense. Even in the case of an accident, it is still a matter of judgment whether or not the officer will issue a citation. A private citizen may make an arrest, but it is a cumbersome procedure and is seldom employed. In the case of the more common and numerous non-serious violations where no accident occurs, there will rarely be a court appearance by the driver. In five out of six violations, the driver will simply mail in the bail and skip court, choosing to forfeit the bail rather than take the time to appear.

Despite the increasing use in some states of administrative substitutes for court appearance, it is the opinion of the Committee that court procedures should be revised to increase the number of violators appearing in the courts, instead of developing new ways of avoiding court appearances through administrative processes. It is felt that at least some of the violators who are escaping court appearances under present procedures, and who are building up records which indicate poor driving habits or attitudes, could be salvaged by mandatory court appearances. It must be understood that such reform would increase the cost of court operation, and the public must be ready and willing to assume these increased costs. A short explanation of the necessity for enforcement, for laws and the rights of the citizens who appear before the court should be made by the traffic judge, as it is usually impressive to the occasional violator.

To improve the effectiveness of such court appearances, the courts should be physically improved to provide the appearance of comfort, efficiency and dignity. A dignified presentation by a capable judge in appropriate physical surroundings should make a lasting and favorable impression.

The Portland Traffic School is an excellent medium for bringing the over-all purpose of traffic laws to the public's attention, and is certainly an effective re-education device. After conviction of minor offenses, a motorist or pedestrian may be required to attend two nights of traffic school in addition to payment of a fine or may be given the opportunity of attending the school as an alternative to the fine. One session is spent on traffic laws, and the other features a movie on
traffic safety. This program is designed to motivate an offender and hopefully obtain his future cooperation.

If court appearance by the offender is sufficient in itself to correct the problem, the judge may not have to impose severe sanctions unless the violation is repeated. If the offenses continued, the courts could restrict or take away all driving privileges until the offender either took a driver improvement course or otherwise showed himself to be competent to handle a motor vehicle. Probation is a tool that might also be used effectively.

Although most drivers can be jolted by a heavy fine, this form of penalty should not be relied upon primarily as a revenue source. Imprisonment is appropriate and essential for chronic offenders, but seems to do little, if anything, to improve driver habits and attitudes. Courts have been reluctant to use jail sentences because an imprisoned driver cannot feed his family, and in many instances his family would soon be on the welfare rolls. In Portland, limited use is being made of "part time" jail sentences to avoid this problem. Under this procedure, the prisoner is released during the day or the work week to continue his regular employment, and serves his jail time at nights and/or on weekends.

3. Appeals of Minor Court Judgments

a. Defects in Appeals Process

A minor court is not a court of record, and no transcript is kept of the proceedings. Since appeals are maintained upon the record, all appeals from traffic court must be completely retried in the higher court. Most minor traffic offenses are punished by fine only and not often appealed. However, because driving while under the influence of liquor usually carries a jail sentence, it is generally appealed. Circuit courts have a responsibility for serious criminal cases and civil cases involving large sums of money, and are somewhat indifferent in their attitude toward these traffic appeals. This has led them to a tendency to reduce sentences or obtain pleas on lesser charges to save the court the time and expense of retrying these cases. Some witnesses before the Committee reported that such reductions occurred in as many as 80 percent of all appeals. Each reduction conceals to some extent the seriousness of our traffic problems. Another problem with traffic appeals is that by the time there is room on the circuit court docket for the case to be heard on appeal, witnesses who have already testified at one trial become reluctant to testify again, are unavailable, or their memories dim, making it much harder to convict the motorist again before the new judge or jury.

This works primarily in favor of the defendant and destroys many clear cases. Presently a case may be tried in municipal court without any defense being presented, in order to discover what evidence is available to be used against the motorist. Then the case is appealed to circuit court, where it is tried all over again, but where the defendant, who already knows what evidence is going to be presented against him, is better able to plan his own defense to counteract it. If the lower courts were made courts of record for all serious traffic offenses, and appeals allowed only upon the errors found in the record, much of the sentence "shopping" which exists today would be eliminated. A second reform should make the sentence in the appellate court identical to the one imposed in the lower court. These reforms would prevent the necessity of complete retrials of these cases, duplicate testimony by witnesses and appeals for better sentences, or to delay final execution of the sentence. Circuit courts would not be so crowded with appeals where the only purpose is to gain a reduction in penalty. This would allow the courts more time for their more important cases.

b. Appeals of Automatic License Suspensions

There is sufficient evidence to show that automatic suspensions following certain convictions also create appeals to circuit court. The most frequent example is the license suspension resulting after conviction for driving under the influence of liquor. Upon notice being given to the Motor Vehicles Division of a conviction for driving under the influence, a mandatory suspension of 90 days is imposed for a first offense, a one-year suspension for a second offense, and three years of additional suspension for a third conviction.
Most appeals of convictions involving license suspensions are filed in the hope that a better verdict can be obtained, or that the higher court will do away with the suspension part of the penalty. The Committee feels that there may be extenuating circumstances under which statutory automatic license suspension is not the best penalty, such as where the suspension will deprive a driver of his means of livelihood or support of his family. Our present law unduly ties the hands of the sentencing judge. Even though the Motor Vehicles Division has the right to review all cases on a case-by-case basis and, upon recommendation by the court, issue a special "business hours only" driver's license, juries are reluctant to convict in these cases, or the court will accept a negotiated plea to a lesser charge. Many of these same drivers later will ask the court for a similar reduction after a subsequent citation, based again upon extreme need and the absence of a prior serious driving record. In this manner, the courts may abet the further concealment of a deficient, or even criminal driving record.

c. Need for Greater Judicial Discretion

The Committee feels that the trial judge has the best background to determine the most effective penalty in any given case. He has such tools as pre-sentence investigation or traffic school to carry out the purpose of reforming the errant driver. An automatic license suspension might certainly be justified after a second conviction but the Committee feels, at least on a first offense, that the judge should have absolute discretion regarding suspension. This would lessen the number of drivers for whom a charge must be reduced or who appeals for more favorable treatment, and would create a more accurate driving record. Special consideration would be given to those first offenders who benefit by it, while more severe penalties would fall upon repeaters. This would ease the friction between the courts and law enforcement officers who become discouraged after making frequent arrests of a motorist, only to have the courts reduce the charge or let him off altogether.

One innovation which is helping to reduce the trials and appeals in the case of the drinking driver is the use of video tape. The interview with a drinking driver is taped at the police station, along with pictures of the motorist taking the tests. This video tape is then available at the time of trial as additional evidence in the event the motorist does not plead guilty. Because of the cost of these tapes, there is only a limited supply available at any one time. They can be used over again, but not until the originally-taped case is finally disposed of, and each tape must be kept until the time of the appeal has passed.

4. The Place of the Motor Vehicles Division in Enforcement

One means of reducing the load of the courts is by using administrative penalties for selected violations. As an example, the Motor Vehicles Division has been charged with the responsibility of enforcing the Financial Responsibility Law. A driver involved in an accident, regardless of fault, must either show he has valid insurance or must post a bond with the Division if he is to keep his driving privileges. There is no court hearing. When a person is convicted of driving while his license is suspended or revoked, the date of his first opportunity to apply for reinstatement is automatically deferred for an additional period.

Many of the witnesses before the Committee felt that the court's personal contact with the errant driver is an important factor in reducing the likelihood of repeated violations and that this close personal contact cannot be obtained through an impersonal administrative agency. There were strong feelings on both sides as to the effectiveness of our present Motor Vehicles Division. Most witnesses did not feel that it would continue as a substitute for our judicial system, but should be utilized more for record-keeping and as a coordinating body.

5. Suspended Drivers

The Committee is very much concerned about the large number of drivers whose licenses have been suspended but who continue to use Oregon's highways, and the apparently poor record of apprehension and conviction of such drivers. A total of 60,224 drivers was suspended in 1970. Almost half of these suspensions were due to failure to comply with the terms of the Financial Responsibility Law following involvement in an accident. Many of these drivers were reinstated upon
showing of financial responsibility. In 1970 the Motor Vehicles Division imposed an additional year of suspension upon 9,587 drivers who were apprehended without a valid driver's license. Most of these drivers were involved in accidents, or were discovered when they were cited on another violation. State Police report that 10.5 percent of drunk arrests in 1969 involved driving with suspended licenses.

There are many thousands of suspended drivers who are still driving today. By and large, these are not just casual offenders but a hard core of law violators according to a recent Motor Vehicles Division study of 505 drivers given additional one-year suspensions for driving while suspended. The typical offender in the study already had three or more suspensions on his record and half of them had been arrested for driving while suspended at least one other time. An average of only 23½ months had elapsed between the issuance of the last suspension order and the apprehension for driving while suspended.

The Committee feels that a greater effort should be made to isolate these drivers and take them off the streets, preferably by jail sentences. Under the law in effect since 1967, upon a first conviction for driving while suspended, a motorist must be sentenced from two days to one year in jail (suspended by most judges) and fined up to $1,000, plus an additional one-year continuation of his suspension.

The law also provides for a 30- to 120-day impoundment of the automobile used by the errant driver, but only if it is the owner of the automobile who is convicted. This law is seldom applied. Until early in 1970, only Umatilla and Coos counties used the statute. The Multnomah County District Attorney announced early in 1970 that he would start applying the law and has done so to a limited extent.

6. Judicial Reform

Ultimately the proper handling of traffic cases in the courts must come through a major statewide judicial reform. The purpose of this reform would be to solve the problems of crowded courts, divergency of sentences, and the unequal enforcement between the various jurisdictions. The reform should be designed to reduce the number of appeals taken from the minor courts, make the minor courts courts of record, and upgrade the qualifications of the people administering the courts.

a. Upgrading Court Personnel

Several specific reforms would improve the treatment of traffic cases in the courts. First, the position of traffic court judge should be filled only by attorneys, and further, only by those attorneys who are specialists in traffic law. The Committee recognizes that this may be an impossible objective in some low-population jurisdictions. To attain this objective, many counties would have to increase the salary paid to the judge in order to attract qualified candidates.

Another important position in traffic court is that of the prosecutor. The usual custom is to select the newest or least experienced deputy for this task and his in-court performance is often disillusioning to the witnesses or to the victims whom he represents. Upgrading of this position would greatly benefit the courts by creating more public support, as well as more uniform treatment of all violators. The prevalent practice in small jurisdictions of requiring police officers to act both as chief witness and prosecutor should be eliminated.

b. Integration into State System

Integration of the traffic courts into the regular courts of record would be an excellent vehicle for starting the above reforms. Appeals would be virtually eliminated. The standards by which the courts are maintained and operated would be standardized throughout the State. Trial results and penalties would be similar wherever tried.

c. Pre-sentence Investigations

A new innovation is the widening use of the pre-sentence investigation as a traffic court sentencing tool. At first this was used only in criminal cases, but now it is often ordered in an attempt to determine the nature of the factors contributing to a bad driving record. Using this device, the court attempts to impose a program
which will eliminate these influences, rather than just penalize the driver. As more drivers are required to submit to investigation, more patterns that combine to create a bad driving record will be discovered, hopefully before a bad accident or death occurs.

Expanded use of the pre-sentence investigation and other court resources specifically for drunk driving cases will be made possible on a demonstration basis in Portland this year, as the result of a grant from the U.S. Department of Transportation. The grant will allow the creation of two additional traffic courts for a 30-month demonstration period. The Committee feels this is clearly a move in the right direction and hopes that the program can be continued and expanded.

d. Disposition of Traffic Fines

Government units should not depend upon traffic fines as the source of revenue for operating police departments, courts, or any other governmental functions. Such use of traffic fines results in one of the most widely-held criticisms of the courts and law enforcement officers by the general public. Fines should go only into funds completely separate from the courts, the police, or any other official who might pressure for justice to be tempered according to the monetary needs of his department. This would free the traffic judge to levy penalties in accordance with the circumstances of each individual case.

B. The Police Function

It was agreed by all witnesses interviewed by your Committee that the fundamental purposes of traffic law enforcement in general—and the police function in particular—are the prevention of accidents and orderly movement of traffic. It was only regarding the methods and techniques designed to accomplish these objectives that the Committee found differences of opinion—both as to the value of various techniques and the extent to which various techniques are actually in use today.

1. Citation Frequency as Indicator of Efficiency

Some feel that efficiency in the pursuit of these objectives is measurable in terms of citation frequency. In its effort to define and evaluate an effective system of enforcement, the National Traffic Safety Commission has established citation guidelines for each city and county. They are based on the proposition that violations occur in proportion to the number of miles driven. If fewer citations are given, the enforcement is considered substandard. In order for a community to show an exceptional record, it need only issue a large number of tickets. Police departments trying to look good will establish quotas and pressure officers to write the indicated number of tickets whether warranted or not.

This enforcement technique has obvious drawbacks. When traffic officer evaluation and promotion depends upon performance, and performance is measured by the number of citations issued, officers may tend quickly to issue the required number of citations for any type of violation whatever, and then, once this quota is reached, become reluctant to issue more because of public accusation of being "citation happy". When records are available, it is easy to spot these "quota jurisdictions by the pattern of citations. They tend to increase during certain hours and days which are related to record-keeping, and not to traffic volume or number of actual violations committed. The high citation periods occur at the beginning or end of patrol, at the beginning of a new period, and again just before the end of the period. Most of these citations are written for minor infractions and at certain high violation locations. The City of Portland relies extensively on quotas for its traffic patrols, on the theory that any officer spending time on the streets will see a certain number of violations and that failure to issue citations is an indication he is not doing an adequate job.

The quota system and its side effects can easily create strained relationships between police and the community. Apart from natural public resentment of the system, it is easy to equate, whether correctly or not, a quota system with a revenue system. It is far easier to fill a quota by citing drivers who fail to make complete stops, make improper turns, or violate radar spot checks even though these violations may not significantly contribute to accident figures, than to apprehend drivers guilty of more dangerous acts, such as "reckless driving". When police officers succumb to this temptation, there is an adverse reaction
from the public which considers such minor citations as revenue raising rather than as a valid device for meaningful traffic enforcement.

That a quota system, or even the suspicion of a quota system, has a deleterious effect on police force morale is well evidenced by disclosures of the alleged abuse of the system in certain divisions of the Oregon State Police.

None of the above discussion should be interpreted as an indictment of a strong citation writing program or any program of deployment of traffic officers designed primarily to accomplish the objectives of safety and traffic flow. Constant reminders of the presence and the citation-writing authority of police officers do have a salutory influence on the driving habits of the majority of drivers. A police car along the side of the road will slow traffic down below the maximums for quite a while.

It should be noted that unmarked police cars will not serve this purpose. Police can make far more arrests for violations in unmarked cars, but find it more difficult to slow down traffic. It is especially important that marked cars be used in trouble sectors for maximum effect.

2. Selective Enforcement

A technique known as "selective enforcement" is at least partially based on the knowledge that people respond to the presence of a police officer. In this procedure, the officer is placed where the majority of the accidents or violations occur. Since the violations tend to taper off in the presence of an officer, he may soon be able to go on his way, and drivers will still exercise caution for a time after he is gone. The officer then goes to another problem area. Often it is enough if an officer appears at a trouble spot for one hour a day. Modern police departments use a computer to determine the trouble spots hour by hour and schedule their rounds to cover these locations at the times they are the worst.

There has been some public criticism of this program on the grounds that the officer hides around the corner to catch an unwary motorist, while violations continue unabated right down the street. This is strictly a public relations matter. Once the public understands the problems, and the reasoning behind selective enforcement, it should support this type of program.

3. Inefficiencies in Use of Manpower

The perpetual law enforcement problem is the lack of adequate manpower. This results from both budgetary restraints and the combination of high standards and low salaries in many law enforcement agencies. The problem is further increased by the present system which wastes manpower by requiring officers to wait in court to testify. Many hours are completely lost in this fashion. A return to court is often necessitated when cases are set over or appealed. In many cases, the officer also is required to be present on the day the motorist pleads, in the event the case is disposed of at that time. If the motorist pleads not guilty, the officer must return later to testify at a trial. Considerable officer time could be saved if the officer's appearances were cut down to trial days only. Sentence should be given without testimony from the officer in the event of a guilty plea. The citation should be used as the basis of fact upon all guilty pleas, and the police report used to show the results of the officer's investigation.

In many jurisdictions outside Oregon, night courts are used to keep dockets down, conserve officer time, and to serve as a convenience to the public. This is not feasible in small communities, and even Portland may not have a sufficient number of cases to justify the expense of maintaining a complete court with all of its personnel, but considerable time could be saved if a judge were readily available to persons brought in during the night, without having to hold their cases over until the next day.

C. Recommendations on Traffic Law Enforcement

In conclusion, the Committee recommends the following steps to enhance the position of the law enforcement bodies in their part of the fight for improved motor vehicle safety:

1. Standardize the traffic court system by incorporation into the state judicial system.
2. Minor courts should be made courts of record for all serious traffic charges and report all traffic trials. Prohibit appeals except upon a mistake in the law, and provide that review be on the record only. In the event the lower court is affirmed, the penalties should be automatically reimposed.

3. Provide an adequate number of judges to handle the case load.

4. Increase the number of mandatory court appearances.

5. Give the trial judge discretionary license suspension powers upon first offenses.

6. Provide more severe penalties for chronic traffic offenders.

7. Separate the funding of the courts and police from traffic fine monies.

8. Dovetail the educational portion of judgments (such as traffic school, alcohol rehabilitation center referrals, etc.) with the penalty portion to improve voluntary compliance by the public.

9. Institute a statewide record-keeping system, to be administered by the Motor Vehicles Division. This system should show for each driver in the State a complete record of all violations, accidents, citations, and convictions. Some cities, such as Portland, are already cooperating with the Motor Vehicles Division in the accumulation of such records.

10. Police programs of selective enforcement should be improved and extended, supplemented with a program of public education.

11. Quota and revenue systems of measuring enforcement objectives should be eliminated.

12. As recommended in the section on Alcohol and Medical Factors, enforcement of driver license suspensions should be vastly improved. Through whatever means are available, suspended drivers must be made painfully aware that there are effective, severe penalties for driving while suspended, whether they are involved in an accident or not.

X. STATISTICS AND DATA COLLECTION

A. Scarcity of Usable Data

This report has already noted the scarcity of meaningful data related to accident and fatality causation and the effects of attempts to alleviate motor vehicle accident problems. This scarcity has created a most disturbing problem for your Committee, and it is apparent to members of the Committee that it has also been a major factor in impeding effective remedial programs. The only comprehensive statistics on accident, injury and fatality causation are derived from reports published by state police departments and departments of motor vehicles. Unfortunately, these reports are based on information compiled and tabulated in such a manner as to be of only the most limited use to safety investigators. They almost invariably restrict the analysis of causation to one “prime causative factor”, even though causes are usually multi-faceted, and the prime causative factor selected for reporting is almost bound to be the factor which is most obvious on the basis of casual observation. This is so because the reports are based either on observation of eyewitnesses or attending police officers with neither the time, the equipment, the training nor the direction from their superiors to conduct meaningful investigations.

B. Need for In-Depth Investigations

1. Current Local Effort

Some jurisdictions have established procedures for limited “in-depth” investigations of the most serious accidents. Both the City of Portland and Multnomah County have police officers assigned to the investigation of hit-and-run and fatal motor vehicle accidents. The Committee was impressed with the description of the investigative work performed by these officers, especially at the city level. In all “fatais” in the city, according to testimony, these officers carry out a complete investigation of the accident itself, the condition of the occupants of the vehicles, the itinerary and activities of the drivers and occupants prior to
the accident and any other surrounding circumstances which the officers have reason to believe might have a bearing on the accident. The one significant thing they do not investigate in detail is the motor vehicle itself, to determine whether a vehicle defect was a contributing factor. Although the Committee feels this is a significant lack in the investigative process, the reasons presented for this lack are completely understandable. In the first place, the equipment, personnel and funds for this type of study are not currently available to local law enforcement bodies, and in the second place, the investigations as conducted usually explain to the satisfaction of the officers that the emotional, mental or physical condition of the offending driver or the physical conditions surrounding the accident made the driver a death statistic before the accident ever occurred, and that the accident was very likely to occur under the circumstances, entirely irrespective of the condition of the vehicle. One interesting comment by the investigator for the city was that whenever he received a call to investigate a “fatal” which occurred late at night, he was virtually certain that he would discover intoxication to be a factor.

On the local level, the county coroner is also involved in fatal accident investigations. He prepares reports of autopsies of many of the fatal accident victims. According to statements made to the Committee, these reports many times disclose information bearing on fatality causation, either because they disclose physical impairments existing at the time of the accident, or because they provide insight into the points of contact or the types of contact of the body with different parts of the vehicle. It was reported that the coroner rarely received a request for these reports from law enforcement agencies.

The Committee does not feel it is in a position to criticize any of these agencies responsible for accident investigations. The Committee was convinced, on the basis of the testimony, that these law enforcement agencies are conscientiously performing their duties. This of course, does not mean that the Committee is satisfied with the extent of investigations currently being conducted or with the quality or quantity of usable and readily available information generated by these investigations. It is not satisfied with investigation procedures and feels that significant improvements need to be made.

2. Comparison with Aircraft Accident Investigations

Comparison of motor vehicle accident investigation with the investigation of fatal aircraft accidents is again in order. The federal government expends large sums of money in an effort to determine causes of aircraft accidents. Although the absence of cost breakdowns in the budgets of enforcement agencies does not allow these figures to be compared with expenditures for the investigation of motor vehicle fatalities, it is quite obvious that the level of expenditures per fatality in the two types of investigations are not in the same class. It is almost as if government authorities were of the opinion that aircraft fatalities are catastrophes, but that motor vehicle fatalities are merely slightly unfortunate incidents. The Committee cannot understand why, if it is so vital to clearly identify and correct the causes of fatal aircraft accidents, the identification and correction of the causes of fatal motor vehicle accidents is of such little concern. Strongly as the Committee feels on this matter, it must, as it has done before in this report, remind the reader that its statements are designed more to prompt remedial action than to criticize past failures. The Committee recognizes that, historically, aircraft accident investigations have been a federal responsibility, whereas motor vehicle accident investigation has been a state and local responsibility, so that the relative weights given to fatalities in the two types of accidents has not been a conscious weighting by any one deliberative body.

3. Provisions of Highway Safety Act

The Highway Safety Act contains provisions which may contribute to more complete investigative procedures and more accurate reporting and statistics on accident causation. The Act provides that the Secretary of Transportation may use some of the funds appropriated for the administration of the Act specifically for the “development of improved accident investigation procedures”, and also provides that state-administered systems, to qualify under the Act,
must comply with standards for the “provisions for an effective record system of accidents (including injuries and deaths resulting therefrom)” and “provisions for . . . accident investigations to determine the probable causes of accidents, injuries, and deaths”. Regulations issued so far under these provisions do little more than confirm what most states are already doing, which, as this report has indicated, does not provide information essential to an effective program of highway safety. Among federal grants to Oregon and its political subdivisions, very little has been allocated to the study and improvement of reporting and investigative techniques.

To be truly effective, a motor vehicle safety program must start with a thorough understanding of the true nature of the factors primarily responsible for fatal and injury-producing accidents. Although there is compelling evidence of the significance of alcohol, useful knowledge just about stops there. How important are such factors as emotional instability, low mentality, suicide, vehicle defects, medical problems, deficiency in manual dexterity and a host of other factors variously blamed for motor vehicle accidents? With the paucity of evidence indicating the significance of these factors, is it reasonable to embark on expensive programs of driver education and motor vehicle inspection? Perhaps so — perhaps not — but whether adopted or not, the search for meaningful data on causation must be intensified — to determine what programs will have the greatest promise of success and to audit the effectiveness of programs already established.

C. Recommendations on Statistics and Data Collection

The Committee believes that there are several ways in which investigations, reporting and record-keeping should be improved, as follows:

1. All fatal accidents should be intensively investigated by specially trained personnel. These investigations should be conducted in a manner similar to those currently conducted by the City of Portland but should be more extensive in scope. In addition to an investigation of the emotional, mental and physical condition of the driver and occupants and the physical environment at the time of the accident, the investigation should include detailed study of the automobile to determine whether vehicle defects were a factor.

2. A statistically significant sample of non-fatal accidents, especially those involving personal injury, should be subjected to the same kind of intensive investigation. The possibility of interviewing those involved in these accidents may make the investigation of non-fatales even more meaningful than the investigations of fatales.

3. Results of the investigations described above, along with all other accident reporting data, should be tabulated and reported in such a fashion that useful statistical analyses directed toward the selection of remedial measures will be facilitated. The reporting methods should be uniform throughout the United States so that the largest possible samples will be available for analysis and so that state-to-state comparisons will be possible.

XI. CONCLUSIONS

What has been done to date in the field of traffic safety obviously has only scratched the surface. It is inconceivable that traffic fatalities and injuries cannot sharply be reduced if actions are sufficiently drastic. A study by Stanford Research Institute concludes that the highway death toll could be cut as much as 90 percent if the public were willing to accept the challenge.

If the public resistance to the costs and inconveniences of the programs could be disregarded, the most effective course of action would involve institution of drastic overhaul of all traffic safety programs covered in the scope of this study. Such a program would involve a far more rigid screening and re-examination of driver license applicants, probably patterned closely to examinations for aircraft pilot licenses. It would involve severe penalties for serious chargeable violations, especially in the form of rigidly enforced license suspensions for mean-
ingful periods, or for life in the most serious cases, such as chargeability in an accident involving personal injury when driving while intoxicated. It would involve comprehensive rehabilitation programs for heavy drinkers and other problem drivers. It would involve the establishment of a unified nationwide network of accident, citation and conviction records for all drivers, promptly accessible to all police departments and courts. It would involve rigorous in-depth periodical motor vehicle inspection designed to disclose such latent defects as metal fatigue in critical safety components. It would involve sharp increases in traffic police forces. It would involve comprehensive driver training as a prerequisite for all new driver licenses and retraining for all drivers determined by accident records to be deficient in skill or knowledge. Finally, it would involve federal requirements for safety and design features in new automobiles which would protect the passenger from all but the most violent of impacts.

Irrespective of the contributions to traffic safety of the individual components of the program, no rational person would be likely to question the efficacy of the total package. The driving public would be limited to the well-trained and thoroughly qualified drivers, encased in vehicles thoroughly designed and tested for safety, and well protected when these precautions failed to prevent accidents. Unfortunately, as in all human endeavor, good works must be limited by economic factors and by the impatience of the American public. Although all of these safety programs may some day come to pass, they cannot all logically be proposed today. Your Committee’s most difficult task was to establish at least a rough order of priority, taking into consideration anticipated effect on traffic deaths and injuries, costs and public acceptance. The Committee does not believe it placed undue emphasis on public acceptance, or “political feasibility”. The restraints of public acceptance should be flexible and subject to some influence by groups such as the City Club, and by its members individually. The Committee therefore has made some recommendations which many witnesses before the Committee have said were unrealistic. Although perhaps unrealistic, the Committee felt they were necessary, and it hopes the public will be influenced to accept them, either now or later.

XII. SUMMARY OF RECOMMENDATIONS

Because of the variety of subjects covered in this report, the Committee felt that lists of specific recommendations should be included at the end of each section rather than listing them in detail at this point. The reader should refer to the individual sections of the report for detailed recommendations. (See pages 385, 390, 394, 396, 407, 415 and 417). The following is a summary of the Committee’s recommendations.

1. Because the evidence is very clear that driver incompetence, in one form or another, is responsible for the vast majority of injury- and fatality-producing motor vehicle accidents, incompetent drivers must be removed from the road. The Committee recommends specifically that:

A. Problem drinkers (those with repeated convictions of driving under the influence of liquor, or those who have been called to the attention of the State Health Officer and have been deemed by such officer to be problem drinkers) should have their driver’s licenses suspended (along with other appropriate penalties) until they can provide documented evidence that their problem is under control. To bring more problem drinkers to the attention of the courts, the limit for a “disputable presumption” of driving under the influence of liquor should be lowered from .15 percent to .10 percent blood alcohol content.

B. Drivers with other kinds of physical or mental impairments should be brought to the attention of the Motor Vehicles Division through required reporting by physicians and social agencies concerned with such problems. Although some forms of impairment are currently reportable, the list should be expanded.

C. All drivers should be periodically re-examined for visual acuity, rules of the road, simulated driving ability (including reaction to simulated emer-
gency situations), and, at the discretion of the Motor Vehicles Division, on-the-road driving ability.

D. Although it would not be feasible at the present time, completion of a State-approved driver training program should be required ultimately as a condition of driver licensing for all new drivers.

E. The high school driver education program should be upgraded and expanded, so that it will be readily available to all high school students in the State.

2. Because a program designed to remove incompetents from the road through license suspension and more strict licensing requirements can be effective only with strict enforcement of driver licensing and license suspension laws, procedures should be adopted to absolutely enforce these laws, with severe penalties imposed for violations. This may create the most difficult problems posed by any of the Committee's recommendations, but it cannot be emphasized too strongly that it is absolutely essential to the success of any motor vehicle safety program.

3. Because adequate enforcement depends on impartial, uniform, enlightened, and, where necessary, strict judicial processes, the traffic court system, at all levels, should be incorporated into a uniform State court system. All traffic courts should be made courts of record, appeals should be based only on errors in the law, and lower court penalties should be upheld in appellate courts if lower court decisions are not overturned. Traffic courts should be upgraded and increased in number to handle the case load promptly and adequately.

4. The federal and state governments should sharply increase their scope of in-depth accident investigations, especially of fatal and serious injury-producing accidents, to determine the contribution of various human, vehicle and environmental defects to accident, injury, and fatality frequency. Investigative methods should be uniform throughout the nation so as to create the largest body of usable and comparable data.

5. Although periodic motor vehicle inspection is widely proposed, and although it is currently employed in many states, the Committee recommends against its adoption in the State of Oregon at the present time, unless it becomes clear that serious loss of federal funds will result from the State's failure to adopt such a system.

Respectfully submitted.

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John Donnelly, M.D.
Dale R. Kneeland
Patrick H. Maney, and
Emerson Hoogstraat, Chairman

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APPENDICES

A. SPECIAL RESEARCH PROBLEMS
B. BIBLIOGRAPHY
C. SOURCES OF INFORMATION
D. RESULTS OF DRIVER LICENSING SURVEY
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F. EXCERPT FROM HIGHWAY SAFETY ACT OF 1966
G. THE PROBLEM DRINKER — Traffic Fatality Project

APPENDIX A

SPECIAL RESEARCH PROBLEMS

Any intensive research effort will be hampered by peculiar conditions and problems within the field of the research. The Committee feels that it should outline the special research problems which continually detracted from its efforts, frustrated its deliberations and delayed the progress of its work. These problems may have been more difficult than those faced by many previous City Club research committees, but to this Committee they sometimes appeared to be almost insurmountable.

The members of the Committee feel that discussion of these problems will help to explain the character of the Committee's conclusions and recommendations and the reason that some of the final recommendations are supportable only in terms of subjective logic and not in terms of cold, hard facts.

Some of the most serious research problems were the following:

1. The research project was carried on during a period in which the field of study was undergoing rapid and revolutionary change. At no time in the history of the motor vehicle has there been so much attention given to the problems of motor vehicle safety, and at no time has there been such rapid development — in the legislatures, in Congress, in the automobile industry — designed to lead to safer automobiles, highways and drivers. A research effort is always made easier in a static situation. On the other hand, in a revolutionary situation, it is a nightmare.

2. Research efforts depend on facts and reliable statistics. In the field of accident causation and accident remedy research, with few exceptions, such data are simply not available. One of the first efforts by the Committee was to attempt to determine the major causative factors in death and injury-producing automobile accidents, on the plausible grounds that one must know the causes before he can devise the remedies. This initial effort was almost fruitless. Data developed later in the course of the Committee's study helped to alleviate this deficiency, but it has never been solved completely. Although there is a large volume of statistics available, they generally break down on either one of two grounds. First, the gross statistics of causative factors for all accidents, as published by state police departments or state motor vehicle departments, are based on reports by persons involved or by the reporting police officer and are almost always superficial, based on casual observation. The Committee is not blaming the police officers in making this statement. Officers do not have the time nor the responsibility to make intensive accident causation investigations. Second, although there have been independent studies by government and by private agencies of accident causation in a limited number of accidents, the results have usually been inconclusive because of poor research techniques, inadequate raw data, or data based on superficial analyses.

3. Witnesses appearing before the Committee many times provided conflicting testimony, both regarding accident causation and proposed remedial action. Although some differences of opinion were, of course, expected, it was not anticipated that highly competent specialists with long years of experience in the same field would provide testimony in some instances 180 degrees apart.

4. As the evidence came in, it became more and more apparent that some of the most widely publicized and perennially recommended remedies for the traffic safety problem appeared to offer some of the least fruitful results. Although this evidence may make the Committee's report more meaningful — and perhaps more dramatic — it also made the Committee's work more frustrating.

5. Although not a research problem in the narrow sense of the term, the reconciling or compromising what the Committee feels are the most effective priorities, with those priorities imposed by federal legislation and regulations issued by the Highway Safety Bureau was a most difficult problem which faced the Committee. Strict adherence to the Committee's views would fail to comply with federal guidelines, thereby jeopardizing present and potential federal financial support for the state's highway construction and motor vehicle safety projects. On the other hand, strict adherence to federal guidelines would not, in the Committee's opinion, result in optimum resource expenditures.

Despite these handicaps, the Committee, although frustrated and delayed, gradually developed a feeling and a sense for what it feels are the critical factors in the motor vehicle safety problem.
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APPENDIX B

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APPENDIX C

SOURCES OF INFORMATION

The following is a list of organizations, agencies and individuals who provided books, pamphlets, copies of studies and other information to the Committee. The Committee also received useful correspondence from many other persons, primarily Oregon State legislators.

- American Association of Motor Vehicle Administrators
- Auto Industries Highway Safety Committee, Inc.
- City of Birmingham, Michigan, Municipal Court
- California State Department of Motor Vehicles
- Columbia University, Safety Research and Education Project at Teachers College
- Connecticut State Department of Motor Vehicles
- Cornell Aeronautical Laboratory, Inc.
- The Honorable Edith Green, U. S. House of Representatives
- Harvard University School of Public Health
- The Honorable Mark Hatfield, U. S. Senate; then Governor, State of Oregon
- Illinois State Department of Motor Vehicles
- University of Illinois Highway Traffic Safety Center
- Insurance Institute for Highway Safety
- Michigan State University Highway Traffic Safety Center
- University of Michigan Highway Safety Research Institute
- The Honorable Wayne Morse, then U. S. Senator
- National Academy of Sciences Highway Research Board
- National Education Association, National Commission on Safety Education
- National Safety Council
- The Honorable Maurine Neuberger, then U. S. Senator
- New Jersey Division of Motor Vehicles
- Jeffrey O'Connell, Associate Professor of Law, University of Illinois
- Oregon State Board of Education, Division of Driver Education, Safety & Health
- Oregon State Board of Health, Occupational Health Section
- Oregon State Medical Association, Traffic Safety Committee
- Oregon State Motor Association
- State of Oregon Motor Vehicle Division
- Portland Traffic Safety Commission
- U. S. Department of Commerce, Bureau of Public Roads
- U. S. General Services Administration, Federal Supply Service
APPENDIX D
RESULTS OF DRIVER LICENSING SURVEY

The following questionnaire was mailed to the Motor Vehicle departments of all fifty states. There were thirty-one respondents. Although responses are tallied where possible, it should be understood that the questionnaire was largely subjective, and that many of the responses were qualified in one way or another. Although the questions attempted to elicit attitudes, many answers were in terms of current State law, and, to this extent, the tallies tend to be misleading.

1. Is each individual entitled to a driver's license as a matter of right, or is it a privilege subject to revocation?
   Responses:
   - Right ........................................ 1
   - Privilege ................................... 30

2. If subject to revocation, should it be temporary, or, in some instances permanent, depending on the record and severity of offenses?
   Responses:
   - Could be permanent ...................... 19
   - Temporary only ............................ 6

3. If physical condition is a factor in your regulations, should periodic re-examinations be required and if so, to what extent?
   Responses:
   - Re-examination required ............... 8
   - Re-examination not required ........... 18

4. The cost of strict regulation of driver licenses, including driver ability and physical fitness tests, with periodic re-examinations would be substantial. Should this cost be borne by the individual through increased license fees? If not, how should the cost be paid?
   Responses:
   - Cost borne by driver .................... 25
   - Cost borne by State ..................... 2

5. Are psychological examinations to determine the individual attitudes feasible? (This bears on the comment often heard that some "nice guys" are "demons" when behind the wheel). Is there a way to discover this tendency and then to do something about it as far as licensing is concerned?
   Responses:
   - Not currently feasible ................. 17
   - Feasible .................................... 4
   - Feasible in special cases only .......... 5
APPENDIX E

WITNESSES APPEARING BEFORE THE COMMITTEE

Judge Philip Abraham, Municipal Court, City of Portland
The Honorable Sidney Bazett, Oregon House of Representatives; Chairman, Committee on Transportation
The late William A. Bowes, then Commissioner, City of Portland
William Brady, M.D., Chief Medical Investigator, State of Oregon, then Multnomah County Coroner
W. A. "Pete" Brooks, President, Oregon Automobile Insurance Company
Donald E. Clark, Commissioner, Multnomah County; Assistant Professor of Law Enforcement, Portland State University, then Multnomah County Sheriff
Jack Davis, Investigator of hit-and-run and fatal motor vehicle accidents; Department of Public Safety, Multnomah County
David W. Eccles, then Commissioner, Multnomah County
Howard Eddy, then Manager, Traffic Safety and Education Division, Motor Vehicles Division, State of Oregon
Don Eva, Attorney at Law
Russell Henry, M.D., then Chief Medical Investigator, Board of Health, State of Oregon
Vern Hill, then Director, Motor Vehicles Division, State of Oregon
Holly Holcomb, Superintendent, Department of State Police, State of Oregon
Vinita Howard, Director of Information, Traffic Safety and Education Division, Motor Vehicles Division, State of Oregon
Farley Mogen, Captain, Traffic Division, Department of State Police, State of Oregon
The Honorable F. F. Montgomery, then Speaker of the House of Representatives, State of Oregon
Joseph Nelson, Consultant on Driver Education, Department of Education, State of Oregon
Paul Orris, then Director, Portland Traffic Safety Commission
John Pittenger, Captain, Traffic Division, Bureau of Police, City of Portland
Ard Pratt, Assistant Chief of Operations, Department of Public Safety, Multnomah County
John Rice, Staff Assistant, Board of County Commissioners, Multnomah County
John Scarino, Investigator of hit-and-run and fatal motor vehicle accidents, Bureau of Police, City of Portland
Byron Shields, then Director, Department of Public Safety (Sheriff), Multnomah County
Ralph Sullivan, M.D., then Director, Occupational Health Section, Board of Health, State of Oregon
Edward Syring, Manager, Driver's License Division, Motor Vehicles Division, State of Oregon
The late Carl Wendt, then Director of Transportation, City of Portland
The Honorable Anthony Yturri, Oregon State Senate, then Chairman, Highways Committee
APPENDIX F

EXCERPT FROM HIGHWAY SAFETY ACT OF 1966

TITLE I — HIGHWAY SAFETY

Sec. 101. Title 23, United States Code, is hereby amended by adding at the end thereof a new chapter:

"Chapter 4. — HIGHWAY SAFETY"

§ 401. Authority of the Secretary

The Secretary is authorized and directed to assist and cooperate with other Federal departments and agencies, State and local governments, private industry, and other interested parties, to increase highway safety.

§ 402. Highway safety programs

(a) Each State shall have a highway safety program approved by the Secretary, designed to reduce traffic accidents and deaths, injuries, and property damage resulting therefrom. Such programs shall be in accordance with uniform standards promulgated by the Secretary. Such uniform standards shall be expressed in terms of performance criteria. Such uniform standards shall be promulgated by the Secretary so as to improve driver performance (including, but not limited to, driver education, driver testing to determine proficiency to operate motor vehicles, driver examinations both physical and mental, and driver licensing) and to improve pedestrian performance. In addition such uniform standards shall include, but not be limited to, provisions for an effective record system of accidents (including injuries and deaths resulting therefrom), accident investigations to determine the probable causes of accidents, injuries, and deaths, vehicle registration, operation, and inspection, highway design and maintenance (including lighting, markings, and surface treatment), traffic control, vehicle codes and laws, surveillance of traffic for detection and correction of high or potential high accident locations, and emergency services. Such standards as are applicable to State highway safety programs shall, to the extent determined appropriate by the Secretary, be applicable to federally administered areas where a Federal department or agency controls the highways or supervises traffic operations. The Secretary shall be authorized to amend or waive standards on a temporary basis for the purpose of evaluating new or different highway safety programs instituted on an experimental, pilot, or demonstration basis by one or more States, where the Secretary finds that the public interest would be served by such amendment or waiver.

(b) (1) The Secretary shall not approve any State highway safety program under this section which does not —

(A) provide that the Governor of the State shall be responsible for the administration of the program.

(B) authorize political subdivisions of such State to carry out local highway safety programs within their jurisdictions as a part of the State highway safety program if such local highway safety programs are approved by the Governor and are in accordance with the uniform standards of the Secretary promulgated under this section.

(C) provide that at least 40 per centum of all Federal funds apportioned under this section to such State for any fiscal year will be expended by the political subdivisions of such State in carrying out local highway safety programs authorized in accordance with subparagraph (B) of this paragraph.

(D) provide that the aggregate expenditure of funds of the State and political subdivisions thereof, exclusive of Federal funds, for highway safety programs will be maintained at a level which does not fall below the average level of such expenditures for its last two full fiscal years preceding the date of enactment of this section.

(E) provide for comprehensive driver training programs, including (1) the initiation of a State program for driver education in the school systems or for a significant expansion and improvement of such a program already in existence, to be administered by appropriate school officials under the supervision of the Governor as set forth in subparagraph (A) of this paragraph; (2) the training of qualified school instructors and their certification; (3) appropriate regulation of other driver training schools, including licensing of the schools and certification of their instructors; (4) adult driver training programs, and programs for the retraining of selected drivers; and (5) adequate research, development and procurement of practice driving facilities, simulators, and other similar teaching aids for both school and other driver training use.

(2) The Secretary is authorized to waive the requirement of subparagraph (C) of paragraph (1) of this subsection, in whole or in part, for a fiscal year for any State whenever he determines that there is an insufficient number of local highway safety programs to justify the expenditure in such State of such percentage of Federal funds during such fiscal year.

(c) Funds authorized to be appropriated to carry out this section shall be used to aid the States to conduct the highway safety programs approved in accordance with subsection (a), shall be subject to a deduction not to exceed 5 per centum for the necessary costs of administering the provisions of this section, and the remainder shall be apportioned among the several States. For the fiscal years ending June 30, 1967, June 30, 1968 and June 30, 1969, such funds shall be apportioned 75 per centum on the basis of population and 25 per centum as the Secretary in his administrative discretion may deem appropriate and thereafter such funds shall be apportioned as Congress, by law enacted hereafter, shall provide. On or before January 1, 1969, the Secretary shall report to Congress his recommendations...
with respect to a nondiscretionary formula for apportionment of funds authorized to carry out this section for the fiscal year ending June 30, 1970, and fiscal years thereafter. After December 31, 1968, the Secretary shall not apportion any funds under this subsection to any State which is not implementing a highway safety program approved by the Secretary in accordance with this section. Federal aid highway funds apportioned on or after January 1, 1969 to any State which is not implementing a highway safety program approved by the Secretary in accordance with this section shall be reduced by amounts equal to 10 per centum of the amounts which would otherwise be apportioned to such State under section 104 of this title, until such time as such State is implementing an approved highway safety program. Whenever he determines it to be in the public interest, the Secretary may suspend, for such periods as he deems necessary, the application of the preceding sentence to a State. Any amount which is withheld from apportionment to any State under this section shall be reapportioned to the other States in accordance with the applicable provisions of law.

§ 403. Highway safety research and development.

The Secretary is authorized to use funds appropriated to carry out this section to carry out safety research which he is authorized to conduct by subsection (a) of section 307 of this title. In addition, the Secretary may use the funds appropriated to carry out this section, either independently or in cooperation with other Federal departments or agencies, for (1) grants to State or local agencies, institutions, and individuals for training or education of highway safety personnel, (2) research fellowships in highway safety, (3) development of improved accident investigation procedures, (4) emergency service plans, (5) demonstration projects, and (6) related activities which are deemed by the Secretary to be necessary to carry out the purposes of this section.
THE OREGON PROBLEM DRINKER — TRAFFIC FATALITY PROJECT

On June 17, 1970, the Mental Health Division of the State of Oregon, through the Alcohol and Drug Section contracted with the U.S. Department of Transportation, National Highway Safety Bureau to undertake a three-year, $2.15 million demonstration project directed to the problems of alcohol abuse and driving safety.

The main thrust of the Project is directed toward the problem drinker who drives after abusive drinking.

The Project is unique in that it will be implemented in two communities, Portland and Eugene. This approach will provide the additional opportunity of evaluating the effectiveness of the various countermeasures in two widely different settings.

OBJECTIVES

The objectives of the Project will be to significantly reduce the number of alcohol-related traffic fatalities and serious injury accidents during the next three years, and to demonstrate various project countermeasures and their relative effectiveness toward decreasing the alcohol-related traffic fatality toll on our highways.

COUNTERMEASURES

A variety of countermeasures will be put into effect. These countermeasures may be classified as portions of three main thrusts of the Project. First, identification of drivers who drink abusively and then drive. Second, decision on the nature of the alcohol problem of the identified drinking driver. Third, action responses from the community to control, rehabilitate, and assist these drivers as well as educate the general public to the relationships between drinking and driving.

The specific aspects of the program are detailed as follows from each of the three main components of the Project:

A. Identification of Problem Drinkers Who Drive

The Mental Health Division will establish a central file which will aid in identifying the extent and severity of drinking problems of arrested drivers (inputs will be collected from local law enforcement agencies, the Oregon State Police, the Motor Vehicles Division and others). A staff of medical expert witnesses will be trained and retained for use by the prosecution in jury trials of DUlL cases.

The Portland Municipal Police will increase by 100 per cent its traffic enforcement surveillance. This increase will occur during critical hours of the week at locations which show high accident vulnerability characteristics.

The Motor Vehicles Division will develop a predictive scale for identifying individuals as problem drinkers prior to their initial arrest for drunk driving. The scale’s predictive accuracy will be validated against the diagnostic records generated by the Project. The Motor Vehicles Division will also revise the contents of the drivers' manual and written drivers' tests to include questions on the significance of alcohol on driver performance and the role of the abusive drinking in the traffic safety picture.

B. Decision Processes Regarding the Drinking Driver

The Alcohol and Drug Section of the Mental Health Division will conduct comprehensive clinical pre-sentencing investigations of drivers convicted of drunk driving. Individuals will be referred to one of the available programs based upon this medical-psychological-social evaluation.

The Motor Vehicles Division will implement a routine complete driver re-examination for any driver convicted of a second or subsequent DUlL prior to the reinstatement of his driver's license (follows a one-year suspension). The use of medical review boards at the time of original application as well as reinstatements is still being examined.

The Municipal Court will expand its courtroom facilities to accommodate the anticipated larger amounts of DUlL arrests.

C. Action Programs

Within the Mental Health Division, referral cases will be assigned to group dynamics sessions, anti-buse treatment, or other therapeutic programs. Surveillance of individuals will be maintained to evaluate their response and dedication to their program.

Community Alcohol Educations will be employed in each area to organize a community advisory board and to unite the communities behind the Project and its countermeasures.

The Motor Vehicles Division will give special attention to the problem drinker in its expanded Driver Improvements Program. It will also prepare and include public information flyers (regarding blood alcohol level and alcohol driving statistics) in operator license renewals and vehicle registration notices.

The Municipal Court will expand its court school program to accommodate a larger proportion of DUlL convictions in the program. The program will be modified to meet special needs of the problem drinker.

The Teaching Research Division of the Oregon State System of Higher Education will prepare a training program on the significance of the alcohol-driving relationship. This program will be included in the driver education courses at the tenth grade level.

A private advertising agency will be retained to develop and handle a public information campaign including seminars for public officials, opinion surveys, and educational advertising.

Evaluation of Project progress will be organized for both the full-spectrum countermeasures program as well as the specific countermeasures wherever possible. The Oregon Research Institute will provide the evaluation services needed for the Project.
APPENDIX H

MEDICAL REQUIREMENTS FOR RECOMMENDED APPROVAL OF APPLICATION TO OPERATE A MOTOR VEHICLE FOR THOSE REFERRED FOR CERTIFICATION BY COMPETENT MEDICAL AUTHORITY

1. Epileptics, suspected epileptics or persons with similar disorders subject to lapses of consciousness or control:
   a. Favorable recommendation of qualified physician.
   b. Witnessed statement from individual substantiating freedom from attack of unconsciousness during waking hours for a period of one year.
   c. After favorable recommendation has been made:
      (1) Re-examination by a physician at six-month intervals until patient has been free of attacks for two years.
      (2) Following two years of freedom, re-examination at yearly intervals until he has been free of attacks for five years.
      (3) After five years of freedom, re-examination at two-year intervals.
   d. If the alteration of anti-convulsant medication by his physician in a well controlled seizure case results in a seizure recurrence, this should not be cause for reapplying the regular standard of 12 months freedom from seizure with suspension of license to drive an automotive vehicle.
   e. The following criteria for termination of periodic follow-up as a condition of licensing in seizure disorder cases shall be employed:
      (1) When such a case, regardless of type, has been off anti-convulsant treatment for a period of five consecutive years without any seizures, irrespective of electroencephalographic findings.
      (2) When such a case has been off anti-convulsant medication for at least two years without any recurrence of seizures and when the E.E.G. in such case has reverted from abnormal to normal.

2. Strokes, cerebral anoxia or hypoxia and other related conditions causing loss of consciousness or physical control:
   a. Recommendation of qualified physician that, on the basis of adequate control, a license be granted.
   b. Witnessed statement from individual substantiating freedom from loss of consciousness or physical control for a period of at least six months.

3. Diabetics:
   a. Recommendation of qualified physician that, on basis of adequate control, a license be granted.
   b. Witnessed statement from individual substantiating freedom from loss of consciousness or physical control for a period of at least six months.
   c. Those controlled by diet alone—no follow-up would be necessary regarding their driver's license.
   d. Those on diet and oral hypoglycemic agents should probably be checked every two or three years.
   e. Those on diet and Insulin should be checked every six months, twelve months, or twenty-four months; depending on the recommendation of the physician.

4. Cardiacs, hypertensives and other related conditions:
   b. Practical driving test.

5. Other physical handicaps:
   b. Practical driving test.

These standards have been recommended by the Traffic Safety Committee of the Oregon Medical Association and approved by the Oregon State Board of Health.