

Statement of

FRED W. VETTER, JR.  
ASSOCIATE ADMINISTRATOR

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
DEPARTMENT OF TRANSPORTATION

For the Record

SUBCOMMITTEE ON HEALTH  
COMMITTEE ON LABOR AND PUBLIC WELFARE  
UNITED STATES SENATE

EMERGENCY MEDICAL SERVICES AND  
RELATED LEGISLATION

January 23, 1976

The Department of Transportation's Emergency Medical Services (EMS) program stems from the mandate given us by the Congress in 1966. In that year, the Congress initiated the Federal motor vehicle safety program through the enactment of the National Traffic and Motor Vehicle Safety and Highway Safety Acts (15 U.S.C. 1381; 23 U.S.C. 402). To prevent crashes and minimize injuries when crashes nevertheless occur, we were directed to issue standards to improve highways, and motor vehicle and driver performance. Congress recognized, however, that these preventive efforts would have to be supplemented by other measures. If crash victims did not receive prompt medical attention, many persons would needlessly die or become permanently disabled. The Department was, therefore, also directed to undertake a vigorous EMS program under the Highway Safety Act.

The Act establishes a Federal-State partnership under which each State implements a highway safety program that complies with program standards promulgated by the Secretary. To aid the States in carrying out these programs, the Act provides financial assistance for the States on a matching fund basis. To ensure the participation of the communities, the Act requires that 40 percent of the Federal assistance be expended by or for the benefit of the political subdivisions of the States. The aid is funneled through the States to help ensure the statewide coordination of all State and local activities. To aid the States in finding better ways of implementing their programs, the Act also authorizes the Secretary to conduct research, development, and demonstration projects.

Pursuant to the Act, we issued Standard 11, titled "Emergency Medical Services", in 1967 specifying the steps to be taken by the States and their political subdivisions to improve their EMS activities. We recognized from the beginning that the accomplishment of the Act's EMS goals would require upgrading State and local EMS capabilities for all types of medical emergencies. Consequently, the standard requires each State to develop a comprehensive, statewide plan covering all types of EMS activities, not merely those relating to highway safety. The standard provides the strategy for the mobilization, management,

and coordination of all EMS resources within a planning framework which assists States in identifying needs responsive to local requirements, and the methodology to implement systems with these capabilities.

Implementation of this standard has enabled the States to take positive steps toward identification and satisfaction of their EMS needs. Under the standard, patients are to be provided with emergency care at the accident scene and during transport in well-equipped vehicles to points of definitive medical care. Communications networks are to be utilized to report the emergencies and efficiently allocate resources. In this way, the States can achieve one of our major goals, the reduction of emergency vehicle response times over wide geographic areas. The networks are used also to relay advance medical information concerning the patient's injuries or illness to the hospital and transmit, in return, appropriate medical guidance. Emergency medical care personnel are to be carried in the emergency vehicles to assess the injuries or illness and apply life-sustaining procedures.

When we issued the standard, the overall quality of EMS was tragically low in most areas of the country. There were poorly designed and equipped emergency vehicles, inadequately trained and even untrained personnel, deficient or non-existent communications systems and a lack of both

professionalism and job stability for emergency vehicle personnel. Perhaps one of the most serious problems involved the management and professional aspects of EMS activities.

Since then, much has been accomplished. We have provided guidance and financial support for a wide variety of EMS system elements, including: (1) State EMS capability survey and comprehensive plan development; (2) the economics of emergency vehicle services; (3) the development of numerous EMS training courses which have received wide acceptance; (4) the development of ambulance, equipment and communications criteria; and (5) the development of management information and data systems. To assist the States in assimilating all of this material and in implementing their programs, we have also developed a program manual that explains at length how to establish and operate each element of an EMS program.

In an effort to speed the Federal financial assistance to the States, we have decentralized the grant approval process under the Act. Grant applications are no longer being processed first by the regional offices and then transmitted to Washington for final approval. Instead, they are being reviewed and approved by the regional offices in accordance with uniform policy guidelines. We believe that the approval process has been substantially

improved by giving the decision-making authority to regional officials who are closer to the details of the EMS problem and the people charged with solving it.

To provide the manpower necessary for the EMS programs, we have developed an 81 hour basic training course and an advanced 480 hour course for emergency medical technicians. The final format of the advanced course for the paramedic is being prepared by the University of Pittsburgh and should be available this July. This DOT advanced course of instruction will increase significantly the life-saving capabilities of the emergency medical technician. Both of these courses were developed in cooperation with the National Academy of Sciences and National Research Council and cover all types of medical emergencies.

We have also developed courses for State highway patrolmen in crash injury management, emergency vehicle dispatchers in communications, emergency vehicle drivers in safe driving, and a postgraduate course for managers of EMS systems. The last course will help to provide the manpower needed to coordinate the comprehensive State EMS plans.

We have been working hard to ensure that newly acquired EMS equipment is of the best quality. Drawing upon our expertise in setting vehicle safety standards and in cooperation with the medical community, we have developed criteria and specifications for the design, configuration

and equipping of ambulances.

In an attempt to spur the States and communities to adopt new advanced methods for implementing EMS programs, we have conducted numerous demonstration projects in urban and rural areas to improve EMS technology and practices. Several projects showed that helicopters may be useful for coping with certain emergencies in rural areas. However, the procurement, maintenance and insurance costs of helicopters may render them impractical in many circumstances. Other projects have demonstrated the value of a sophisticated communications network for allocating emergency vehicles and personnel, thus avoiding duplication of emergency responses and reducing the amount of equipment and personnel necessary to provide an adequate level of service. We have developed a planning outline for Statewide communications planning, and a manual, "Guidelines for EMS Communications," both of which have been widely accepted by the public and Federal agencies as national guidelines in this area. In addition, we provided financial support and encouragement for the first national conference on citizen access to EMS systems and accident reporting through the national emergency telephone number. "911" is now available in many areas and its use is expanding rapidly. To further assist citizen access to EMS systems and accident reporting, we have recently completed studies concerning the use of citizens' band

radio and are developing a manual for such use. We have also helped to bring about a general awareness of the need for EMS discrete frequency allocation, which caused the Office of Telecommunications Policy to define requirements for EMS communications and the FCC to provide a responsive frequency allocation structure.

We have two Medical Emergency Coordination Communications Assessment (MECCA) demonstration projects scheduled as part of the National Bicentennial Celebration, one in Philadelphia and the other in the metropolitan area of the District of Columbia. The purpose of these MECCA projects is to develop and provide a "state-of-the-art" capability to rapidly mobilize and manage resources for medical emergencies through advanced data management and communications technologies. The Philadelphia MECCA project, for instance, will specifically use DOT funding to develop, employ and evaluate the impact of an advanced EMS system and provide information on ranking the priorities of the system's elements. The Philadelphia project will also evaluate an automatic vehicle monitoring (AVM) program as a model for wider use in the detection of crashes and crash locations and resource management.

In 1969, we approached the Department of Defense with a proposal to use military helicopters and medical personnel to augment established EMS systems in the vicinity of in-place aeromedical and rescue helicopter units. The

Military Assistance to Safety and Traffic (MAST) program evolved as a cooperative effort of the Departments of Transportation, Defense, and Health, Education and Welfare. The original concept of assistance to highway accident victims has been expanded to include response to all serious medical emergency incidents. 22 MAST programs now serve portions of 28 States and active planning is in progress at 3 other locations. As of January 12, 1976, they had flown 6336 missions to assist 6681 seriously ill or injured persons. The MAST Interagency Executive Group, the Federal policy making body, has been chaired by the Department of Transportation since the Group was formed. The program has provided substantial impetus to the development of EMS systems including a surface capability in the areas served, largely because of the requirement for the establishment of such a system and capability prior to the implementation of MAST projects.

The progress that the States have made in EMS under Standard 11 of the Highway Safety Act is gratifying. In general, the States have been highly responsive through enacting necessary legislation, adopting licensing and certification criteria, and using resources to promote EMS. By 1973, all States had submitted acceptable comprehensive EMS plans. The capability of the States to plan and administer an effective, coordinated EMS program has increased in other ways. In 1967, only 4 States had inventoried the types and levels of EMS activities

operating within their boundaries. Today, all of the States have collected this information on their resources and needs. Further, the number of States with a full EMS staff and a State EMS coordinator has grown from 6 in 1967 to 50 today. These coordinators oversee EMS activities for all types of medical emergencies. The capability of the States to provide the manpower necessary for EMS has also increased. For instance, 46 States, Puerto Rico and the District of Columbia and all branches of the military service have adapted our basic EMT training course as the standard for the certification in licensing of ambulance personnel, while 4 States (Ohio, New York, Delaware and Hawaii) have courses which are considered to be "equivalent" to our basic training course. More than 150,000 of the nation's 200,000 medical technicians have been trained under our basic 81 hour course and the 4 equivalent State programs. The basic training course material has been used to produce video tape and film programs so that training can be conducted in remote and rural areas where a physician is not always available to provide instruction.

Our EMS activities have led to a wide variety of improvements in EMS resources. For example, the percent of ambulances with equipment meeting the standards of the American College of Orthopedic Surgeons increased from 45 to 60 between 1968 and 1974. During the same period, the percent of ambulances with two-way communications equipment increased from 43 to 72. Between 1968 and 1972, the

percent of ambulance personnel with advanced Red Cross training increased from 45 to 72. Finally, since the introduction of our 81 hour EMT course in 1972, approximately 60 percent of all ambulance personnel have completed that course.

The individual successes of particular States and communities under the Act are even more encouraging. Illinois and Maryland, for example, have attracted international as well as national attention through their programs to develop a network of regional trauma centers interconnected by a central information and data system. These imaginative programs were undertaken in response to the EMS standard and with our financial assistance to provide equipment and trained personnel. Under these programs, the condition of each patient is first stabilized by highly qualified emergency medical technicians. Then the patient is rapidly transported in a properly equipped and manned vehicle to a designated hospital for full medical treatment. The selection of the appropriate hospital is facilitated by the categorization of the hospitals within each region. This activity was also aided with Highway Safety Act funds.

New York State established this country's first comprehensive EMS data system. This advanced system analyzes both capability and response data. The State is thus provided with the information necessary to (1) establish proper training levels for personnel, (2) properly locate and allocate emergency vehicles, (3) evaluate the performance

of emergency vehicle and emergency room personnel, and (4) provide cost-benefit data to facilitate the assessment of the overall State EMS program. Other States are now beginning to collect data for similar evaluation and oversight processes.

In Jacksonville, Florida, Highway Safety Act funds were used to develop a highly sophisticated response system for the rapid reporting of emergencies and efficient allocation of responding vehicles and personnel. The operation of this system enabled local authorities to reduce the number of highway fatalities per 1,000 injury-producing crashes by 38 percent in 1974. In Los Angeles, financial assistance has been provided for the training of firemen in emergency medical care.

The results of these and other activities being conducted across the country are transmitted to us and then conveyed to the other States and communities. In this way, the EMS innovations of individual States and communities can be fully analyzed by us and then shared by all.

As I have indicated, the EMS support provided by our Department is making an important contribution to improving EMS performance in many States and localities. The ultimate responsibility, of course, for the detailed planning and implementation necessary to establish truly comprehensive EMS systems is appropriately vested in the State and local governments.

The enactment of the Emergency Medical Services Systems Act in 1973 authorized another Federal demonstration program for funding the upgrading of EMS systems. Such enactment was compatible with our program. Cooperation and exchange of information has taken place through direct contacts between the EMS personnel of the DOT and the HEW and through our representation on the Interagency Committee on EMS.

In my opinion, the Interagency Committee subcommittees through which we work primarily, those relating to transportation, training, and communications, have performed their functions in an effective manner. This has resulted in the award of HEW grants and contracts which are compatible and supplemental to the DOT EMS efforts. Our EMS programs, particularly in the pre-hospital phase of an EMS system, have been adopted by all Federal agencies involved in EMS. Ambulances, for example, have been procured using design and equipment criteria established by the DOT, and Emergency Medical Technician training has been accomplished by means of DOT developed courses. Close coordination has also been achieved by the respective agencies involved in the establishment of communications systems.

The authorities under the Emergency Medical Services System Act of 1973 expire on June 30, 1976. The President has proposed consolidating the HEW EMS program and funding with other narrow categorical health programs in the proposed "Financial Assistance for Health Care Act". As we understand it, the proposal would give the States greater flexibility in selecting priorities and funding, including EMS activities, that meet their individual needs. With respect to the specifics of that proposal and of the EMS extension legislation before this Subcommittee, we would defer to the views of HEW.