



National Association of EMS Educator's Position Paper on the Critical Care Paramedic

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NATIONAL ASSOCIATION OF EMS EDUCATOR'S POSITION PAPER ON THE CRITICAL CARE PARAMEDIC

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BACKGROUND

PREHOSPITAL EMERGENCY CARE 2018;00:000–000

POSITION

The position of the [National Association of EMS Educators \(NAEMSE\)](#) is that critical care paramedicine is a specialty area of EMS practice that, when fully developed, includes the following:

- Critical care paramedicine is a Bachelor's degree from an accredited college or university as defined by the U.S. Department of Education;
- Critical care paramedics obtain an advanced practice certification;
- National regulatory entities and national and state officials formally recognize critical care paramedicine as a specialty and define the scope of practice;
- State officials create a critical care endorsement for the paramedic license;
- Critical care paramedics maintain current specialty certifications by psychometrically valid examination processes and maintain continued competency through appropriate continuing education activities in order, and when appropriate through reexamination, to maintain their critical care paramedic designations;
- Insurance companies reimburse critical care paramedic transports commensurate with the Medicare specialty care transport unit rate or greater.

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The 1966 [National Academy of Sciences publication Accidental Death and Disability](#) whitepaper noted that 50% of ambulances in the United States were operated by morticians, “mainly because their vehicles can accommodate transportation of litters” and that only a few cities had, “first class ambulance services ... with full-time ambulance attendants.” Focusing on accidental injuries, the whitepaper recommended the standardization of emergency training for, “rescue squad personnel, policemen, firemen and ambulance attendants” which led to the development of the first nationally recognized curriculum for the Emergency Medical Technician–Ambulance (EMT-A) in 1969.

The 2007 [National EMS Scope of Practice Model](#) describes four levels of EMS providers including the Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), Advanced Emergency Medical Technician (AEMT), and Paramedic. Training at each level is described in the 2009 [National EMS Education Standards](#) and entry level competency testing is available through the [National Registry of EMTs \(NREMT\)](#). Current paramedic education is cumulative. EMT courses generally consist of basic life support (BLS) treatments and skills that are taught in 120 to 150 hours of program time with limited clinical rotations that when occur, are usually observational in nature and last between eight (8) to sixteen (16) hours. Following EMT certification as a prerequisite, paramedic programs last between 1,200 to 1,800 hours with some requiring 2,500 hours of combined didactic and clinical time. State EMS offices either license or certify providers at each level and formal education for the paramedic requires accreditation by the [Committee on Accreditation for the EMS Professions \(CoAEMSP\)](#).

In 2013, any student seeking National Registry Certification at the paramedic level must have successfully completed education from a [Commission on Accreditation of Allied Health Education Programs \(CAAHEP\)](#) accredited program. Even with the standardization of CAAHEP accreditation, paramedic programs interpret the curriculum differently and individual states may have unique mandates built into paramedic education requirements

that make each paramedic program unique. For example, while the 2009 [National EMS Education Standards](#) teaches tube thoracostomy and paramedic students learn and are tested on tube thoracostomy, many states do not include this skill in the paramedic scope of practice.

Throughout the United States, paramedics routinely practice above the nationally recognized paramedic scope of practice, most often when transporting critically ill or injured patients from one hospital to another in ground ambulances or in rotor or fixed wing air ambulances. The paramedics transporting these critical patients often exceed their training levels and scopes of practice, typically without the benefit of appropriate and essential education and training that is needed (1). No national standard currently exists for critical care paramedic practice that exceeds the training and skills included in the 2007 [National EMS Scope of Practice Model](#), which is under revision at the time of publication of this position paper. While commonly referred to as the, "Critical Care Paramedic," "Advanced Practice Paramedic," or "Paramedic with Advanced Training," some states recognize this level of paramedic practice but the state education and training requirements and allowed skills vary greatly. The [International Association of Flight and Critical Care Paramedics \(IAFCCP\)](#) maintains an accounting of state regulations regarding critical care paramedics (2), and, since 2009, the [International Board of Specialty Certification \(IBSC\)](#) has offered the only internationally recognized specialty certification examination process to paramedics to become a Certified Critical Care Paramedic (CCP-C®).

EDUCATION

NAEMSE supports an Associate Degree program in paramedicine that include a curriculum that matches or exceeds the [National EMS Education Standards](#). It is the position of NAEMSE that a bachelor's degree from an accredited post-secondary college or university should be obtained by paramedics providing specialized critical care during transports. All such bachelor degree programs should have a minimum standard curriculum that augments the associate degree in paramedicine and includes specialized curricula with standardized critical care knowledge and skills including, but not limited to:

1. Advanced physiology
2. Analysis of laboratory results
3. Advanced resuscitation techniques
4. Advanced airway management including RSI and surgical airway

5. Multimodality ventilator management (noninvasive and invasive)
6. Cardiac assist device management
7. Advanced pharmacology including initiation and management of hemodynamic infusions (vasopressor, vasodilator, inotropic, antidysrhythmic)
8. Blood product transfusion
9. Advanced procedures (tube thoracostomy, escharotomy)
10. Management of intracranial pressure devices
11. Pediatrics-management
12. Obstetrical-management including complications of delivery and fetal heart monitoring
13. Neonatal-management and transport considerations
14. Extracorporeal membrane oxygenation (ECMO)-specific
15. Future advancements

ADVANCED CERTIFICATION

It is the position of NAEMSE that a specialty certification with standardized training requirements and testing is essential for critical care paramedics. Upon national and state recognition of critical care paramedicine as a specialty, NAEMSE supports requiring paramedics to have earned a relevant clinical bachelor's degree (e.g., BS in EMS or BS in Nursing) in order to be eligible to sit for a critical care paramedic certification examination.

An independent not-for-profit organization, the [International Board of Specialty Certification \(IBSC\)](#) has developed and widely deployed validated examinations for both flight and critical care paramedics. Since 2000, the Certified Flight Paramedic (FP-C®) measures and validates the knowledge in the unique critical care paramedicine environment of rotor and fixed wing air ambulances. In 2009, the Certified Critical Care Paramedic (CCP-C®) examination was launched to assess the critical care paramedic functioning in a ground ambulance setting. Furthermore, the [Commission on Accreditation of Medical Transportation Systems \(CAMTS\)](#) has required IBSC certification for both air and surface critical care paramedics (3).

CRITICAL CARE PARAMEDIC RECOGNITION

It is the position of NAEMSE that specialized paramedics, including the critical care paramedic, should be recognized in the [National EMS Scope of Practice](#) model, which is currently under revision,

and that state EMS offices likewise recognize the critical care paramedic and designate the specialty scope of practice using a nationally accepted certification process for endorsement. Governmental regulatory bodies and non-governmental professional organizations must collaborate in determining training standards, competency verification, licensing, and defining the authorized scope of practice for critical care paramedics. In adopting these critical care paramedic training and certification standards, EMS will join other well-established health care professions in creating either a national professional organization or a professional subspecialty board at the state level (4).

MAINTENANCE OF CERTIFICATION

It is the position of NAEMSE that critical care paramedics should be lifelong learners and that targeted specialty continuing education requirements need to be developed cooperatively between governmental regulatory agencies and non-governmental organizations that provide oversight and serve the critical care paramedics.

REIMBURSEMENT

It is the position of NAEMSE that reimbursement for critical care paramedic service should be patient-centric and based on the treatment delivered to the patient and not based on the transport of the patient.

The current [Centers for Medicare & Medicaid Services \(CMS\)](#) ambulance fee schedule includes the specialty care transport (SCT) level for ground inter-facility transport of a critically ill or injured patient that states: "when a beneficiary's condition requires ongoing care that must be furnished by one or more health professionals in an appropriate specialty area, for example, nursing, emergency medicine, respiratory care, cardiovascular care, or a paramedic with additional training" (5).

Some private insurance companies, however, do not recognize the SCT code, requiring some EMS agency to "down code" the transport service to bill at the ALS-2, ALS-1, or even the BLS level (6). Some other insurance companies deny claims based on determinations of medical necessity or pay only a percentage of billed charges for SCT based on usual and customary charges, regardless of the costs of transport. Patients often receive subsequent balance

bills with typically exorbitant balances due when compared to routine transportation and patient care service invoices. If a patient receives medical care from a critical care paramedic that is above the scope of practice of a paramedic, then insurance companies should be required to provide equitable reimbursement for the services rendered.

SUMMARY

Critical care paramedicine is a specialty practice of the EMS profession. Development of a bachelor's degree is supported as a requirement for entry-level paramedic education and training and targeted specialty continuing education as a requirement for certifying critical care paramedics. Critical care paramedic certification is required for the establishment of national practice standards, recognition and standardization of scopes of practice at the state-level. Maintenance of critical care paramedic certification and appropriate regulatory requirements for third-party reimbursements are also supported. Current national, state, and non-governmental agency recognition such as registries, accreditation bodies, educational institutions, and third-party payors must recognize the critical care paramedic practice for the best interest of the health, welfare, and safety of all.

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