

The delivery of emergency medical care as we know it today was born as a result of numerous milestones. The following are several of those:

1487 Siege of Malaga (Spain): First recorded use of an ambulance (cart) was by the military. It was used to remove wounded from the field of battle; however, there was no attempt at rendering medical care.<sup>1</sup>

1800s Field ambulance and medic: One of Napoleon's chief surgeons designed a vehicle, staffed with a medial attendant, to go directly onto the field of battle, treat wounded, and transport them to a field hospital.<sup>1</sup>

1860s US field ambulance and medic: First recorded use of a field ambulance and medic in the US was during the War Between the States (Civil War).<sup>1</sup>

1865 First civilian ambulance services: The Commercial Hospital of Cincinnati, Ohio was the nation's first civilian ambulance service. However, by 1869 there was a proliferation of hospital ambulance services.<sup>1</sup>

1900 Interns on the ambulance: Hospitals, by this time, were routinely dispatching ambulances with an intern on board. This was the first attempt at providing quality care both on the scene and while transporting a patient.<sup>2</sup>

1941 Funeral homes, commercial services, and volunteer rescue units: Physicians, during World War II, were routinely drafted into the military to support the war efforts. Unable to adequately staff ambulances with qualified medical personnel, hospitals began to abandon their emergency services. It was for this reason that funeral homes, commercial services and volunteer rescue units began to offer community EMS.<sup>2</sup>

1964 National call to make EMS programs a priority: The President's Commission of Highway Safety calls for emergency care and transportation of the sick and injured as one of its community action programs.<sup>3</sup>

1965 Need for EMS given national attention: "Accidental Death & Disability: The Neglected Disease of Modern Society" is published by the Division of Medical Sciences, National Academy of Sciences/National Research Council (NAS/NRC). This publication explicitly outlined the severity of the emergency medical care situation in this country as follows: 3, 4

1. There was a lack of uniform and adequate Federal, State and Local laws and standards concerning EMS (only six states had written standards).
2. Both the ambulance and equipment carried on board (if any at all) were of poor quality and design. The vehicle offered little room for patient, attendant or equipment.

3. Radio communications between emergency services and hospital was seriously lacking. Only 5% of the nation's ambulances have radio contact with a hospital.
4. Personnel were sadly lacking in training for emergency care of patients. Only about 50% of the nation's EMS personnel had even American Red Cross certificates and many had no training at all.
5. Hospitals themselves were staffing emergency rooms with part-time physicians, who may or may not have training or experience in emergency care or trauma.

1966 National law addressing development of EMS systems: Public Law 89-563 "National Traffic and Motor Vehicle Safety Act of 1966" was the first national effort to focus on improving deficiencies in EMS systems. This Act mandated the following:<sup>5</sup>

1. Federal Department of Transportation (DOT) promulgates minimum standards for provision of care for accident victims.
2. States can be penalized up to 10% of their Federal Highway funds if they do not comply with this law.

Note: The emphasis was on victims of highway traffic accidents.

1966 EMS guidelines: The federal [DOT/ National Highway Traffic Safety Administration \(NHTSA\)](#) published the first guidelines (Highway Safety Act, Standard 11) for development of EMS systems. It's interesting to note that the first publication of these guidelines called for raising the training of EMS personnel to the highest level possible - American Red Cross Advanced First Aid.<sup>6</sup>

1967 Textbook for EMS Personnel: The American Academy of Orthopaedic Surgeons (AAOS) began creating "Emergency Care and Transportation of the Sick and Injured." This is the modern EMS system's first well-designed and authoritative textbook for EMS personnel.<sup>7</sup>

1968 Training standards for EMS personnel: The Task Force of the Committee on EMS of the NAS/NRC is the first to attempt standardizing, on a national level, basic training requirements of EMS personnel. The result is a series of presentations, slides, manuals, etc. from Dunlop and Associates called "Training of Ambulance Personnel and Others Responsible for Emergency Care of the Sick and Injured at the Scene and During Transport."<sup>8, 9</sup>

1969 Emphasis of EMS expanded to include medical emergencies: Up until this time, the focus of EMS systems was on treatment and transportation of accident victims. In great part, this was because the original studies and Acts were through the eyes of highway safety and transportation. However, this singular focus, on highway traffic injuries changed at the Airlie House Conference on EMS. The conference called for expanding the scope of EMS and developing basic definitions of care and establishing workable guidelines for rendering care.<sup>10</sup>

1969 Medical equipment and vehicles greatly improved: The Committee on Ambulance Design Criteria published a report "Medical Requirements for Ambulance Design and Equipment" which it submitted to DOT-NHTSA. This report called for sweeping changes in both the design of vehicles and medical equipment carried aboard.<sup>11</sup>

1970 Helicopter use explored: Five demonstration areas were selected to explore the feasibility of using military helicopters and service paramedical personnel in civilian emergencies (Military Assistance to Safety and Traffic or MAST).<sup>12</sup>

1970 Unified EMT exams and certification: The National Registry of Emergency Medical Technicians was established to attempt unification of exam and certification EMT on the national level.<sup>13</sup>

1971 Hospital emergency guidelines: The American Medical Association's Commission of EMS publishes "Categorization of Hospital Emergency Capabilities." It established hospital guidelines for providing comprehensive emergency medical care and also the means to measure and classify the capabilities of a hospital for providing emergency care.<sup>14, 15</sup>

1971 EMT training: The Committee on Injuries of the AAOS hosts a national workshop on the training of EMTs. It ties previous efforts together by making the following endorsements and recommendations:<sup>16</sup>

1. Basic and refresher training course,
2. EMS be organized on a regional or district basis with state or provisional coordination,
3. Standard texts (Emergency Care and Transportation of the Sick and Injured) by AAOS,
4. Text be revised and continuously updated,
5. Physicians be responsible for overall excellence and completeness of the course,
6. Physicians teach the course (whenever possible),
7. Instructors receive special training in an "Instructors Training Course",
8. Advanced Red Cross First Aid Certification encouraged as a prerequisite to basic EMT,
9. Courses on heavy equipment and extrication be offered, and
10. Evaluation of proficiency be through the National Registry of EMTs.

1972 Demonstration areas: The US Department of Health, Education and Welfare (DHEW) was directed, during President Nixon's State of the Union Message, to develop new ways to organize EMS. Five demonstration areas were awarded \$16 million.<sup>17, 18</sup>

1973 EMS Systems Act passed: Public Law 93-154 "EMS Systems Act of 1973" amends the Public Health Services Act of 1944 by adding Title XII and EMS was now free to develop a comprehensive system:<sup>19</sup>

1. Terms are defined,
2. Grants and Contracts are authorized for feasibility studies,
3. Perhaps of greatest import, monies were made available nationally to plan, establish and provide initial operation of EMS systems,
4. Provisions were made to expand and improve existing EMS systems,
5. EMS was placed under the Director of EMS Programs, Health Services Administration, US Department of Health, Education and Welfare.
6. Research grants were provided, and
7. Requirements for funding were set forth.

1973 Florida EMS Act passed: Chapter 401, Florida Statutes "Emergency Medical Services; General Provisions" is passed which establishes the general framework for Florida's EMS in line with federal guidelines.<sup>20</sup>

1974 EMS System Development Guidelines: The DHEW published comprehensive guidelines for developing and implementing EMS systems. These guidelines addressed basic operations through research and evaluation of system performance, including impact of EMS on mortality and morbidity.<sup>21</sup>

1976 Renewal & continued funding of EMS at the Federal level.

1979 Renewal & continued funding of EMS at the Federal level.

1982 Federal Funding of EMS ends: Authority and responsibility for EMS was vested in the states and local governments.

1983 EMS for Children: Public Law 98-555, "The EMS for Children Act" is passed.

Generally, EMS systems focus on a major immediate need in the general public health field. EMS systems, as they relate to the care of life threatening or seriously injurious injuries and medical events, are one of the most important areas in the health care field.

The knowledge and services offered by EMS systems has benefits for individuals requiring comprehensive emergency medical care. Early research clearly established that EMS systems reduce preventable mortality and morbidity.

Prevention activities also are having a positive effect, as evidenced by reductions in the number of motor vehicle fatalities over the last ten years. EMS system are still evolving, and becoming more important in prevention activities.

EMS systems have evolved and are now accepted by public health community and public primarily because of their help in reducing premature death and disability.

## **Resources History of EMS Systems**

1. "Ambulance" World Book Encyclopedia I (1974): 387
2. Stewart SN "Emergency Medical Service – An Emergency" A paper submitted for graduate credit at the University of Oklahoma Health Science Center, Health Administration Class 5103 (March 1976): 3.
3. Rockwood Jr. CA., Mann CM, Farrington JD, Hampton Jr. OP, Motley RE "History of Emergency Medical Services in the United States" The Journal of Trauma 16 (April 1976): 299-301.
4. Accidental Death and Disability: the neglected disease of modern society" Division of medical Sciences, National Academy of Sciences/ National Research Council Washington DC 1966 (Revised April 1974).
5. Law of the 89th Congress "National Traffic and Motor Vehicle Safety Act of 1966" Public Law 89-563 Washington DC 1966.
6. Highway Safety Program Manual, Vol. 11 "Emergency Medical Services" National Highway Safety Administration, US Department of Transportation, Washington DC 1977.
7. Hyatt GW "History of the Committee on Injuries American Academy of Orthopaedic Surgeons" Emergency Medicine Today Vol. 3. No. 3 March 1974.
8. Burnette WE "Historical Background of the AMA Commission on Emergency Medical Services" Emergency Medicine Today Vol. 2 No. 7 July 1973.
9. Seeley SF "Summary Report of the Task Force on Ambulance Services" Division of Medical Sciences, National Academy of Sciences, National Research Council Washington DC April 1967.
10. American College of Surgeons, Committee on Trauma and American Academy of Orthopaedic Surgeons, Committee on Injuries: Emergency Medical Services, Recommendations for an Approach to an Urgent Problem Proceedings of the Airlie Conference on Emergency Medical Services, Airlie House, Warrenton VA
11. "Ambulance Design Criteria" US Department of Transportation, National Highway Traffic Safety Administration, Part I (Revised, January 1973): 1.
12. Gonsalves D "Historical background of emergency medical services in the United states" Emergency Care Quarterly 1988;4(3):77.
13. Farrington JD "The Registry of Ambulance Attendants" Emergency Medicine Today Vol. 1 No. 1 March 1972.
14. Garvey JC "Categorization of Emergency Capabilities" Hospitals 47 (May 1973): 1139
15. Rockwood Jr. CA., Mann CM, Farrington JD, Hampton Jr. OP, Motley RE "History of Emergency Medical Services in the United States" The Journal of Trauma 16 (April 1976): 305.
16. Gonsalves D "Historical background of emergency medical services in the United states" Emergency Care Quarterly 1988;4(3):77.
17. Gonsalves D "Historical background of emergency medical services in the United states" Emergency Care Quarterly 1988;4(3):77.
18. Special Report Neglected for Years, Emergency Medical Services Now Seem to be Catching on in the U.S. The Robert Wood Johnson Foundation, Princeton NJ Number Two 1977 8.

19. Law of the 93rd Congress "Emergency Medical Services Systems Act of 1973" Public Law 93-154 Washington DC 1973.
20. Chapter 401, Florida Statutes "Emergency Medical Services; General Provisions"
21. "Emergency Medical Service Systems: Program Guidelines " U.S. Department of Health Education and Welfare, Office of Emergency Medical Services, Washington DC 1974.