Birth of EMS: The History of the Paramedic

By Dennis Edgerly, EMT-P
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Paramedic students from HealthONE's first graduating class learn IV skills circa 1973. Photo courtesy HealthONE EMS

It was the early 1970s. President Richard Nixon had just taken office and America was still entrenched in the Vietnam War. The Godfather was on the big screen and disco danced its way into the mainstream. The most important milestone, however, occured only a few years earlier in 1966. President Lyndon B. Johnson received the report Accidental Death and Disability: The Neglected Disease of Modern Society, which identified accidental injuries as the "leading cause of death in the first half of life's span."

The report revealed that in 1965 alone, vehicle accidents killed more Americans than were lost in the Korean War. When evaluating prehospital emergency care, the report identified that "if seriously wounded ... chances of survival would be better in the zone of combat than on the average city street." Additionally, the report identified a lack of regulation or standards for ambulance operations or provider training.

Commonly known as "the White Paper," this report made several recommendations for the prevention and management of accidental injuries, including the standardization of emergency training for "rescue squad personnel, policemen, firemen and ambulance attendants." This standardization led to the first nationally recognized curriculum for EMS—emergency medical technician–ambulance (EMT-A)—which was published in 1969. Many consider this document to be the birth of modern EMS.

***JEMS* founder Jim Page stands with an L.A. County Rescue response truck in 1959. Photo A.J. Heightman**

Creation of the Paramedic

Despite the documented regulations, some people believed more could be done in the out-of-hospital setting, including advanced airway management, vascular access and medication administration. This led to the creation and implementation of the emergency medical technician–paramedic (EMT-P) curriculum in the early 1970s, with pioneering work by Walt Stoy, PhD, Nancy Caroline, MD, and others in Pittsburgh. But prior to the declaration of this new title, several organizations had already begun training personnel in advanced procedures and medication administration, creating the nation's first paramedics.

The first EMT-P curriculum included 400 hours of class, lab and clinical rotations in various hospital settings followed by a 100-hour field internship. As prehospital advanced life support (ALS) care gained favor within systems and communities, more paramedic programs sprouted up around the country.

By 1972, the expectation of advanced-level care on the streets and in the homes of Americans grew, fueled by the iconic TV show *Emergency!*, which portrayed paramedics providing care in an advanced manner never before seen, now watched by millions every Saturday night. For more than five years, America watched Johnny and Roy swoop in to save lives and help those in distress.

Although just a TV show, *Emergency!* set a standard expectation for the public and served as a catalyst for many to pursue careers in EMS.

JEMS publisher Jim Page, then an L.A. County battalion chief, served as a technical editor for the show and is credited with making the producer and director portray paramedics as professional and well-educated—a solid step for future EMS educational endeavors.

This 1941 low headroom ambulance was called the "Black Maria" in reference to the small, black vans that transported prisoners in the 1950s. Photo A.J. Heightman

Establishing Residency

As interest in EMS grew, more and more people attended CPR, EMT and paramedic classes. Still, there were many unanswered questions about prehospital medicine. There wasn't much science to prove what treatment was effective in the emergency setting and other areas of medicine didn't provide much guidance. Initial paramedics didn't have experienced staff members to guide them, and the emergency physician as we know it today didn't exist.

It wasn't until 1972 that the first residency program to train physicians specifically for the practice of emergency medicine was established at the University of Cincinnati. Still, advanced cardiac life support (ACLS) didn't exist until 1979 and wasn't universally required for paramedic training and certification until the mid 1980s, meaning care of patients in cardiac arrest varied widely from provider to provider. Paramedics were taught by nurses and physicians who were interested in emergency medicine and had visions of what it could look like in an out-of-hospital setting. Many, however, had never worked in the sometimes harsh prehospital setting or in the back of a moving ambulance.

This 1975 International Travelall Ambulance had limited room for supplies. Photo A.J. Heightman

Getting Accredited

Visionary pioneers of EMS and EMS education recognized the need to further the standardization and regulation suggested in the White Paper. In 1970, the first board of directors of what is now the National Registry of EMTs (NREMT) met to determine the feasibility of creating a national certifying exam. In 1971, Rocco V. Morando was selected as the founding executive director of the NREMT and in the same year, 1,520 personnel took the first NREMT-Ambulance exam.

Seven years later, the first NREMT-Paramedic exam was given in Minneapolis. That same year, the NREMT became a member of the National Commission for Health Certifying Agencies. During this same timeframe, paramedic programs saw the need for validation through a national accreditation process. EMT-P became an approved health occupation through the Council of Allied Health Education and Accreditation (CAHEA) and in cooperation with the Joint Review Committee for EMT-P, and these organizations continued reviewing paramedic programs.

In 1980, the University of California, Los Angeles (UCLA) and Eastern Kentucky University were the first institutions to have their programs reviewed. Other forward-thinking programs quickly followed.

The reviewing entities are now the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). Both continue to work in concert to evaluate, reevaluate and accredit paramedic programs. As of the press time, CAAHEP reports 365 currently accredited programs and 246 programs in the process of becoming accredited.

Table 1: Initial Accredited Paramedic Programs

Year	Program
1980	UCLA Center for Health Services – Los Angeles, Calif.
1980	Eastern Kentucky University – Richmond, Ky.
1981	Pennsylvania College of Technology – Williamsport, Pa.
1982	HealthONE EMS/Arapahoe Community College – Englewood, Colo.
1983	University of Texas Health Science Center – San Antonio, Texas
1983	Centura Health-St. Anthony Hospitals – Denver, Colo.
1984	University of Alabama – Huntsville, Ala.
1984	Harrisburg Area Community College – Harrisburg, Pa.
1984	Southwest Tennessee Community College – Memphis, Tenn.
1984	Texas Tech University Health Sciences Center – Lubbock, Texas

Updating Standards

Much has changed since the initial development of the EMT-P level of practice. The initial EMT-P curriculum was updated in 1985 and again in 1998. The 2000 EMS Education Agenda for the Future: A Systems Approach carried the vision of the 1996 EMS Agenda for the Future, and 2009 saw the most recent change in paramedic education in the form of the Education Standards. The Education Standards are less prescriptive than the original curriculum. This allows paramedic education to change as the practice changes. This also requires those running paramedic programs to keep current with advances in medicine and to be proficient in the writing of curriculum. For example, paramedic education programs now require more time in field internships than was once required to complete the entire program. Programs are also now aligned with collegiate institutions and graduate paramedics are backed with two- and four-year degrees in their field.

Continuing to move toward standardization and accountability, the NREMT has stated recently that only students who graduate from CoAEMSP-accredited paramedic programs are allowed to take the NREMT-P exam. This change has forced programs across the country to evaluate their criteria and either seek accreditation, close their doors or graduate students who aren’t eligible to be nationally registered.

CoAEMSP continues to evaluate required competencies required for paramedic programs. One of the recent changes made requires paramedic program directors to hold at least a bachelor’s degree. Now, not only are those who run paramedic programs vested with EMS experience and insight, but they’re also well-educated. Many program directors have moved beyond their four-year degree to obtain a master’s or doctorate.

Maintaining the educational standards set by the profession and demanded by society is not an easy nor an inexpensive task. Successful paramedic programs have multiple faculty and use the latest in communication technology and training.

A paramedic student practices splinting an ankle during ED clinical rotation, circa 1975. Photo courtesy HealthONE EMS

Staying Accredited

Several of the originally accredited paramedic programs are no longer accredited or in existence. There was no numbering system when CAHEA provided accreditation, so numbering of paramedic programs in the order they obtained accreditation began with CoAEMSP. The remaining active programs of the first ten currently accredited are:

- 600001—UCLA Center for Health Services, Los Angeles, Calif.
- 600002—Eastern Kentucky University, Richmond, Ky.
- 600003—Pennsylvania College of Technology, Williamsport, Pa.
- 600005—HealthONE EMS/Arapahoe Community College, Englewood, Colo.
- 600006—Northern Virginia Community College, Annandale, Va.
- 600007—Centura Health-St. Anthony Hospitals, Denver, Colo.
- 600009—Columbus State Community College, Columbus, Ohio
- 600010—University of New Mexico School of Medicine, Albuquerque, N.M.

Several of the original programs are still accredited, and many continue to work with partners within the industry to advance the profession.

The inside of a Scranton, Penn., ambulance in 1970. Photo A.J. Heightman

Evaluating the Accreditation Process

Directors from paramedic programs serve as site visitors for the CoAEMSP to help with the initial accreditation and reaccreditation of paramedic programs. Faculty from paramedic programs sit on the board of directors for the NREMT and work on test-writing committees and pilot groups. Recently, eight programs worked with the NREMT to look at the feasibility of changing the paramedic psychomotor exam from an isolated skill exam to a scenario-based exam.

UCLA Center for Health Services, HealthONE EMS, University of Texas South West, Creighton University, Inver Hills Community College, Chemeketa Community College, Oklahoma Community College and Gwinnette Technical College worked with NREMT to create a process where paramedic students will create a portfolio of the isolated skills they learned during their program. Upon completion of the program, the isolated skill exam can be replaced with a scenario exam, which may better assess the student's ability to function as a provider in the field.

Prehospital Medicine Evolution

Evidence-based medicine is changing how we think about the practice of medicine in general, and prehospital medicine is not exempt. We are no longer doing skills or providing treatment because we believe that skill or intervention to be cool or sexy. Patient care needs to be vested in what is proven to make a difference in patient outcome. This process is a large driving force in paramedic education. Much of what we do—including spinal immobilization and endotracheal intubation—is being evaluated. Paramedic programs will serve as advocates to the advancement of evidence-based medicine. Paramedic graduates must know how to not only read and interpret research, but must understand the basis by which a research study is established.

Conclusion

Many don't understand the complexity and structure of paramedic programs today. Gone are the days when a physician could teach some advanced skills to a provider and then call them a "paramedic." Paramedic education has matured, as has the EMS profession. Paramedic programs today are well structured, supported within their local EMS community and backed by or found within institutions of higher education. Quality paramedic programs offer themselves up for evaluation by accrediting bodies supporting and participating in the process. Quality paramedic programs are integral components within the foundation of EMS.

By

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Dennis Edgerly began his EMS career in 1987 as a volunteer firefighter EMT. He completed his paramedic education in 1989 and went to work for Reed Ambulance in Denver, Colo. During his time with Reed, he was promoted to a supervisory position. In 1992, he began teaching part time in an EMT basic program. In 1999, he was named the instructor/coordinator of the year by the state of Colorado, and in 2004, was awarded the instructor of the year by the Colorado Symposium on Emergency Care. Currently he's the paramedic education coordinator for the paramedic education program at HealthONE EMS. He's a frequent presenter at EMS conferences around the country and a content reviewer and contributing author for several EMS texts.

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