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A Brief History Of EMS And Its Present Multi-Tier Components.[1]

To fully understand the role that emergency medical service ("EMS") providers perform in today's complex healthcare system and the essential services EMS provides, an understanding of the history of EMS is essential.

Most historical accounts of the origins of EMS are closely associated with wartime medical developments. As noted by perhaps the best-known physician in history, "*he who desires to practice surgery must go to war.*" (Hippocrates [460 – 377 BCE].) Since then, EMS advances, including patient handling and transport, have been closely associated with the battlefield. As far back as the Greek and Roman eras, chariots were reportedly used to remove injured soldiers from the battlefield. The term "ambulance" can be traced

[1] This article was adapted from an Application for Leave to the Michigan Supreme Court in the matter of *Bartlasky v. CEMS*, et. al, in which the Court was faced with the question of whether the transfer of a patient on an ambulance stretcher should be considered "*medical treatment*" for purposes of the immunity afforded to EMS providers under Michigan's Emergency Medical Services Act, MCL 333.20975(1).

to the 15th century, when Ferdinand and Isabella of Spain commissioned medical supplies to be provided to troops in special tents referred to as "*ambulancias*."[2]

In 1794, during the French Revolution, Baron Dominique-Jean Larrey recognized that leaving wounded soldiers on the battlefield for days without treatment dramatically increased morbidity and mortality, weakening the fighting strength of the army. He instituted a system in which he trained medical personnel- *emergency medical services*- to remove injured soldiers from the battlefield. Similarly, in the United States, organized evacuation of wounded soldiers from the battlefield began during the Civil War when Dr. Jonathan Letterman, Medical Director of the Army of the Potomac, began using evacuation techniques involving a litter and cart.[3] Based on this experience, the first civilian-run, hospital-based ambulance service began in Cincinnati in 1865.[4]

The first municipally-based EMS system began in New York City in 1869. Then, in 1910, the American Red Cross began providing first-aid training programs across the country, initiating an organized effort to improve civilian bystander care. During World Wars I and II, further advances were made in EMS, although typically these were not

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[2] *Emergency medical services at the crossroads* / Committee on the Future of Emergency Care in the United States Health System, Board on Health Care Services. Institute of Medicine of the National Academies, 2007, pg. 31. https://nasemso.org/wp-content/uploads/EMS-at-Crossroads.pdf.

[3] A ***litter*** essentially is a stretcher with sides (or just a raised edge) and a removable head/torso cover. During the United States Civil War, horse-mounted litters were used to transport wounded soldiers from battlefields. Rear Admiral Charles Francis Stokes, retired Surgeon General of the Navy from 1910 to 1924, devised the Stokes stretcher. See https://en.wikipedia.org/wiki/Litter_(rescue_basket)

[4] Letterman, *Medical Recollections of the Army of the Potomac*, pp. 58-63. See also, *Providing for the Casualties of War: The American Experience Through World War II,* Rostker, Bernard D., 2013 The Rand Corporation at pp. 84-87.

replicated in the civilian setting until much later. Following World War II, city EMS activities were, for the most part, run by municipal hospitals and fire departments. In smaller communities, funeral home hearses often served as ambulances because they were the only vehicle capable of transporting patients quickly in stretchers. With the advent of federal involvement in EMS in the early 1970s and the articulation of standards at the state and regional levels, these EMS providers were gradually replaced by third-service providers, fire departments, rescue squads, and private ambulances.[5]

By the late 1950s, prehospital emergency care in the United States was still little more than first aid. Around that time, however, advances in medical care began to spur the rapid development of modern EMS. While the first recorded use of mouth-to-mouth ventilation had been in 1732, it was not until 1958 that Dr. Peter Safar demonstrated it to be superior to other modes of manual ventilation. In 1960, cardiopulmonary resuscitation (CPR) was shown to be efficacious. These two clinical advances led to the realization that rapid response of trained community members to cardiac emergencies could improve outcomes. The introduction of CPR and the development of portable external defibrillators in the 1960s provided the foundation for advanced cardiac life support (ACLS) that fueled much of the development of EMS systems subsequently.[6]

The Vietnam War brought an increased awareness of the importance of EMS, especially the signficance of bringing rapid pre-hospital care to the field. Unlike the Korean War, when injured soldiers were evacuated from the field and treated in "Mash Units" (as displayed in the popular TV program "M*A*S*H"), during the Vietnam War

[5] *Emergency Medical Services: At the Crossroads, Id.*

[6] *Id.*

treatment of injured soldiers was done in the field. The knowledge gained from that experience was brought back to the U.S. and formed the steppingstones to a modern EMS system in America employing advanced life support and other life-saving measures. The experiences and knowledge gained from the Vietnam War also led to the passage of the "Emergency Medical Services Act" by the U.S. Congress in 1973, providing the financial resources necessary to fund EMS regions across the country which ultimately led to the establishment of the components of the EMS system today.[7]

During the decades that followed, states, municipalities, and other local communities began implementing new models for the provision of ambulance service in their communities. These models were all influenced by studies documenting the importance of implementing rapid life-saving measures by EMS, such as early cardiac defibrillation. This led to the expansion of the role of fire departments and other first responders, as well as the advent of ALS in pre-hospital care.[8]

Today EMS systems across America employ the same structure and identical components. These components include public education of early recognition of an emergency and rapid access of EMS; a central dispatch center trained and equipped to receive 911 emergency calls and efficiently dispatch the appropriate level of EMS care necessary for each emergency call; and a rapid response by the EMS provider certified to provide the most appropriate level of care to address the emergency call.[9]

The EMS systems employed today in communities across America also operate a

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[7] *EMS Management: Beyond the Streets,* Fitch J.J., Keller R.A., Raynor D., Zalar C., Chapt.1 "A Brief History of Emergency Medical Services," pp 1-12.

[8] *Id.*, p 5.

[9] *Id.*, pp 6-12.

multi-tier response by several agencies, including a central dispatching center, a first responder agency (i.e., the fire department, police, or public safety department, etc.) and an ambulance agency providing advanced life support response. These systems also include non-emergency interfacility ambulance transports of patients whose medical condition necessitate the use of licensed life support agencies and EMTs for moving and transport of patients. The components of a medically-controlled transfer of a patient from one facility to another are as much "*in the treatment of a patient*" as is the administration of defibrillation and other lifesaving procedures employed by ambulance agencies and licensed EMTs and are precisely the type of functions and activities that our Legislature has sought to immunize.

In conclusion, the historical origins, as well as the battlefield advances in EMS, make clear that the "transport" of a patient, whether on a stretcher or an ambulance, is as much a part of the "treatment" of a patient as any other service EMS may provide.

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