

## **A Brief History of Pre Hospital Care**

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When you dial 911 for a sick or injured loved one, whom do you presume will walk through your front door and what level of care do you expect? Many would expect that all ambulances called to any emergency would have the highest level of care available and to be staffed with paramedics, but this is not always the case due to priority in funding and shortages of trained professionals. To become a skilled paramedic it takes experience, discipline, responsibility and training, and this may take many years to fulfill. To understand this profession you would have to start from the beginning with the history of ambulance care to the present and look at current trends to see where paramedics may be headed. This essay plans to do just that, and explain the driving force behind this progressive form of medicine.

Pre hospital health care has been around in one form or another for many years. The Romans had chariots with stretchers in the back to carry the dead or dieing off the battlefield. They had no surgical advancement or emergency room (ER) to intervene if they survived the trip. The world would have to wait for medicine to advance before a structured Emergency Medical Service (EMS) could develop into a practical and efficient machine. The French Military invented the world's first ambulance service in 1792 by Napoleons personal surgeon Dominique-Jean Larrey. "Named *ambulance volante* (flying ambulance), a corps of surgeons and nurses who went into battle with the men and tended to their wounds on the battlefield as far as was possible." Named *flying ambulance*

because they were on the battlefield with the flying artillery, these surgeons and nurses are the first skilled practitioners organized to treat patients, pre hospital, on record. Their model of pre hospital care revolves around bringing the hospital to the patient; the French and much of Europe still focus their practice on this system.

It wasn't until later that North America found the benefit of having an organized and structured pre hospital system. "One of the first civilian EMS services can be traced back to 1869, when Dr. Edward L. Dalton at Bellevue Hospital, then known as the Free Hospital of New York, in New York City started a basic transport service for the sick and injured". This of course was with horse drawn carriages. In 1870 "Prussian siege of Paris used hot air balloons to transport wounded soldiers. This was the first documented case of aero medical transportation." In 1899 "Michael Reese Hospital in Chicago began to operate an automobile ambulance which was capable of speeds up to 16 mph."

American historians claim that the first component of pre hospital care on scene began in 1928, when "Julien Stanley Wise started the Roanoke Life Saving and First Aid Crew in Roanoke, Virginia, which was the first land-based rescue squad in the nation." However the city of Toronto takes this claim stating "The first formal training for ambulance attendants was conducted in 1892." These services were of course very basic, as airway control techniques and CPR were not invented yet.

There is a history of fire department and ambulance service integration throughout the world and has created controversy over the companies motivation for taking on the role of EMS providers. Are their priorities focused towards patient care or as our buildings become increasingly more fire resistant are they trying to justify their existence, a survival tactic? One reason for integration was World War II in 1939.

Prior to World War II, hospitals provided ambulance service in many large cities. With the severe [e] manpower shortages imposed by the war effort, it became difficult for many hospitals to maintain their ambulance operations. City governments in many cases turned ambulance services over to the police or fire department. No laws required minimal training for ambulance personnel and no training programs existed beyond basic first aid. In many fire departments, assignment to ambulance duty became an unofficial form of punishment.

The use of helicopters for rapid evacuation of injured patients has become increasingly popular in metropolitan areas and has been attributed to saving many lives. This strategy of scoop and run is what the North American EMS system was originally based on. Developed during the Korean War (1950-1953) and reinforced, and somewhat perfected during the Vietnam War (1959-1975). Everyone remembers “Hawkeye” performing his skillful method of triage (also invented by Napoleon's personal surgeon Dominique-Jean Larrey) along side a chopper at the beginning of every episode of “MASH”, which consisted of a touch of a shoulder and who's painful wince proved most convincing. But we must trust our medical professionals are well trained and don't cut corners. It wasn't until the development of portable defibrillators and the perfection of CPR that we started to see the modern day lifesaver take form. “1959-Researchers at John's Hopkins Hospital in Baltimore, MD developed the first portable defibrillator as well as perfected CPR. The future of “ambulance drivers” was starting to change and their roles and responsibilities were becoming more complex. They were starting to establish their own profession, soon they would have a new title.

## **The Dawn of Paramedics**

Public perception of unqualified ambulance drivers clumsily packing people to the hospital has shifted towards professionally trained Paramedics caring for and treating critically ill patients. This new perception justifies the demand for this level of care in every community. The nations first paramedic program was developed to appease the ubiquitous cry for better pre hospital care. In “1969-The Miami, FL fire department started the nations first paramedic program under Dr. Eugene Nagel. The very first out-of-hospital defibrillation occurred shortly thereafter (the patient survived and left the hospital neurologically intact).” The paramedic image in 1971 was helped even further with a little fire department propaganda, a T.V series known to many (some obsessively) as Emergency. This positive public perception was the catalyst for the development of our current system. “Emergency contributed to changed public attitudes concerning the fire service and emergency medical care. At the start of the show there were only 12 medic units in the entire country [USA]. Four years later at least 50% of the population of this entire country was within 10 minutes of a medic unit.” Its no mistake why fire departments get top pay and priority funding, they realized the necessity of public support and developed a “brand image.” Like branding a product for sale in a department store, it is this positive image with the communities and doctors that paramedics need to focus on for trust to develop. Then an increase in support, funding, and autonomy with patient treatment will follow.

## **Current Trends and a Prediction for the Future**

Medicine is ever changing in a process of scientific evidence-based research with the goal of providing cost effective treatment with optimal patient outcomes. Paramedic medicine is a direct reflection of the medicine being developed in the hospitals and is now being included in the hospital based research. Paramedics are being trusted more and more with their ability to make a clinically sound diagnosis and formulate an ethical treatment plan based on knowledge and understanding of human physiology. With this trust comes autonomy from physician control, the opportunity to become part of innovative treatment therapies and expanding the paramedic's role in hospitals, clinics and out in the community. A perfect example of this is England's paramedics now being trained as Emergency Care Practitioners (ECPs). "Many ECPs are based at GP clinic's, operating theaters and attend major life threatening emergencies on the street. They now prove most useful attending less serious emergency calls, responding in single occupancy vehicles, aiming to treat patients at their homes rather than taking them to A&E [aka ER]. Caring for patients at home will require this new breed of paramedic, ECPs, to diagnose treat and write prescriptions, currently done by doctors in physician response units (PRUs). This new form of pre hospital care will of course save taxpayers money and relieve their A&E's of unnecessary congestion (by 40%) but could not have been done with out the trust and support of the community and doctors. Paramedic's roles are expanding and pushed even further with the development of the Bachelors of Science degree in Paramedicine. There may be a day when paramedics will only be hired with this degree and as shortages of doctors increases and only paramedics to fill the gap, we will see the evolution of this awe-inspiring profession taken to yet another level.

In regards to education and practice, the evolution of the paramedic is complex and has only recently become well defined. With the development of ACLS standards and the global medical community joining forces to develop unified medical practices, the hospital treatment of patients is becoming uniform. Since paramedic practices are under the direct control of emergency room physicians, paramedicine has taken a similar unified standard. As the physicians trust with paramedics builds their roles and responsibilities will only increase. The evolution of this dynamic profession has seen its most rapid changes in the past 10 years and if this pace of change continues it will be a constant challenge for pre hospital professionals to maintain mastery of their skills. It's this challenge and willingness to help people that drive's paramedics too extend their hearts and minds into the community giving our loved ones access to vital health care, liberating the sick and injured.

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