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HISTORY OF EMERGENCY MEDICAL SERVICES IN THE UNITED STATES

CHARLES A. ROCKWOOD, JR., M.D., COLLEEN M. MANN, J. D. FARRINGTON, M.D., OSCAR P. HAMPTON, JR., M.D., AND ROBERT E. MOTLEY

From the Division of Orthopaedics, Department of Surgery, The University of Texas Medical School at San Antonio, San Antonio, Texas

Emergency medical services (EMS) may be defined as a total and complete system capable of responding to the medical and surgical emergencies of a community with prompt and adequate emergency care. The system should include: 1) an agency with full responsibility for administration and coordination of a statewide system; 2) an appointed Emergency Medical Services Advisory Committee, on a state or regional level, with membership representing all agencies with a responsibility for emergency services; 3) established local councils, on a county or hospital service area basis, reporting to the main EMS committee; 4) a comprehensive EMS operational plan identifying the agencies, their resources, capabilities, and deficiencies, designation of authority in emergency operations, and a systematic plan of action; 5) appropriate laws and ordinances for ambulance, rescue, and emergency services, and hospital emergency departments, which adequately cover standards for licensing, equipment, vehicles, training, and inspection; 6) categorization of hospital emergency capabilities; 7) a statewide EMS communication system; 8) a system for reporting and program evaluation, and 9) a written and tested disaster plan at state and local levels.

Increasing numbers of locales within the United States are reaching high levels in providing emergency medical services, but in a great many communities, EMS is in a miserable state of affairs. However, it can be said without question that if the current rate of enthusiasm and interest continues, the nation can have a superb EMS system. The ingenuity of the people of the United States appears boundless, and while it may take time to realize that there is a great need for improvement in this area, dedication to meeting the needs of all citizens suffering from injury or sudden illness can provide the best EMS system in the world.

Address for reprints: 7703 Floyd Curl Drive, San Antonio, Texas 78284 (Dr. Rockwood).

Until the late nineteen-sixties, very few cities provided adequate emergency medical services. Most consisted of a large number of uncoordinated, competitive commercial and municipal ambulance services which responded to all types of calls, including emergency. Ambulance crews offered little or no real life-saving care; their primary function was to speed to the scene of the accident, load the victim, and speed to the hospital. In many cases, only a driver made the emergency run; no one else was with the patient in the ambulance. Little more than a litter, a first-aid kit, and an oxygen tank were carried. Radios were present in some vehicles but their main use was to monitor police calls so that an ambulance might be first to arrive at an accident scene.

In some parts of the country, there were commendable volunteer services, but even when the volunteers received adequate training, it was frequently difficult for them to maintain proficiency in patient care with only an occasional opportunity to respond to emergency situations.

In addition, most hospitals were not geared to accept life-threatening emergencies, and often emergency departments were not adequately staffed, especially during the night hours of peak emergency influx when the medical staff consisted of "moonlighting" physicians or those with the least training in emergency care. There were no communication systems between ambulance attendants and emergency department personnel; ambulance attendants had little training; ambulances were inadequate in design and/or equipment; and hospital emergency departments were not functioning as they should —all a far cry from a comprehensive emergency medical care system.

Tragically, some of the types of services just described still exist today. In some cities, animals receive better emergency care than citizens, in that radio dispatched vehicles with well-trained personnel are available for emer-

gency calls for pets (21). It is currently estimated by the National Highway Traffic Safety Administration (NHTSA), that only 30 to 35% of the communities in the United States have what is considered adequate emergency medical services. This is a healthy and promising increase over percentages of even 2 to 3 years ago, yet our national accident death rate, although slightly reduced in 1974, was still over 100,000 for that year.

In spite of the improvement:

1) Accidents are the leading cause of deaths among all persons ages 1 to 38 years.

2) Accidents are the fourth leading cause of death for all ages.

3) Motor vehicles are the leading cause of accidental deaths from age 1 to 75.

4) In 1974, there were 105,500 accidental deaths in the United States, down 10% from 117,000 in 1973.

5) Approximately 46,200 people died from traffic accidents in 1974—since 1900, almost twice as many people have been killed in traffic accidents in the U.S. as have been killed in all the wars the country has been engaged in.

6) Currently, over 11 million U.S. citizens are physically impaired each year by accidental injuries.

7) Accident costs have risen to approximately $43.3 billion per year.

8) The medical load due to accidents involves more than 14 million bed disabling injuries annually, and approximately one out of every eight beds in general hospitals in the U.S. is occupied by an accident victim.

9) Seventy per cent of deaths due to motor vehicle accidents occur in rural areas (25, 26).

These shocking facts are a reflection of the deplorable state of our emergency medical services system. Had there not been organizations such as the American National Red Cross, the U.S. Bureau of Mines, the International Rescue and First Aid Association, the Ambulance Association of America, the National Ski Patrol, the Committee on Trauma of the American College of Surgeons (ACS), the Committee on Injuries of The American Academy of Orthopaedic Surgeons (AAOS), and individual volunteer ambulance and rescue organizations, these statistics could be even more disastrous. It was through the efforts of these groups that some semblance of organization and training were maintained during a period when national leadership and national standards for operation of emergency services were lacking.

In the past few years, a monumental amount of work has been done by representatives of medicine and government to improve emergency medical services. At times these groups appeared to be going in different directions, but now they seem to be more coordinated toward their common goal.

Organized medicine has undoubtedly been a major stimulus in improving emergency medical care. The American College of Surgeons' Committee on Trauma, established in 1922, has been dedicated to improving trauma care delivery. Before 1960, ACS regional committees provided numerous courses for ambulance attendants, and, in 1957, these committees initiated a series of annual trauma courses for physicians (17). Other College contributions included the publication of "Essential Equipment for Ambulances," which became a nationally accepted standard (3), training programs for emergency medical technicians, and numerous films, publications, slide sets, etc. for upgrading emergency medical care.

The Committee on Injuries of the American Academy of Orthopaedic Surgeons conducted its first course for ambulance and related personnel in 1965. From then until 1970, this committee offered 10 to 15 courses per year, providing training for approximately 2,250 persons annually. The Trauma Committees of the ACS and the AAOS have also sponsored courses for physicians and emergency department nurses in emergency medical care and forums on the organization of emergency departments.

That patriarch, the American Medical Association, through its Commission on Emergency Medical Services and its vast arms of medicine, has pulled medical resources together as perhaps never could have been done by any one of the involved medical organizations alone.

Probably one of the single most provoking stimuli to improve emergency services was the 1966 publication of *Accidental Death and Disability: The Neglected Disease of Modern Society* (10) by the Division of Medical Sciences, National Academy of Sciences/National Research Council, which explicitly outlined the severity of the situation. It stressed the difference competent initial emergency medical care, efficient transportation, and active treatment could make in survival rates among the critically injured. Its publication spurred the progress we report in this paper.

A 1965 report from the President's Commission on Highway Safety (established in 1946) proffered emergency medical care and transpor-

tation of the sick and injured as one of its community action programs, resulting in inclusion of Emergency Medical Services as Standard 11 of the 18 in the Highway Safety Act of 1966. States were directed to demonstrate intent to develop an effective emergency medical services program covering the eight elements of Standard 11 or be subject to loss of up to 10% of their federal highway construction funds. The program was administered by the Secretary of Transportation and involved the U.S. Department of Transportation–National Highway Traffic Safety Administration (DOT-NHTSA) which published guidelines for implementation of Standard 11 in its *Highway Safety Program Manual. Vol. 11, Emergency Medical Services* early in 1969 and supplemented in 1971 (39, 40).

Before the passage of the Highway Safety Act, the majority of ambulance services in the United States provided little more than transportation of the sick and injured. Only 48% of the estimated 200,000 ambulance and rescue personnel received training comparable to an advanced Red Cross level; many had no training at all. Only 46% of the 26,500 ambulances were equipped with the minimal equipment recommended by the American College of Surgeons. Thirty-five per cent of the ambulances had two-way radios but less than five per cent of those were capable of communicating with the hospital emergency department staff. Only six states offered, on a statewide basis, standard training courses for ambulance and rescue personnel, and none were equivalent to what is now considered "basic" training; i.e., the NHTSA 81-hour Emergency Medical Technician (EMT) course. Only four states had legislation regulating and setting standards for ambulance service operations, and only six states had an organization in their State Department of Health with delegated responsibility for the administration of its emergency medical services program. It is no surprise that Congress passed the Highway Safety Act which charged the DOT-NHTSA with the responsibility for assisting the states in correcting these deficiencies.

Many of these deficiencies have been corrected. All states and the District of Columbia and Puerto Rico have delegated to a full-time staff the responsibility of administering this vital program. Forty-seven states have adopted the NHTSA 81-hour EMT training course. The remaining states have established an equivalent course. Over 150,000 people have received the 81-hour training or its equivalent. Seventy-eight per cent of the ambulances have two-way radio communication capability. Sixty-five per cent now carry the essential equipment. This latter figure would be higher except for the fact that many commercial services in metropolitan areas do not carry long backboards, which, together with extrication equipment, are carried by fire departments that respond along with the ambulance to traffic accidents. Thirty-five states now have legislation providing for regulation of ambulance service operations, and 20 of those also have regulations covering advanced emergency care techniques carried out by EMT's under physician direction. The efforts of the DOT-NHTSA have been, and still are, a major contribution in improving emergency medical services in the United States.

From the innovative mind of Walter A. Hoyt, Jr., M.D., then Chairman of the Committee on Injuries of the American Academy of Orthopaedic Surgeons, work was initiated in 1967 to develop a comprehensive text to be used in emergency medical care courses. *Emergency Care and Transportation of the Sick and Injured*, five years in the compiling, has become a standard text for many of the nation's ambulance and rescue training courses. Its contributors encompass The American College of Surgeons, The American Academy of Orthopaedic Surgeons, The American Medical Association, The American National Red Cross, The Department of Transportation, The United States Public Health Service, The National Academy of Sciences/National Research Council, the United States Army Medical Corps, and many others (1).

In 1968, a special Task Force of the Committee on Emergency Medical Services of the National Academy of Sciences/National Research Council produced *Training of Ambulance Personnel and Others Responsible for Emergency Care of the Sick and Injured at the Scene and During Transport*, an attempt to standardize on a national level training requirements of ambulance attendants and others providing emergency medical care and services (11). Until then, the greatest degree of uniformity of training was in the courses conducted by the American College of Surgeons and the American Academy of Orthopaedic Surgeons.

In 1969, the DOT-NHTSA awarded Dunlap and Associates, Darien, Connecticut, a contract to develop a standardized course of instruction,

based on the recommendations in the above NAS/NRC publication. Using the preliminary draft of the AAOS emergency-care text and working with a number of knowledgeable people, the contractor devised and tested one of the first comprehensive courses of instruction designed specifically for ambulance services. The final product included a course package under the title, *NHTSA Basic Training Program for Emergency Medical Technician-Ambulance*, which consisted of Instructor's Lessons Plans, a Course Guide and Course Coordinator Orientation Program, and Concepts and Recommendations (29–31). In 1971 the DOT-NHTSA further implemented recommendations of the NAS/NRC through publication of *Instructor's Lesson Plans* and a *Course Guide* for Refresher EMT training (42, 43). It is now agreed that, after completion of the Basic course, an EMT should have periodic refresher instruction and/or continuing education to keep him current on the latest techniques in emergency medical care and to develop expertise in the use of new emergency care equipment (5).

Early in 1972, the AAOS Committee on Injuries made available a set of 1,600 35-mm slides and syllabus to accompany the Academy's *Emergency Care* text and the NHTSA Basic and Refresher Courses. This slide set was designed to complement existing visual aids and to aid instructors in the EMT training programs.

A number of other emergency care texts and training packets were produced in this period. *Emergency Victim Care*, from the Ohio Trade and Industrial Education Service, Columbus (28), and *Emergency Care*, published by the Robert J. Brady Company (14), were among those released in 1971 which received wide attention.

In May, 1969, an Airlie House Conference on Emergency Medical Services was co-sponsored by the Committee on Trauma, ACS, and the Committee on Injuries, AAOS. The Division of Emergency Health Services of the U.S. Department of Health, Education, and Welfare's Health Services and Mental Health Administration also provided substantial assistance and support for this major conference where 53 representatives of American medicine and government participated, discussing all aspects of emergency medical services. Their goal was development of basic definitions of care and establishment of workable guidelines for rendering emergency care. The group was divided into four Task Forces: Ambulance Services, Personnel and Education, Emergency Facilities, and Administration. The report of this conference has proven to be a valuable document: its valid proposals are being implemented today on a nationwide scale (2).

Ambulance Design Criteria, prepared in 1969 as a report to DOT-NHTSA by the Committee on Ambulance Design Criteria, was designed to complement the NAS/NRC's *Medical Requirements for Ambulance Design and Equipment* published in 1968. This document recommends design standards, including size, shape, color, ground clearance capability, electrical systems, environmental controls, emergency equipment, etc. It outlines the specific requirements of all components and is a perfect guideline for use in the design, planning, and development of vehicles to be used in an emergency medical service (23). The ambulance industry is to be commended in that the majority of providers are now building vehicles according to these criteria. The NHTSA has been a primary instigator in bringing this change about, first making it mandatory that matching federal funds were expended only for vehicles meeting design criteria and, subsequently, with the General Services Administration, developing Federal specifications applicable to all Federal procurements, leases, and State implementation of Standard 11 (16).

In 1970, through the joint endeavors of the Departments of Defense, Health, Education and Welfare, and Transportation, the MAST (Military Assistance to Safety and Traffic) Program was established in five demonstration areas. This project explored the feasibility of utilizing military helicopters and service paramedical personnel in civilian medical emergencies, including highway accidents. This test program demonstrated that military resources can effectively augment local EMS systems, and soon legislation provided for expansion to many additional areas across the United States (20). As of April, 1975, there were 22 MAST sites in operation and almost 5,000 patients had been transported in more than 9,000 flight hours.

In June, 1970, a National Registry of Emergency Medical Technicians (originally Registry of EMT's-Ambulance) was organized. While most states were developing their own standards, the Registry was formed to unify educa-

tion, examinations, and certification of EMT's on a national level. The American Medical Association, Employers Insurance of Wausau, and The Ambulance Association of America provided no-interest unsecured loans to this non-profit organization to begin operation. Seven organizations providing ambulance service throughout the country worked for National Registry establishment as did many interested physicians. Initially, written and practical examinations were given to the candidate EMT's who had varying levels of experience in emergency care. However, since January 1, 1973, candidates have been required to complete successfully the DOT-NHTSA 81-hour EMT training course or its equivalent. Biennial evaluation, re-examination where necessary, and published regulations for revocation of certificates are also provided. As of June 20, 1975, 35,501 EMT's have qualified and received certification; an additional 4,098 are in the process of being examined.

J.D. Farrington, M.D., Chairman of the Registry's Board of Directors, has written, "The Registry is a great beginning in the improvement of ambulance services nationwide. Long a dream in the minds of many providers of ambulance services and a few physicians, it is now an established fact. Uniform training will result. The stature of the EMT will be improved, possibility of advacement is present; i.e., there is no reason why in some hospitals an EMT could not be in charge of the emergency department, freeing the Registered Nurse for duty in patient care elsewhere in the institution. The ambulance service field should attract more career-minded individuals, particularly the former medical corpsmen with field experience in the armed services, who in the past have been absorbed by industry. The ambulance services of the country are a vital part of the EMS system and are, in reality, an arm of the hospital emergency department extended to the critically ill and injured" (13, p. 5).

In February, 1971, the AMA Commission on Emergency Medical Services conducted another important conference, the proceedings of which were published as *Categorization of Hospital Emergency Capabilities*. This document was designed to enable hospitals to measure their capabilities in providing effective emergency care. Guidelines for hospital emergency capabilities were provided for comprehensive emergency service, major emergency services, general emergency services, and basic emergency services, and are being extensively used today (6). The second Categorization Conference was sponsored by the Department of HEW-Emergency Medical Services Division in September, 1975, and reports have not been released as of this writing.

In an effort to tie all of the previously outlined developments together, the Committee on Injuries of the AAOS hosted a National Workshop on the Training of Emergency Medical Technicians in July, 1971. Representatives included those from ten organizations of American medicine and from federal agencies involved with emergency medical services. The proceedings of the Conference, reached by three task force groups meeting in separate and general sessions, were published by NHTSA in 1972, and "Recommendations and Conclusions for an Approach to an Urgent Problem" were summarized in the document:

"1) The Task Force endorses and approves the programs developed from *Training of Ambulance Personnel and Others*, as recommended by the NAS/NRC and implemented by the National Highway Traffic Safety Administration and the American College of Surgeons. This includes the *Basic Course* and *Refresher Training Curriculum for Emergency Medical Technicians-Ambulance* and the *Instructor's Basic Refresher Lesson Plans.*

2) The Basic Course should be organized on a regional or district basis in cooperation with the State or provincial Emergency Medical Service Coordinator.

3) The book *Emergency Care and Transportation of the Sick and Injured*, written by the AAOS, should be recognized as a standard text for training the EMT in the NHTSA Basic and Refresher Courses.

4) The AAOS text on *Emergency Care and Transportation of the Sick and Injured* and the Lesson Plans should be expanded in certain areas and be constantly reviewed and updated.

5) A physician should be responsible for the overall excellence and completeness of the Basic and Refresher Courses. He should review and make recommendations to appropriate agencies for updating the courses on a regular basis.

6) For the most part, the physician should teach that part of the course which requires an in-depth understanding of altered physiologic states. However, in certain situations, the materials may be presented by lay instructors, but a physician must be present for all medical teaching sessions. Lay instructors can be used to teach such non-medical technical subjects as rescue, fire suppression, and communications.

7) There should be an orientation program for course coordinators to familiarize the physician and

others responsible for the conduct of the training course with background on such things as training, objectives, or scope.

8) There should be an instructor's training program on teaching methods for physicians and key instructors.

9) The advanced Red Cross First Aid Certificate, or its equivalent, should be encouraged as a prerequisite for the Basic Course. However, candidates with interest, experience, and/or training should not be prohibited from entering the course because they do not have that certificate.

10) There is a need for an in-depth training course in light, medium, and heavy rescue and extrication.

11) Workshop participants should endorse the set of 35 mm teaching slides on emergency medical care and the syllabus developed by the AAOS. It is further recommended that an audio component be developed for this set to make sound/slide programs for the individual 25 Lesson Plans included in the 81-hour Basic Course. This would enable the EMT to use the programs for self-education.

12) An EMT evaluation should be conducted through the Registry of Emergency Medical Technicians-Ambulance, in cooperation with the EMS coordinator in each state" (27).

The frequent meetings and conferences of this period contributed to a growing national awareness of profound problems inherent in existing emergency medical care. On January 20, 1972, in his State of the Union Message, President Nixon directed the Department of HEW to develop new ways to organize emergency medical services. HEW moved quickly and within the same year it was announced that $8.5 million in contracts had been awarded to five areas for development of model EMS systems. Congressional action over the next year and a half resulted in the Emergency Medical Systems Act of 1973 (P.L. 93-154), which created a new emergency medical services program in HEW (22). The Act amended the Public Health Service Act of 1944 by adding a new *Title XII-Emergency Medical Services* to "provide assistance and encouragement for the development of comprehensive area emergency medical services systems."

The first three sections of the Act define terms, authorize grants to and contracts with eligible entities for feasibility studies, planning, establishment and initial operation, and expansion and improvement of emergency medical services systems, and provide that special consideration be given to systems that will coordinate with statewide emergency medical services systems. Activities of these sections (1201-1203) are administered by David R. Boyd, M.D., Director of EMS Programs, Health Services Administration, DHEW. Further sections provide for grants in support of research in emergency medical techniques, methods, devices and delivery, requirements for funding, and authorization of appropriations administered by Laurence Rose, M.D., HRA. In fiscal year 1974, the U.S. Public Health Service, under the EMS Systems Act, provided $26,600,000 in funding. Pending budgets call for $37,000,000.

Communication systems have greatly improved in the past few years and the space age has given impetus to the use of telemetry. In the early 1970's, pilot programs tested the feasibility of advanced emergency medical care supplied in the field by EMT's under physician direction. Advanced modalities included defibrillation, intravenous fluids, and drugs, based on telemetered electrocardiographic tracings and voice communication with medical personnel in the hospital and proved to be of real value and in upgrading emergency care. By March, 1972, the Federal Communications Commission (FCC) had published rules providing emergency medical services with exclusive telemetry and associated dispatch channels in the ultra-high frequency range. Also, during this developing period, the Robert Wood Johnson Foundation supplied $15,000,000 for 45 EMS communications projects.

Further rules for a unified and comprehensive medical radio services category were set forth by the FCC in July of 1974. These rules provide for flexibility in the implementation of an EMS communications capability to permit effective intercommunication among all EMS participants, allowing citizen access, medical and vehicle coordination, and multi-channel allocation of 20 frequencies in the UHF band. Frequencies are now available for dispatching, providing hospital or medical contact, and transmitting biomedical telemetry to all EMS users on a common basis.

Major manufacturers of communications equipment continue to develop smaller, more portable equipment for use by the EMT. Current sophistication includes availablity of exclusive frequencies for paging, multiplexing, which means simultaneous voice and ECG transmission, the use of repeaters which permit the EMT to communicate via the ambulance even when he is in a building or at the scene of an

emergency remote from the ambulance, and the use of mobile relays.

More efficient ways of handling emergency calls are being looked at. Emergency telephone numbers have been used for years in Europe. Great Britain has had the number 999 since 1930. In Sweden, the number is 9000; in Belgium, 900; in Denmark, 000; in Russia, 03. In the United States the number 911 is already utilized in many cities to summon many kinds of aid—fire, police, and medical emergency—through a central dispatch system, and nationwide use is being strongly urged.

The DOT-NHTSA has published many guides for community planners and educators in emergency medical services in the past five to six years (8, 32, 33), some of these in cooperation with other government agencies and with input from EMS personnel in the field. An Advanced Training Program for EMT's, a 480-hour course recommended by the NAS/NRC in 1970, was developed by the Springfield Hospital Medical Center, Springfield, Massachusetts, and Dunlap and Associates, Darien, Connecticut, under a contract from the DOT-NHTSA in October, 1972. Curriculum materials were field-tested by more than 40 agencies throughout the United States and evaluations and recommendations of the testing agencies resulted in a second contract being awarded in June, 1975, to the Department of Anesthesiology/Critical Care Medicine at the University of Pittsburgh to develop a definitive course. The final course package (Lesson Plans, Course Guide, and visual aids) is scheduled for publication as a national standard course in 1976 and will qualify the EMT-Paramedic to carry out more advanced procedures, such as starting intravenous infusions, giving medications, decompression of tension pneumothorax, tracheal intubation, cricothyrodotomy, defibrillation, and using telemetry equipment, independently or with guidance and supervision provided by two-way voice communication with physicians. Another important facet of EMT training has been provided with development of a standard two-day *EMT Crash-Victim Extrication Training Course* (44, 45) and a different aspect is covered with the publication of NHTSA's *Crash Injury Management Course* (34–36). The latter is based on the premise that a law enforcement officer who is patrolling the roadway in a radio-equipped car is frequently the first official at the scene of an accident, and the course material was prepared to aid in planning and conducting a training program in emergency medical care for the first responder, usually the police and highway patrol.

As emergency medical systems became sophisticated and the qualifications, training, and certification of the EMT were standardized, the need to classify EMT's according to level of training received and responsibility held became more apparent. The term EMT itself has been the subject of endless debate, but it has become familiar with use and time and has been adopted by the AMA Commission on Emergency Medical Services, DHEW, and DOT-NHTSA, as the official title. The National Registry of Emergency Medical Technicians has standardized the following basic levels of competency:

EMT. This person has satisfactorily completed the basic training program of DOT-NHTSA or its equivalent and works in a fixed area, such as an emergency department, CCU, ICU, recovery room or some other area in a hospital, or as a safety engineer in a plant. There are 4,810 individuals registered in this category as of August 25, 1975.

EMT-Ambulance. This person has satisfactorily completed the same basic training program and is engaged in ambulance service. As of August 25, 1975, 42,853 persons have passed the certifying examination and are registered.

EMT-Paramedic. This person has satisfactorily completed an advanced course of instruction is sophisticated emergency care at all levels. Included in the course is advanced life support covering the use of IV fluids, the use of cardiac drugs and defibrillation under physician direction, intubation, using telemetry equipment, etc.

Many of the current Basic EMT's, Ambulance and Non-ambulance, have successfully completed advanced training, and the term EMT-Paramedic is being used with increasing frequency.

Formal standards and a mechanism for registration are projected for mid-1976. In January, 1975, the National Registry submitted a brief to the AMA Committee on Health Manpower requesting recognition for the EMT-Paramedic as a bona fide health occupation. The brief describes a projected scope of duties, stresses a need for standard education, lists background requirements, potential employment, professional certification and re-registration, and the requirement that all complete the National Registry examination to insure standard geographical and professional recognition. The AMA Committee accepted and approved the

brief in April, 1975, listing the EMT-Paramedic as a bona fide emerging health occupation.

Whether EMT's function in hospitals, within municipal government (such as fire or police departments), as volunteers, or in private ambulance services, the training offered to EMT's will be essentially the same, varying only in levels of expertise. It is hoped that the time will come when, nationally and in each community, EMT's will be recognized on a career status level comparable to those in the Fire or Police Departments or the nurses and technicians in hospital emergency departments.

The community status of individuals dealing in Emergency Medical Services is important. One of the oldest organized emergency medical care services in the world is still in operation in Florence, Italy. La Misericordia di Firenze (The Merciful of Florence) was founded in 1240. In this system, new volunteers are indoctrinated with an elaborate ceremony and presented with special black robes. They care for the sick and injured, transport the dead, keep statistical records, and are traditionally held in high esteem by the people of the city, earned by the quality of the service provided (15).

We are now within reach of a comprehensive emergency medical service system in the United States. The achievements of the past 9 years assure that such a service can be available to all citizens. These include:

1) Establishment of training curriculum standards and guidelines for EMT's, including the Basic and Refresher Courses.

2) Initiation of the EMT-Paramedic training course.

3) Availability of standard texts and visual aid material for training.

4) Emergency vehicle design and equipment standards.

5) State coordinated training programs.

6) The MAST project.

7) The National Registry of Emergency Medical Technicians.

8) Guidelines for categorization of hospital emergency capabilities.

9) Improved communications and telemetry capabilities.

10) A standard course on extrication from vehicle accidents.

11) Development of model emergency medical sevices systems.

12) Major federal support through the Department of Transportation, the Department of Health, Education and Welfare, and the Department of Agriculture.

13) Official agencies in all state governments with delegated responsibility to administer and coordinate the emergency medical services program.

Much has been accomplished; much still needs to be done. Nationwide, emergency medical service remains one of the weakest links in the delivery of health care. Where it is good, it has become very good, but where it is bad, community councils, political officials, physicians' groups, and other concerned citizens need to band together, use the guidelines and requirements now available and implement these standards in their own areas.

Local governments must accept responsibility for providing emergency medical services as they do fire and police services. The greatest threat to the average citizen in his own community today is not a fire in the home or a criminal in the street. The greatest threat is the inability to obtain adequate emergency medical care at the time of need—when knowledge, skill, and minutes can save lives.

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ACS CONTINUING EDUCATION COURSE

SPRINGFIELD, ILLINOIS

MAY 3–5, 1976

A three-day continuing education course on emergency care of the injured will be held May 3, 4 and 5 at the Forum XXX, Springfield, Illinois.

The course is sponsored by the American College of Surgeons Committee on Trauma, and co-sponsored by the Southern Illinois University School of Medicine and the Illinois Chapter of the American College of Surgeons.

C. O. Metzmaker, MD, FACS, Associate Professor, Division of General Surgery, School of Medicine, Southern Illinois University, is coordinator of the seminar.

Advance registration forms may be obtained by writing to Dr. Metzmaker, Department of Surgery, St. John's Hospital, Room 386W, Springfield, Illinois, 62702, or to the ACS Trauma Division, 55 E. Erie, Chicago, Illinois, 60611.

The course is open to all physicians, but registration is limited to 200. The course is accredited for 19 hours (Category I) toward the Physician's Recognition Award by the American Medical Association and 19 hours of Continuing Education by the American Academy of Family Physicians.

The fee for the course will be $150, except for interns and residents, who pay $60.

Among the topics to be covered by members of the School of Medicine faculty and visiting faculty are: "Epidemiology of Trauma"; "Scalp and Facial Avulsion Injuries"; "Injuries of the Eye"; "Lawn Mower Injuries"; "Animal Bites"; "Electrical Burns of the Mouth"; and "Prevention of Athletic Injuries".