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Enlisting Health Departments in Highway Safety Programs

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16. Abstract <p>This report documents the manner and degree of health agency involvement in motor vehicle injury prevention activities. It describes not only the existing cooperative activities between state highway safety and health agencies, but also the perceived barriers which must be overcome to promote increased interagency cooperation. This information is presented to encourage the development and expansion of these important cooperative efforts.</p> <p>Information was obtained by interviewing state personnel from 36 states. Highway safety personnel were interviewed in 27 states with nine states chosen for each of the following three content areas: (1) occupant restraints, (2) motorcycle helmet laws and emergency medical services, and (3) alcohol program activities and 55 mile per hour speed limit laws. Health department personnel in nine states were interviewed in regard to their agency's injury prevention programs. In addition, one state in each group was selected for an on site, in-depth study of its activities.</p> <p>Highway safety and health department cooperative efforts are compiled and described for each topic along with a brief summary of historical development in that program area. The characteristics of interagency relationships, including cooperative efforts, perceived barriers to cooperation, health agency priorities, and networks are examined.</p>					
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Background

Methods for reducing the vast numbers of motor vehicle related deaths and injuries in the United States have been identified and developed. It is known that certain injury control techniques, such as the use of child restraints, seat belts and motorcycle helmets can be effective if they are implemented. But implementation of these techniques has been slow and has not been uniform. The implementation of injury controlling techniques can be done on a state level, involving the cooperation and effort of many state governmental units. The State Highway Safety Agency, established in each State by the Governor in accordance with the Highway Safety Act (23 U.S.C. 402), is authorized to obtain information about the highway safety programs administered by state and local agencies (23 C.F.R. S 1251.1). This requirement that each state have one agency responsible for the oversight of its highway safety programs reflects the fact that diverse agencies within a state can contribute to the efforts to reduce motor vehicle injuries.

Traditionally, health agencies have not been extensively involved in state highway safety programs, in spite of the enormous public health consequences of motor vehicle related injuries. Often health departments have regarded motor vehicle injuries as outside their purview. As a result, even cost-free, non-programmatic opportunities such as supporting motorcycle helmet laws are sometimes untapped, and other potentially fruitful collaborative opportunities are overlooked.

Potentially, health departments have much to contribute. For example, clinics and visiting nurse programs provide close contacts with citizens and legislators that are not available to most highway safety agencies. Child-oriented programs within health departments provide a natural setting

for incorporating such efforts as child restraint loaner and education programs. Health department information networks include other members of the health community. Health agencies collect or have available pertinent data and their staff often includes experts who can measure the prevalence of injuries, evaluate time trends, and analyze morbidity and mortality data. Their budgets and programs are adversely influenced by expenditures of limited resources for preventable injuries.

Since the goals of state highway safety programs are clearly within the mission of state health agencies, it is appropriate for the health agencies to assist in these programs. In many states there is already some health department involvement, but it may be limited to certain areas such as alcohol programs and certification of Emergency Medical Services (EMS) personnel. Recently, some health agencies have participated in efforts to retain motorcycle helmet laws or enact child restraint laws.

In general, the details of these efforts have not been available outside the states and agencies that have been directly involved. This report was compiled from the wealth of information so generously provided by highway safety and health agency personnel in many states. The report seeks to document the manner and degree of health agency involvement in motor vehicle injury prevention activities.

This report describes not only the existing cooperative activities between state highway safety and health agencies, but also the perceived barriers to such cooperation. The information is presented to encourage the development and expansion of these important cooperative efforts.

Methodology

The project was designed to determine the level of health department involvement in highway safety activities. Included in the study was an exploration of highway safety priorities in the two types of agencies, as well as an examination of the barriers which must be overcome to promote increased interagency cooperation.

Information was obtained by interviewing state personnel from 36 states. Four content areas of inquiry were determined, and nine states were chosen for each of the four content areas in order to capture a wide variety of efforts and ideas. Within each content area, states were chosen to achieve geographic diversity.

Of the four content groups, initial interviews for group 1 through 3 were made of highway safety personnel. The fourth group was approached through health department personnel. In this way, the perspectives of both types of agency could be obtained. The subject matters of inquiry for each of the groups were as follows:

Group One - Nine states were chosen which had either enacted or introduced child passenger protection legislation. Questions dealt with information on seat belt and child restraint promotional activities, as well as on legislative activities.

Group Two - Nine states with motorcycle helmet laws in force requiring helmet use in all age groups, including those states which may have re-enacted such laws, were chosen. Questions dealt with helmet law activities and also with emergency medical services systems.

Group Three - Questions for these nine states focused on alcohol and drunk driving prevention activities, and activity on the fifty-five mile per hour speed limit law.

Group Four - Health officers in nine states were contacted in regard to their agencies' injury control programs or activities which either presently focus on highway safety problems or could be expanded to do so.

Data were collected primarily through telephone interviews, conducted by the investigators with at least two agency staff members interviewed per state.

Comments were not solicited on topics outside of the focus of the group in which a particular state was classified, but if volunteered, such information was recorded.

Questions asked of the individuals who participated in this study were open-ended, and were structured to reveal highway safety - health department interactions on legislation, administration, communication, education, and data gathering in the highway safety content areas which were the focus of the particular group.

Following the telephone surveying, one state in each group was selected for an on site, in-depth study of its activities to more fully explore the relationship between the agencies and to seek details about specific cooperative efforts.

I. EXISTING COOPERATIVE EFFORTS

In this section, highway safety and health department cooperative efforts have been compiled and briefly outlined. Efforts included in this section were provided by individuals contacted in the state agencies. The information presented is illustrative and by no means exhaustive.

Activities are grouped according to the highway safety topic that they address: occupant restraints, motorcycle helmet laws, emergency medical services, drunk driving laws and programs, and the fifty-five mile per hour speed limit laws. Each topic is prefaced by a summary of histor-

ical development in that program area. The final section describes health department injury prevention efforts which are not exclusively related to highway safety.

Since the activities are only briefly described, it is hoped that the reader who is interested in a specific program or effort will refer to the agencies in the state mentioned for additional details.

A. Occupant Restraint Laws and Programs

Preface

The toll of motor vehicle crash injuries on the nation's health and economy is enormous. One of several means of reducing the severity of injuries sustained by occupants of motor vehicles is to restrain them with seat belts or child restraint devices. Observational surveys of occupant restraint usage, however, indicate that seat belts are used by only about one in ten drivers.⁽²⁷⁾ Seat belt use among high risk groups, such as teenagers and young children, is also low. In a 1974 survey of cars leaving amusement areas and shopping centers in three states, 22% of the drivers of cars containing children under ten years of age were using seat belts while only 7% of the children in those cars were protected by seat belts or child restraint devices.⁽³⁸⁾

Restraint of infants and children traveling in motor vehicles is of particular importance because half of all deaths in the United States of children between the ages of one and fourteen result from injuries. Motor vehicle occupant deaths comprise the largest group of fatal injuries, with 2,000 annually for children less than fifteen years old. Among young children, infants less than 6 months have the highest occupant death rate.⁽³⁾

It is estimated that safely constructed infant and child restraint devices can reduce the probability of death or serious injury by more than 50%. For children who can sit unaided, seat belts have a similar effect.

Educational programs have often attempted to increase the protection of occupants of motor vehicles. While public education concerning general seat belt usage for adults has not been shown to be effective, in-hospital programs for new mothers and face-to-face communication between pediatricians and parents may increase correct usage of child restraint devices. (38)

A second countermeasure activity involves the establishment of distribution or loan programs. Loaner programs are effective in making child restraint devices available to people who would otherwise not be able to afford them. (12)

Another countermeasure for increasing the protection of occupants is through legislation requiring restraint usage. Research indicates that where such laws have been vigorously enforced in other countries, observed belt use levels have risen substantially while crash injuries have declined. (33) Thus far, however, attempts to secure enactment of belt use laws in the United States have been unsuccessful, and there is public antipathy toward such proposed laws as measured in opinion polls. (14)

Tennessee was the first state to pass a mandatory child restraint law, which became effective January 1, 1978. Presently, about twenty states have some form of child restraint usage law that applies to transportation of young children in motor vehicles.

Although mandatory use laws increase the percentage of restrained child occupants, they do not guarantee adequate reductions in deaths and injuries of child occupants. Significant advances in the protection of motor vehicle occupants will more likely be achieved through "passive"

protection. These include padded instrument panels, airbags and other energy-absorbing structures both inside and outside the occupant compartment which do not require special action by any individual. (3)

Activity Summary

The highway safety agencies listed a number of priorities concerning occupant restraint issues. These included initiatives to increase seat belt and child restraint usage and promote passage of mandatory restraint use laws. Other priorities were increasing the number of child restraint loaner programs and improving the reporting of restraint usage on accident report forms.

The highway safety agencies felt that the health department could assist them by supporting existing highway safety activity and by assisting with the establishment of new programs. In addition, the health departments could participate in efforts to pass seat belt and child restraint use laws.

Highway safety agencies reported that their priorities do not always correspond to the priorities of the health departments, and thus cooperation at the state level has not been as strong as it could be. Most involvement has been with the local health departments, especially with child restraint loaner programs. North Carolina reported that the local health departments have set up loaner programs with child restraints that they have received from the highway safety agency. The local health departments receive training in the use of child restraints and the running of a loaner program. In addition, the N.C. Academy of Public Health has started a loaner program for state employees. Work is also being done to provide child restraint devices for day care centers. New Mexico's highway safety agency has contracted with a private, non-profit agency to set up loaner programs and to conduct an observational study of restraint use.

Some highway safety agencies stated that they received support from state health departments in the passage of child restraint laws. For example, representatives of Tennessee's health department testified at the hearings, and Dr. Robert Sanders of the Rutherford County Health Department lobbied extensively on behalf of the bill that resulted in the nation's first child restraint law.⁽³⁵⁾ In Tennessee, the latest observational study reported a use rate of 33%.

Illinois reported that their highway safety coordinator is responsible for promoting the child passenger safety issue and for developing a network of governmental groups to ultimately lead to the passage of a child restraint bill.

Michigan's highway safety agency worked with the health departments in attempting to get an adult seat belt law passed. A newspaper survey in Michigan showed that 46% favor seat belt usage. A study sponsored by the Office of Highway Safety Planning is now being conducted by the University of Michigan Traffic Research Institute (UMTRI, formerly HSRI), on the non-use of seat belts.

Another area of cooperation between the highway agencies and state health departments has been with public information and education. Some health departments are conducting child passenger education programs in the maternity and pediatric sections of hospitals to make child restraint information available to parents, doctors and nurses, and to demonstrate the use of child restraint devices. Health departments are also disseminating brochures through pediatricians, obstetricians, and nurses and devising training films for employers. In North Carolina, local health departments are using the Governor's Highway Safety Program - Highway Safety Research Center materials concerning child restraints, including brochures, fact

sheets, and posters, and are sending their staff to attend occupant restraint seminars.

With the aid of federal funding, the California Department of Highway Safety contracted with the UCLA School of Public Health to establish a California Center for Child Passenger Safety (CCCPS). The CCCPS has served as the center of a statewide network. To facilitate the dissemination of child restraint information around the state, the state was divided into ten regions. Each region has a coordinator who oversees child passenger safety activities in his or her locale. Regional coordinators are highly motivated volunteers who have been very effective in linking agencies, decision makers and community groups in their area.

California plans to disseminate child passenger information at the state's migrant camps, using brochures that were developed from health department funds for an English version and from highway safety funds for a Spanish version. In addition, California's Center for Health Statistics supplies hospital data concerning the causes and severity of injuries. A quarterly newsletter keeps participating individuals and groups informed as to state and regional developments. This network, combined with the recent passage in California of a mandatory child restraint law, should provide a strong foundation for continued progress in the area of occupant restraints.

The Oakland County Health Department in Michigan became involved with occupant restraints after seeing an Office of Highway Safety Planning (OHSP) exhibit on child restraints. The state health department is now encouraging other local health departments to coordinate child passenger activities, to start rental programs and to conduct public information and education campaigns. They are providing educational materials in local

health clinics to the parents of young children. The health department is also assisting the highway safety agency in its statewide effort to increase seat belt usage by sitting on the Occupant Protection Committee which meets monthly.

The highway safety agency in Illinois is setting up a seat belt use program. They were successful in getting the health department to include a statement about child passenger safety in the state plan and are implementing seat belt use requirements for 4000 state vehicles. The aim is to implement a mandatory in-house policy in which belt use is a condition of employment. This is to be enforced through a disciplinary code. In this way, state employees will set an example for other workers in the state.

The health departments also reported cooperation with highway safety agencies on various occupant restraint programs. Oregon reported that they were unsuccessful in their campaign to pass mandatory child restraint device legislation and that while they function in a supportive role, the county health departments run the child restraint loaner programs.

Massachusetts, on the other hand, reported that the Department of Health lobbied, testified and wrote a letter of support for a law requiring child restraint device use, which was passed. The health department provides instruction in the use of child restraint devices and seat belts to health professionals, schools, day care centers, and consumers. They also provide educational materials to teachers. An advisory board for the child restraint program meets quarterly. The health department has conducted observational studies of child restraint use and will be conducting more studies to evaluate the impact of the new law after it has been in effect for one year.

Rhode Island has had a child restraint law in effect for over two years. The University of Rhode Island recently observed a restraint use rate of 48% in a study run by the Rhode Island Department of Health.

In North Carolina crashes, the percentage of children under age two who are restrained has increased by 45-50% since their restraint law has been in effect. Although there is no fine for failure to comply with the law, 400 warning tickets per month are being issued by the State Highway Patrol. (42)

A Child Passenger Safety Association (CPSA) has been established in Indiana which includes health department representation. The goals of this association are to aid the passage of mandatory child restraint device legislation, to set up loaner programs and to provide public education and information on child restraint devices to parents. The Indiana CPSA testified in favor of a law requiring education of the public on child restraint device use, which was passed, and a second part mandating use, which has not as yet been passed.

Prenatal educators are teaching basic information on car seats, through a teaching packet designed for their use. In addition, a grant from the Maternal Child Health Division of the State Health Department was provided to the Indiana Hospital Association to organize loaner programs in hospitals and through other community groups. In the area of seat belts, the department conducted a random digit dial behavioral prevalence survey in which they asked about seat belt usage. Results indicated that usage was very low.

The Alabama state health department also reported that they had helped to obtain passage of a law mandating the use of child restraints. They organized networks of volunteers in the community to take on child

passenger safety promotional activities. In many areas of the state they encouraged groups to set up loaner programs. Although they do not provide any car seats, the health department convinced two hospitals to set up loaner programs, committing \$10,000 out of their own budgets to buy car seats. They targeted key people in the community and involved them in the child restraint device program, publicized the need to use approved child restraint devices, made shopping guides available to people in different communities and provided films and materials to nurses for teaching parents. An observation survey of child restraint device use was conducted in four metropolitan areas. After six months, results indicated that proper usage increased from 6 to 8% while improper usage increased from 10 to 12%. This will be measured again after the new law goes into effect.

The North Dakota State Health Department reported a joint venture of its Division of Maternal and Child Health with the Division of Traffic Safety, to set up child safety seat loaner programs and to provide public information and education on their need and use. Their goal is to have a loaner program accessible to all residents within a 40 mile radius of their homes.

The highway safety agencies suggested that in order to organize successful occupant restraint programs, it is important to build a network of support that involves the prominent health care groups. It is also important to approach other divisions within the transportation agency (for example, the Motor Vehicle Administration) with similar priorities. The media should be kept informed of the issue in order to bring the information to the community. It was felt that local programs should involve local people since they may be more committed to the community and the programs would be more likely to remain in place, if funds were withdrawn.

B. Motorcycle Helmet Laws

Preface

The popularity of motorcycles has grown dramatically in this country since the early 1960's. With this growth has come an increase in deaths and injuries among motorcyclists, as well as evidence that head injuries are the leading cause of death in motorcycle crashes and that motorcycle helmets are an effective means of reducing the incidence and severity of head injuries. (20)

The Highway Safety Act of 1966 authorized the Federal Government to set minimum standards for state highway safety programs and to withhold 10 percent of federal highway construction funds and all federal highway safety funds from any state failing to comply with these standards. The Secretary of Commerce then issued thirteen highway safety standards in 1967, one of which was for motorcycle safety. One part of this standard required the states to enact mandatory motorcycle helmet use laws.

Before 1967, only three states had motorcycle helmet use laws which applied to all age groups. By 1975, all but three states required all motorcycle riders to wear helmets. Research undertaken in 1975 indicated that virtually all motorcyclists wore helmets in states having helmet use laws, whereas many did not in states without helmet laws, and that the laws were effective in reducing fatal injuries to motorcyclists. (40)

Despite such evidence, Congress passed the Highway Safety Act of 1976. Section 208 (A) of the Act removed the secretary's authority to impose financial sanctions on any state that failed to adopt a helmet law. As a result of this action, by 1979, 27 states had either fully repealed their helmet laws or revised them so that only motorcyclists under 18 were required to wear helmets. During the same period, the number of deaths

from motorcycle accidents jumped from 3,312 in 1976 to 4,850 in 1979, an increase of 46%.⁽²⁰⁾

Congress then passed a requirement in Section 210 of the Surface Transportation Assistance Act of 1978 that the secretary study the effects of Section 208 of the Highway Safety Act of 1976 on helmet use, helmet use laws and the consequences of failure to wear helmets. Results of these studies indicated that a vast majority of the public, including motorcyclists, believe that helmets are effective. The majority of the public supports helmet laws; motorcyclists are about evenly divided. Observed helmet use was found to be between 95-100 percent in states with helmet laws, while a low use rate, generally 50-60 percent, was found in states where helmet use is only required of minors, or not at all. While voluntary helmet use may increase through educational programs, the high levels of helmet use found in helmet law states have never been achieved through this approach.⁽⁴⁾⁽²⁰⁾

With regard to the effectiveness of helmets, no evidence exists to support claims that helmets cause neck injuries or cause accidents by impairing vision. Studies indicate that unhelmeted riders are twice as likely as helmeted riders to incur a head injury of any type and three times as likely to incur a fatal head injury. In addition, their injuries require longer hospitalization, resulting in significantly higher medical costs which are often paid by society as a whole. With regard to Section 208 of the Highway Safety Act of 1976, it was concluded that it had a direct effect in the repeal or weakening of helmet laws in 27 states which, in turn, resulted in substantially lower rates of helmet use and increased rates of serious and fatal head injury. It was concluded that "state helmet use legislation is in the national interest because of the social and economic harm they (helmets) avert."⁽²⁰⁾

Activity Summary

The highway safety agencies reported that their major priorities in the area of motorcycle helmets were to keep the law requiring motorcyclists of all ages to wear protective head gear and to engage the public in support of such a law. Pennsylvania's transportation agency conducted a public opinion survey some years ago, with a random sample of motorcycle operators which showed that 60% of the motorcycle operators favored a helmet law.⁽⁴⁾ Vermont conducted a poll which showed that two-thirds of those surveyed supported a helmet law.

Since highway deaths and injuries are a major health issue, most highway safety agencies contacted felt that the health department should support and be involved in their motorcycle helmet law efforts. A few states did not try to involve the health department because they felt that they did not need their assistance, or because they did not think to involve them.

One frequently mentioned area of cooperation between the highway safety and health agencies was in the provision of pertinent data, specifically on health care costs of caring for people injured in motorcycle crashes. Florida reported that they were using the health department's Spinal Cord Injury Registry which provides health care cost information on motorcycle head injuries and rehabilitation. Using their state's accident data, they were able to project statewide health care costs. This information was then used in updating reports to the legislature. For example, they found that the public was the source of payment for 40% of the costs for these very costly spinal cord injuries.⁽⁴¹⁾

Florida suggested that it would be helpful if there was an information and processing system specifically for tracking head injuries by tapping

into routine information systems. This would provide the highway safety agencies with a more complete picture of the costs of motorcycle injuries.

Pennsylvania's transportation agency, using data that was gathered by the health department, prepared a report estimating the injuries that would occur if their state repealed its motorcycle helmet law. Projections were based on the experiences of other states. This report was widely disseminated and publicized through press releases. The health department also helped by publicizing its position and testifying before the legislature.

In addition, other states felt that the health department could use its contacts to provide access to medical doctors who work in trauma centers, who in turn could provide the legislature with testimony concerning head injuries. In Florida, the highway safety department has ready access to the health department's mailing lists. In addition, they received a pledge from the Assistant Secretary of Health to cooperate with them in this endeavor.

One example of effective cooperation among many agencies and individuals is Louisiana's successful effort to reinstate a law requiring motorcyclists of all ages to wear protective head gear.

The Safety Council of Greater Baton Rouge, which coordinated the effort, sent letters and fact sheets to both the full House and Senate soon after the legislative session began. News releases were distributed statewide to all media. At the legislative hearing, testimony on the costs of motorcycle injuries and the effectiveness of helmets was given by various professionals, and two crash-involved motorcyclists testified that their lives had been saved by helmets. A state university professor reported the results of a voter attitude survey conducted for the Safety

Council, which showed that 88% of the state's voters - the "silent majority" - favored mandatory helmets for all ages. The result, despite strong initial opposition, was a favorable vote from the committee, and later from the House and Senate.⁽⁸⁾

C. Emergency Medical Services

Preface

In 1960, at the federal level, Emergency Medical Services (EMS) as a program was housed in the Department of Health, Education and Welfare, Bureau of State Services, Division of Accident Prevention, with some of its activity placed in the Division of Chronic Diseases, Bureau of State Services.⁽¹⁷⁾ In 1967, the newly established Department of Transportation took over the major federal responsibility for emergency medical services and for motor vehicle injury prevention.

Emphasis and federal activity is now moving toward a nationally coordinated, comprehensive emergency medical service system that would be accessible to everyone in the country. In 1971, congressional hearings were held in support of comprehensive emergency medical service legislation. As a result, the Emergency Medical Service Systems (EMSS) Act of 1973 was passed.⁽⁶⁾ This law placed the responsibility back with the Secretary of the Department of Health, Education and Welfare to designate the Division of Emergency Medical Services (DEMS) as the lead agency to administer the program, provide technical assistance and grant awards to develop regional EMS systems. Emergency medical services funded with federal dollars were mandated by Congress to address, plan and implement a "systems approach" to the provision of services. Certain requirements were identified for the establishment of comprehensive programs.

Passage of this law and its subsequent amendment in 1976 provided both the mechanism and the funds for communities to develop emergency medical services. "The EMS act, as amended, mandated that a national initiative of regional EMS systems develop sound programs of medical care as a basic and integral part of the overall health care system in their respective areas."⁽⁶⁾ The goals of this program have been identified as 1) establishing EMS as a national health priority; 2) promoting the EMS lead agency concept within the health care establishment; 3) enlisting individual and organized professional involvement in the creation of regional EMS systems; and 4) gaining public and governmental support for long-term maintenance of EMS programs throughout the United States.⁽⁶⁾

While the development of an EMS system has generally begun with the upgrading of existing resources, the National Highway Safety Advisory Committee has defined an EMS system as having: "1) a communication system for public access (a universal 911 system); 2) emergency medical technicians (EMTs) with appropriate training in resuscitation, stabilization, and transport of victims; 3) a medically supervised communication system which insures communication between hospital-based (emergency room) personnel and on-site EMTs; 4) an established career ladder that will offer motivation and retention of personnel."⁽¹⁹⁾

"In addition, a quality EMS program would provide public education training in First Responder Courses. It would also offer a contact with a state lead agency to provide a coordinated effort for statewide EMS programs".⁽¹⁹⁾

Activity Summary

The highway safety agencies reported that their priorities in the area of Emergency Medical Services (EMS) revolved around obtaining funds to help keep the system in place and operating effectively. Other priorities

include developing baseline systems for analysis of EMS data; increasing training and communication capabilities; conducting public information campaigns involving the police, volunteers, and private industry; maintaining and replacing emergency equipment; and promoting legislation empowering the state agency to certify equipment and practitioners.

Some highway safety agencies stressed the importance of maintaining a close relationship with other agencies responsible for providing EMS. It was felt that emergency medical services would be most successful if they were well-coordinated on a statewide basis, with a cohesive statewide plan and good leadership to implement the plan.

In general, the highway safety agencies reported that they cooperated with the state health department in training, acquiring equipment, passing legislation and sharing data. This relationship was generally reported as coming about through Federal 402 funding and as being close and constructive.

In the area of training, many states reported that the health department provides training for EMT's, paramedics and first responders. In Missouri, the two agencies developed criteria and priorities for these courses together.

Many of the states' EMS projects were described as originally oriented toward purchasing equipment such as ambulances, with the health department in charge of determining the need for, distributing and maintaining the ambulances. The emphasis later shifted to communication systems and training with the responsibility for maintaining and replacing EMS equipment resting with the counties of each state.

The state health departments collect a variety of data which the highway safety agencies find useful. These include: trip tickets including response time, nature of trauma, etc.; accident report forms; hospital

data; and uniform EMS reporting forms, where they are in use.

In Pennsylvania, the transportation and health agencies were meeting to develop a plan to link data files in order to set up an EMS data system. In addition, the Pennsylvania State Health Plan includes a large section on traffic fatalities which was developed with input from the transportation agency. (29) Vermont has established a Fatal Accident Review Committee (FARC) to determine the "best answer to the cause of accidents." South Carolina reported that a statewide ambulance run form which contains data on type of injury, apparent involvement of alcohol and use of occupant restraints, is provided by the health department.

Administratively, EMS has generally involved the health department since its inception as a program. In Pennsylvania, the Division of Emergency Health Services located within the health department is primarily responsible for EMS work, with the highway safety agency responsible for overseeing the funds and coordinating the effort. This Division was reported to be a dedicated supporter of state EMS legislation. Also, the Division has helped the transportation agency to coordinate ambulance and laboratory equipment standards. The transportation agency, on the other hand, helped the health department obtain a federal contract to evaluate their emergency medical service program and estimate costs. A report was then written and issued which played an important role in maintaining state funding for EMS.

In South Carolina, an EMS Advisory Council was established by law; it includes representatives from both highway safety and health departments. The Council meets every two months and discusses problems in an open forum. This close-knit group of approximately twenty-five persons helps the EMS system operate and gives it support from a wide cross-section of groups.

The highway safety agencies felt that cooperation with the state health department in the area of emergency medical services should result in a solid statewide EMS system with comprehensive records and licensing services. In addition, it should result in strong enabling legislation, shared data and coordination, assistance on special projects, support for highway safety goals and objectives, and in securing funding to see that these objectives are realized.

They felt that the health departments could provide additional assistance by increasing paramedic training, increasing communication and updating their data systems by adding EMS questions on their uniform reporting forms. Where appropriate, it was hoped that uniform reporting forms could be adopted.

The health departments also reported cooperation with highway safety agencies on various emergency medical services activities. In the area of emergency medical services, various administrative arrangements were described by the health departments. Indiana reported that emergency medical services is a separate state agency with only a liaison person in the health department. Oregon presently has an emergency medical services section with a staff of five in the health department. However, legislation is being considered which would transfer all training and certification responsibilities to the medical examiners, with only inspections and regulation being handled by the health department. In addition, due to budget cuts, the hospital data form was recently redesigned and a standardized pre-hospital trip ticket was eliminated.

The Iowa State Health Department, on the other hand, reported that the Department of Transportation provides money for the health department's emergency medical services section. This grant supports: travel

for the advanced emergency medical care council which is examining advanced pre-hospital care; educational workshops to train local ambulance workers to use the uniform reporting system; training and certification which is done by the Board of Medical Examiners; emergency service programs and certification procedures; and the development and printing of a uniform trip ticket which is analyzed by computer.

In North Dakota, the Department of Transportation is also responsible for funding the emergency medical services office in the Health Department. This program is regionalized and includes coordination of EMT training. Instructors work on a voluntary basis. There are now 50 rural volunteer ambulance services and one paramedic squad. The EMS office also produces an annual advanced life support report on 7000-8000 cases. This is done through a computerized system utilizing uniform trip reports. Although emergency equipment is no longer purchased by the health department, at one time they purchased rescue equipment for rural areas.

The Alabama State Health Department has an emergency services division which is funded by the highway safety agency. There is a state Emergency Medical Services Advisory Board as well as regional boards. The Emergency Services Division, which has six emergency medical services regions throughout the state, promulgates all rules and regulations regarding emergency medical services and has certification responsibilities for equipment and training. In addition, the health department conducts blood alcohol and other testing services.

An Emergency Medical Services section was created in the Texas Health Department, by statute, with Department of Health and Human Services funds passing through the health department to the regions. An Emergency Medical Services Council was set up as an adjunct to the Bureau of Emergency

Management. The Bureau contains the Disaster Response Group and Emergency Medical Services and Medical Standards on Motor Vehicle Operation. In Texas, the law requires only that an ambulance operator be trained in "basic readiness" and the vehicle need only have a first aid kit. Since recent statewide attempts to upgrade this legislation have been unsuccessful, the health department has developed rules for various levels of training, with cooperation on a voluntary basis, and has encouraged cities to pass ordinances requiring a higher level of training. The health department works with the regions in setting up and coordinating training which is conducted at paramedic, emergency medical technician and special skills levels. A registry was developed which lists all trained paramedics and emergency medical technicians in the state.

Approximately 200-225 ambulance services in Texas participate in a statewide response data program with approximately 50 hospitals contributing data. The health department plans to use the response data to evaluate the changeover in one city from private to city ambulance service. They are also trying to develop an advanced life support reporting form.

D. Drunk Driving Laws and Programs

Preface

The consumption of alcohol has long been recognized as a major factor in a large number of highway crashes. As early as 1904, it was reported that a large proportion of drivers of "automobile wagons" had been drinking before their fatal crashes.⁽²¹⁾ Subsequent research has documented the detrimental influence of alcohol on driving performance as reflected by crash involvement.

Studies have shown that 40-55% of all fatally injured drivers had blood alcohol concentrations of .10% or higher - i.e., high enough for the driver to be considered legally intoxicated in most states. In addition, 55-65% of drivers in fatal single-vehicle crashes, 13% of drivers in personal-injury crashes and 5% of drivers in property damage crashes were legally intoxicated.⁽²¹⁾ Epidemiologic studies indicate that the risk of being involved in a serious crash is much greater at blood alcohol concentrations (BACs) over .10% than it is with no alcohol. The societal cost of such crashes is staggering.⁽¹³⁾

The increasing body of knowledge about drinking and driving led to the emergence of a number of countermeasures intended to modify driver behavior so as to prevent crashes. Legally, the criminal justice system has tried to deter drunk-driving through the threat of punishment. Increased understanding that most drivers involved in alcohol-related crashes were "problem drinkers" led to a health-oriented approach. Along with these approaches, a public information and education approach sought to dissuade persons from driving after drinking and a technological approach has provided devices and techniques for a more objective indication of alcohol impairment.

During the 1970's, the National Highway Traffic Safety Administration's Alcohol Safety Action Projects (ASAPs) tried to tie all these approaches together into a comprehensive, unified effort. This effort involved a variety of law enforcement, judicial, treatment, licensing control and public information countermeasures. A legal approach was directed toward the social-drinking driver while a health/legal component focused on the problem-drinking driver. In all, 35 projects were funded in selected communities throughout the country.

None of the countermeasure approaches designed to deter these drivers, however, has had a substantial, permanent influence on reducing deaths resulting from crashes of alcohol impaired drivers or in reducing alcohol involved crashes. Currently, however, grass roots organizations and state and local task forces are focusing on the issue, and media attention has intensified. As a result, legislators are responding to the pressure and over 25 states have recently introduced bills on drunk driving countermeasures. "The legislation paints a broad spectrum of options, including increased penalties, administrative reforms, changing legal definitions of intoxication, raising the age limit of drinkers, and alternative funding options for rehabilitation programs."⁽²³⁾

Activity Summary

The highway safety agencies stated that their priorities concerning alcohol programs revolve around public information, enforcement and training. A strong public awareness program is considered necessary to sensitize people to the issue. The public's perception of the arrest risk must be increased through road blocks, publicized arrests, news releases, and media campaigns. Selective enforcement should be supported and arrest and conviction rates increased. Law enforcement personnel, attorneys, and judges need training to help them handle offenders with alcohol problems. It was mentioned that legislation should be drafted and promoted to make drunk driving laws comprehensive. Where new laws have been enacted, it is necessary to evaluate any changes and determine the effect of the new laws.

The highway safety agencies felt that health departments could assist them in the area of alcohol programs by providing support for their programs,

cooperation and assistance with projects, and data analysis and evaluation of pilot programs.

Currently, various programs being conducted by highway safety agencies involve cooperation with health departments. Legislative support is often provided by health departments for initiatives such as raising the drinking age, and per se laws. Per se laws allow a person to be convicted of drunk driving on the basis of blood alcohol concentration alone, without any additional evidence of intoxication. In addition, health departments generally certify breathalizers and have clinical labs with facilities for blood alcohol concentration (BAC) testing. Health departments often supply data on injuries and record fatal accidents.

Some local health departments are involved in alcohol education, with highway safety agencies providing information on alcohol and driving that health care providers can present to their patients.

About 34 states have convened Governor's Task Forces which include members from the health and highway safety agencies. These task forces are charged with examining issues such as raising the drinking age, .10 per se laws, administrative license revocation, and referral of defendants to rehabilitation programs after case dispensation. For example, in New York, a Governor's Alcohol Task Force was designated as the primary agent to recommend policies and actions to reduce drunk driving. They recommended that the drinking age be raised from 18 years to 19 years and that a separate Division of Alcoholism be created. In addition, the Task Force served to increase media coverage of alcohol related crashes and convictions. (25)

Ohio also convened a Governor's Task Force on alcohol-related crashes. The Task Force issued recommendations in the areas of legislation, enforce-

ment, rehabilitation, public information and education, and licensing and adjudication.

To increase the public perception of the arrest risk, the Ohio Department of Highway Safety issues a Weekly Drunk Driving/Seat Belt Report. This contains data on the number of arrests made for DWI as well as data on belt use by crash involved occupations of motor vehicles. (26)

Washington set up an Alcohol Interagency Committee with members from many spheres such as the District Court, State Police, the Department of Social Services, and Health Services. A mandatory one day jail sentence for the first driving while intoxicated (DWI) offense was put into effect. The Senate Transportation Committee then passed a resolution to conduct an evaluative study of the effects of this legislation on subsequent arrests. In addition, an alcohol information school, which is funded through alcohol taxes, was created for persons who are identified as alcoholics, convicted of a DWI charge and referred by the court. Records are expunged if the person undergoes treatment and remains alcohol free for a period of two years.

A combined highway safety/health department effort was set up in Colorado to carry out responsibilities related to the state's drunk driving laws, entitled The Alcohol and Drugged Driving Safety Project. The health department has the responsibility for developing DWI programs, setting standards for their operation and referring persons convicted of DWI to the appropriate program. The health department also compiles BACs and other laboratory values and conducts training on BACs and breathalizers. The highway safety agency, on the other hand, conducts an alcohol awareness program, is responsible for the enforcement of laws relating to alcohol, and conducts training and information sessions for judges, highway patrols and municipal police.

This relationship came about through the operation of an Alcohol Safety Action Project (ASAP) which was under the health department. When the project was terminated, the staff was transferred to the highway safety agency. Close coordination between the two agencies developed with the health department providing each county with alcohol counselors who could recommend action post-conviction. The office of alcohol counter-measures is now moving back to the health department with law enforcement responsibilities remaining with the highway safety agency.

A "Stop DWI" Program has been developed in New York. This drinking driver program is available upon conviction for DWI, after which a referral for mandatory rehabilitation can be made. During treatment, a restricted license is issued for driving to work, to home, and to rehabilitation programs. Once a person is referred to the program they must complete it. The state also passed new, tougher drunk driving laws with minimum fines set at \$350 for conviction of DWI. Because the money generated from such conviction will be funneled back to the county of arrest, all counties had to submit plans detailing how they will use the funds to combat alcohol-impaired driving.

The highway safety agencies reported that the health departments could provide additional assistance by supplying information on costs and the length of hospital stay for alcohol-related accidents, as well as more detailed reporting on alcohol-related crashes from time of ambulance pickup to the beginning of in-patient care. Health departments could provide assistance with state alcohol awareness programs and other educational efforts through their well developed network of contacts and help support legislation and an information campaign, where appropriate.

It was recommended that highway safety agencies work with citizen

activist groups and local volunteer groups who have the time and the commitment and can get things done quickly. Task forces are helpful in making recommendations and pushing for reforms in dealing with drunk drivers. It was suggested that it is important to provide information concerning crashes and injuries occurring in each community to local agencies, along with estimates of the cost of caring for the seriously injured. The highway safety agencies also felt that it is important to communicate with others in the highway safety field to keep up with the latest developments.

Health departments reported that they have cooperated with the highway safety agency on various alcohol program efforts. In the area of drunk driving, cooperative ventures have included: training programs, provision of direct services to prevent drunk driving, multi-media campaigns, and program planning.

The health department in Maryland reported that they had cooperated with the highway safety agency on various media activities, on a detoxification program, in the promotion of legislation to increase the drinking age, and in the Governor's task force on drunk driving. In addition, educational programs on alcohol and other substance abuse were developed for high school and junior high school students.

Various sources of data were reported as being very helpful in justifying alcohol initiatives. These included: changes in motor vehicle death rates in states that have lowered the drinking age, data on treatment which showed an increase in the number of people under twenty-one years of age who were identified as problem drinkers and alcoholics, and juvenile services data which showed an increase in vandalism associated with drinking.

B. Fifty-five Mile Per Hour Speed Limit

Speed of travel is an important determinant of both the probability of a crash and the frequency and severity of injury when crashes occur. In a crash that involves a deceleration to zero velocity, the injury-producing crash forces increase with the square of the velocity at the moment of impact. Because speed plays such an important role in vehicle-related injuries, maximum limits have traditionally been set on the legal speed of highway travel.

Because of the fuel shortage crisis in 1973, the United States adopted a national speed limit of 55 miles per hour. Although the speed limit has not been strictly observed, there has been a substantial lowering of top speeds.

The Federal Highway Administration's reports of speed surveys throughout the country show that the average speed of free-flowing traffic was reduced by the greatest amount on the highways that had the highest speeds in 1973, such as the rural interstate system.⁽¹⁷⁾ Urban roads, on the other hand, with the exception of the interstate system, showed little change since posted speed limits generally had not been greater than 55 mph. The reduction in the number of cars travelling at very high speeds, however, was dramatic. In 1973, 50% of the vehicles exceeded 65 mph on rural interstates while less than 10% of the vehicles did so in 1974 and 1975.

While speed was only one of many factors contributing to the reduction in traffic deaths, "the evidence and the results of diverse analyses support a conclusion that for the three years 1974-76 annual traffic fatalities in the U.S. have been on the order of 4000-5000 per year fewer with the 55 mph speed limit than they might have been with the 1973 speed limits."⁽¹⁷⁾

While many states are content with the 55 mph speed limit, efforts to change it have been introduced in various state legislatures during 1981 and 1982. The emphasis, however, has not been on outright repeal, because the law is in effect at the federal level; rather, the emphasis is on lessening the sanctions for violators.

For example, Nevada passed a bill in 1981 which assesses a \$5 energy wasting fine for violations between 55-70 mph with no points assessed against the driver. In 1982 Wyoming's Senate passed a bill which would assess fines for violations between 65-74 mph rather than 55 mph. Indiana's house passed a bill in 1982 to lower fines to \$5 for violations to 65mph with no record of points. Arizona, while passing a law to retain 55 mph for two more years, has made the penalty for violations between 55-65 mph only \$15, and prohibits insurance companies from receiving reports of violations under 65 mph. New Mexico, if the federal requirement for 55 mph is ever lifted, will raise the speed limit to 70 mph. (24)

Highway safety agencies that were questioned about their efforts to maintain the strength of the speed limit law reported that their activity was largely centered around continuing enforcement efforts. Most states reported that no activity to repeal or weaken the law was ongoing in their state. No highway safety agency was aware of health department involvement in efforts to maintain the strength of the speed limit law.

F. Health Department Injury Prevention Efforts

Certain highway safety activities might logically be conducted by health departments because of their relevance to health mandates and priorities. For example, many health department activities address the prevention of health limiting situations and disease conditions. This may

include data collection to identify populations at risk, or education to increase public awareness of existing hazards. In addition, legislation which would improve health outcomes is often supported by the health department. Rehabilitative programs such as those for alcoholics might also appropriately be conducted in concert with a health department. Furthermore, health departments contain experts who function in program planning and evaluation capacities.

Local health departments serve clients in the community, and thus provide a link between individuals and the state agency, forming networks of great potential importance to highway safety officials. (Health agency networks are discussed further in Section II-D.)

The health departments reported that most of their activities in the area of motor vehicle injury prevention concern emergency medical services, child restraints, seat belts, and drunk driving. The emphasis, however, varies from state to state. For example, Maryland reported objectives which include passage of a law with a comprehensive approach to drunk driving, aimed at reducing recidivism and doubling the arrest rates. The Massachusetts Health Department wants to educate school age children on occupant restraint issues to decrease deaths and accidents. Emergency medical services are a major responsibility of the Texas Health Department which is especially concerned with issues of legal immunity for emergency medical services personnel. They also want authority to revoke and decertify licenses of emergency medical technicians when necessary and are concerned with people who fraudulently represent themselves as being certified.

The state health departments are also involved in other injury prevention activities which do not involve cooperation with the highway safety agencies. Information on health department non-motor vehicle injury

prevention programs is valuable for a number of reasons. First of all, the existence of preventive activities suggests a commitment to the injury problem, which can potentially be expanded to motor vehicle injuries. Once a program is in place, the model or framework used may be adapted to motor vehicle related problems. Alabama's Health Department is involved in teaching first aid, disseminating information on cardio-pulmonary resuscitation and the Heimlich maneuver, and conducting workshops on injury prevention, including infant and child safety for expectant mothers. They also carry out state level Consumer Product Safety Commission activities, releasing product information and bulletins. Although they have no product testing facilities, they reported that they will contact retail dealers if a toy is identified as hazardous and will assess the level of compliance with recalls, using the mass-media as necessary to publicize them. In addition, they put on many educational programs each year, for example on burn prevention, or prevention of injuries in preschool children.

The Massachusetts Health Department operates the Statewide Childhood Injury Prevention Program (SCIIPP) which addresses burns, playground injuries, child passenger protection and poison prevention. The project is responsible for collecting data on childhood injuries.⁽¹⁰⁾ The health department is also interested in the problems of injury in the elderly.

The health department in Oregon is interested in the role of cigarettes as an ignition source for housefires. The health department is also interested in legislation or guidelines which would require the installer or manufacturer of hot water heaters to set the water temperature at 130° F, to minimize the chance for tap water scald injuries. In the interim they have petitioned the Consumer Product Safety Commission and Underwriters Laboratories to require manufacturers to simplify hot water

heater controls so that they can be easily turned down to 130° F. They are also interested in trauma centers and in developing better systems of trauma management and data collection.

The health department in Indiana reported that they have a media center with a free loan library containing films on fires, poisoning, and other pertinent topics. They have put on injury prevention workshops for expectant parents covering playgrounds, cribs, fire resistant materials and child restraints. In addition, they received a small Title V grant to work with the Indiana poison control centers.

The Bureau of Health Planning in Texas is gathering and analyzing mortality data with the objective of using the data to influence legislation.⁽¹⁶⁾ They have analyzed motor vehicle fatalities by looking at the death rates for five year age cohorts over a ten year period. They have also examined homicides and suicides and are planning to analyze drowning deaths. In addition, their risk reduction activities include an emphasis on improved driving practices.

The New Mexico State Health Department has set up a Division of Injury Control.

The health departments reported that in setting up successful programs, it is important to generate a lot of interest in your efforts, to focus on activities that work, and to concentrate on doing a few things well, rather than trying to do more than your resources will allow.

II. CHARACTERISTICS OF INTERAGENCY RELATIONSHIPS

A. Cooperative Efforts

This section of the report describes information gained from the

study participants about types of interagency relationships. Highway safety - health department interactions have been grouped according to the following categories: contractual, task forces or interagency councils, information systems and informal relationships, and these are described below. In many states, interagency relationships fit into more than one of the first three categories. However, each one will be defined separately with an attempt to outline advantages and disadvantages of each.

In addition, barriers to cooperation, health agency priorities and networks are discussed in sections B, C and D.

Contractual relationships result from one of two situations: either one agency is funding some activity in the other, or both agencies are conducting part of a project contracted for by an outside source.

These situations place some limitations on the relationship. The agency being funded has to meet certain contractual obligations, including the preparation of periodic progress reports and the completion of the tasks promised under the contract. Therefore, the funded agency may not be comfortable making demands or requests of the funding agency. On the other hand, the agency funding the project may feel free to make extensive demands upon the other agency because they are providing the funds.

This situation usually does not foster the development of a close, peer relationship between the two agencies. Ultimately, even after the termination of contractual arrangements, a pattern of interaction established during the contractual arrangement may continue. The agency which used to receive funds may harbor resentment due to the cessation of funds. The agency which funded the project may view the other agency as one which only performs a task when paid for it. These perceptions may prevent each

from seeking assistance from the other to address mutual priorities.

On the positive side, a contractual relationship of this kind can bring agencies together. Each has a stake in the activities of the other, as the project is mutually beneficial. A successful contractual relationship can serve as a starting point for other wide-reaching involvements.

Another arrangement, in which both agencies work together on a project supported by an outside source, also has advantages and disadvantages. On the positive side, each agency can become better acquainted with the roles, activities and expertise of the other. On the negative side, competition for a scarce or dwindling supply of funds may result.

In the long run, cooperation should serve to benefit both agencies far more than competition may benefit either agency in the short run. However, it may be difficult to convince those involved to think of long term benefits when so many short term constraints must be dealt with.

Task forces and interagency councils are formal networks set up to accomplish certain objectives. Task forces tend to be ad hoc in nature, formed to generate solutions to a pressing problem. Generally the task force members are appointed from different agencies and they meet for a specified period. Once their recommendations have been issued, the group may then dissolve. Interagency councils tend to be standing committees which serve to formulate state level policy, make recommendations and inform members of developments in the agencies represented by the council members.

Task forces are advantageous in that they encourage sharing and interaction between agencies to promote suggestions or solutions which can be of benefit to each agency. Also, through a task force interagency links are formed at a high level. When the powerful individuals on the

task force develop liaisons, such bonds can positively affect endeavors in an entire agency.

These advantages hold true for councils as well. In addition, councils which keep agency leaders abreast of developments in other agencies can further strengthen cooperation.

A task force can be disadvantageous if its members do not work well together - e.g., if it is not well orchestrated, or if no workable solutions are generated by its members. Also, the task force may have authority only to propose solutions and not to choose the ones to be implemented.

The linkage of data systems between two agencies may involve those individuals responsible for data analysis, as well as administrative leaders of the two agencies, who may establish guidelines for the design of such a system. However, other disciplines in the two agencies will also benefit from an alliance between those involved with data analysis and interpretation. Since costs of acquiring and maintaining equipment for an optimally functioning data system are so high, agencies are increasingly sharing responsibilities in this area. In addition, combining data sets such as police accident reports, mortality statistics and ambulance trip tickets may serve to increase the accuracy of the information available to both agencies.

Areas of potential difficulty that need to be decided upon ahead of time include the location in which data is to be coded, stored, accessed and analyzed, as well as a definition of who is entitled to use the information which is generated.

Informal relationships include a wide variety of interaction patterns. Individuals may communicate with employees in the other agency by phone or in person, or through letters on an unscheduled basis. Informal relation-

ships may evolve out of councils, task forces or contractual efforts.

When agencies relate well informally, a good rapport exists and channels of communication are open and solidly developed. In one state, the two agencies are located across the street from one another. The opportunity to visit on short notice exists, and both agencies find that this is beneficial. When people from both agencies maintain close ties, cooperative ventures may often result.

On the other hand, relationships may be so informal that there is almost no interaction at all. Agencies interested in remedying this may wish to construct more formal ties, described earlier in this section. In time, this may generate informal, constructive relationships.

B. Barriers to Cooperation

Although most of this report deals with examples of cooperative efforts, barriers or impediments to cooperation between highway safety and health agencies are examined and described in this section. By pinpointing the situations which impede cooperation at each level of interface, existing difficulties can be isolated and examined. It is hoped that this will lead to the development of strategies to cope with or minimize the effects of such difficulties.

Barriers were found to exist at three levels of interaction. First, there are barriers which exist on the agency level, inhibiting the ability of one agency, as a complete entity, to work with another agency. Second, barriers exist on the organizational level, as a result of differing organizational arrangement of the two agencies. Thirdly, there are barriers at the individual level, which affect the ability of individuals from different agencies to work together.

The most frequently mentioned barriers occurring at the agency level are those that emanate from the allocation of agency responsibilities. The responsibilities of the two types of agencies were found to vary from state to state. Although each agency has responsibility for certain content areas, in some areas, such as occupant restraints or motorcycle helmet use laws, either or both agencies may be involved. If one agency initially had responsibility for a particular program area, an attempt by the other agency to also become involved can be a source of difficulty on both sides.

Although most people interviewed believed that more could always be done to reduce highway deaths and injuries, both the health departments and the highway safety agencies hesitate to move into an area in which the other agency is involved. There is often a reluctance to violate any territorial arrangements that have evolved. In addition, some agency representatives stated that since the other agency was addressing the problem adequately, they saw no need to become involved and had turned their attention elsewhere.

Some experts surveyed felt that a differential in the power wielded by the two agencies in their state was creating a barrier to cooperation. In one state, a highway safety representative felt that the state health department held too little power over its local departments and that this decentralized structure limited his agency's ability to work with the state health department. Another highway safety spokesperson was concerned that the health department was very vulnerable to political forces, because of its high local visibility. It was hypothesized that this might force the health department to address issues which are of immediate concern to the public rather than those which pose the largest threat to the public's

health. For example, they might emphasize the sensational, such as a death from bubonic plague or rabies, as opposed to issues such as highway deaths which are most pressing in terms of morbidity and mortality.

Also noted as barriers was the other agency's inability to change its course or priorities to fit in with present needs of the population. The point was often made that both agencies need to shift emphasis from problems which have largely been resolved, to more pressing current concerns.

Organizational level barriers which were mentioned included difficulty in dealing with the structure and configuration of the other agency. It was felt that large agencies were difficult to work with because things took too long to accomplish. In addition, the many different levels of authority which must be consulted in a large agency decrease the likelihood that a proposal will come to fruition.

Other organizational barriers which were frequently cited stemmed from inadequate availability of funds and personnel. In many states, one agency had been funding the other or providing staff for a joint project. Unfortunately, budget cuts and changing federal priorities have affected both the amount and permitted uses of funds. In some states this has created competition between agencies instead of fostering cooperation. Furthermore, knowledge that an agency is understaffed or has limited funds can discourage another agency from becoming involved with them.

Finally, barriers encountered at the individual level of contact between agencies are noted. In addition to personality clashes, which can occur in any work situation, a barrier which was mentioned concerned differences in educational background between personnel in the two agencies - health departments remarking that highway safety personnel were more technically oriented, and highway safety agencies noting a clinical health

services orientation among health department personnel. These variations may be illustrated by distinct "buzzwords" used in the two agencies or by differences in journals read and conferences attended.

C. Health Department Priorities and Concerns

Health departments are involved in a variety of activities which may effectively be applied to highway safety issues. Most important is the responsibility of the health department to protect the public's health. Motor vehicle crashes figure prominently in the list of causes of morbidity and mortality in all population groups. Therefore, as an agency committed to improving and protecting the health of the public, it is appropriate for a health department to concern itself with highway safety issues.

Priorities revealed by health departments regarding highway safety concerns encompassed a wide range of interests and strategies, and tended to reflect the orientation of the people working on a particular problem area. For example, health educators tended to establish education and motivational campaigns as high priorities, and epidemiologists tended to include data gathering activities in their priorities.

Occupant restraint priorities, including both belt use and child restraint use, included the following: support for mandatory use laws and activities to promote passage of such laws, education programs to increase public awareness and efforts to promote grass roots involvement in legislative processes. Also mentioned were gathering observational or reported data on seat belt usage, developing motivational campaigns in schools and through the media, increasing the involvement of volunteers, providing start up material and technical assistance to groups initiating loaner programs, creating information networks for consumers to learn about

restraints ("hot lines", consumer guides), and providing information to health providers on restraint use.

Motorcycle helmet priorities included the performance of activities designed either to retain laws already in force, or to reinstate laws requiring helmet use for all ages. This included the gathering and presentation of data on injuries to helmeted and unhelmeted drivers, and testimony at legislative hearings.

Priorities in emergency medical services have changed over time and have largely depended upon the availability of federal funds to meet state program needs. Priorities such as acquisition of ambulances and related equipment such as communication instruments, or development of a statewide emergency medical services systems plan have changed to priorities such as providing basic and advanced life support training and first responder courses, and licensure and certification of emergency personnel and equipment. In addition, improvement of data collection and analysis of trip tickets was mentioned. Unfortunately, federal priorities are not always the same as state priorities. For example, some states expressed as a priority securing funds for replacement and repair of equipment used by local jurisdictions.

Most health departments did not mention priorities in regard to promotion of the fifty-five mph speed limit, but when questioned, representatives stated that they favor retention of the law.

Priorities in the area of drunk driving and alcohol programs included everything from public education and rehabilitation of alcoholics to improved blood alcohol determination, data collection on the role of alcohol in motor vehicle crashes and passage by their state of tougher laws including laws raising the drinking age.

Priorities for reducing non-motor vehicle injuries which were mentioned included infant safety, health promotion/risk reduction programs, school safety education, passage of a cigarette safety act*, activities to increase the use of smoke detectors in homes, and acquisition of better data on injury problems.

Although not every health department stated a priority in each area mentioned, this list indicates that there are many areas of common ground between highway safety and health departments.

D. Health Agency Networks

Networks have been defined as a group or system of interconnected or cooperating individuals. Networks involving state health agencies generally center around consumers or providers of health services. Consumers include clients of the health department as well as other members of the community who may utilize health department services and facilities. Providers are the individuals and institutions within a state which provide health services.

Highway safety agencies may find it fruitful to develop links with health department networks when they have an appropriate activity or message to convey. In this section, consumer and provider networks in which state health departments may be participating are described.

Consumer networks often link local health departments with members of the community they serve. In some urban or rural areas, the health department may be the major source of health care for the population. Women and

*This type of legislation would require all cigarettes to be fire-safe to reduce cigarette initiated housefires and the resultant deaths and injuries. (The Cigarette Safety Act - House Bill H.R. 1854, sponsored by Rep. Moakley and Senate Bill S.51 sponsored by Sen. Cranston)

children may receive care from the health department through well child care and prenatal care clinics. Highway safety topics of particular concern to these groups include occupant restraint issues. Child restraint and seat belt use could be promoted at prenatal and well child visits. Safety seat loaner programs can be located at health departments. In addition, testimony from clients whose survival of crashes is due to restraint use can be elicited and then presented at legislative hearings. Observational restraint use studies can be carried out in clinic parking lots.

Interested clients can participate in or form a child passenger safety association, citizen groups against drunk driving, or promote other highway safety efforts. Teaching sessions or meetings can be held at the health department to discuss highway safety issues.

Other consumer networks may include contact with groups that are involved in community efforts with the health department, such as fire or police auxiliaries, civic groups, and volunteers. These groups could become involved in legislative issues such as supporting drunk driving laws or fund-raising for emergency medical equipment. Parents of school aged children may be interested in school bus safety and motorcycle helmet laws as well. Contact with the health department could provide highway safety people with greater access to concerned citizens.

Provider networks center around the variety of professionals working in the health departments and the professional societies to which they may belong. Providers are members of many groups which should be concerned about motor vehicle related injuries as a public health problem. These groups might include, but are not limited to, physician specialty societies, nurses' associations, health educator associations, hospital associations,

and emergency medical technician groups or trauma societies. Also, groups concerned with particular health problems germane to motor vehicle crashes such as head injuries, epilepsy, and physical handicaps could become involved in highway safety efforts.

Professional associations and societies have available mailing lists, journals and newsletters. Also they may hold annual meetings and continuing education programs, either of which may serve as an appropriate forum in which to present highway safety issues.

In working with the health department, highway safety agencies need to view the health department as the center of a wheel with spokes that represent a variety of consumer and provider interactions. The potential for the health department to make an impact on highway safety problems should be viewed in terms of the entire wheel, or network system, and not just through consideration of the health department as an isolated agency.

Conclusion

In this document, we have included a description of activities that highway safety and health agencies are engaged in to reduce motor vehicle deaths and injuries. It is our hope that individuals in both agencies will evaluate cooperative efforts in their states, taking a broadened view of alliances which can be fostered.

Health departments have an important role to play in highway safety, and we hope that they will increase and strengthen their already considerable involvement in highway safety issues. This might be done by enlarging the focus of existing programs geared toward injury prevention, to include motor vehicle related topics. Highway safety agencies may wish to increase their effectiveness by adopting activities existing in some other states or by broadening operational programs, such as child restraint activities,

to include adult seat belt use.

By working together, highway safety and health agencies should be able to increase the effectiveness of efforts to prevent injuries to people in motor vehicle crashes.

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Appendix

This appendix includes samples of questions asked of state highway safety and health experts in the telephone conversations which served as the basis for the information included in this report. Questions asked of highway safety agencies were more specific than those included in the sample, since they were directed toward specific highway safety topics. The interview was designed to give the contacts in the state agencies ample freedom to discuss the subject matter. These questions are included in the appendix merely to illustrate the comprehensiveness of the interview data gathering process.

A. Sample Questions asked of Highway Safety Departments

1. What activities, if any, in the area of:
 - a. occupant restraints
 - b. motorcycle helmet laws
 - c. emergency medical services
 - d. alcohol programs and laws
 - e. fifty-five mph laws
 have involved cooperation with the health department?
2. Can you describe these programs or liaisons in greater detail?
3. How are these programs/activities funded?
4. What is the nature of the working relationship?
5. How did this relationship come about?
6. What agency or persons (position) do you work most closely with in the health department?
7. What are some benefits to your agency that have come out of this working relationship?
8. What kinds of barriers have you encountered which may impede or otherwise affect your relationship?
9. What are your agency priorities in the content are of interest to us?
10. How do they mesh with the priorities of the health agency?
11. In light of the above priorities, how might you work together in this area in the future?

12. Have you made any plans to implement these ideas?
13. Please provide comments and suggestions which might help other agencies interested in replicating some of your activities or plans.

B. Sample Questions asked of Health Departments

1. What activities, if any, in the area of highway injury prevention have involved cooperation with the state highway safety agency?
2. Can you describe these programs or liaisons in greater detail? Do they include any of the following:
 - a. Legislative efforts
 - b. Administrative liaisons
 - c. Media
 - d. Educational programs
 - e. Communication networks
 - f. Data
3. How are these health activities funded?
4. What is the nature of the working relationship between your agency and the highway safety agency?
5. How did the relationship with the highway safety agency come about?
6. What group or person (position, not name) do you work most closely with in the highway safety agency?
7. What are some of the benefits to your agency which have come or are expected from your relationship with highway safety?
8. Does the highway safety agency collect any data which might be useful to you?
9. In what specific areas do you think the highway safety agency could provide some assistance?
10. Have you any plans to implement your ideas?
11. What are your health agency priorities in the area of motor vehicle injury prevention?
12. How do they mesh with the priorities of the highway safety agency?
13. In working with highway safety, what kinds of barriers have you encountered which may impede or otherwise affect your relationship?
14. Is your agency involved in any other kinds of injury prevention activities? (Non-motor vehicle injuries)

15. Are activities designed to prevent injuries supervised by or grouped into one area or office?
16. Do you have any plans to organize injury prevention activities in this way in the future?
17. Please provide any comments or suggestions which might assist other state health departments that may be interested in replicating some of your activities and plans.