

# International Association of Flight Paramedics

## Critical Care Paramedic Position Statement

### BACKGROUND

Historically, to practice as a paramedic in the United States, an individual completes the Department of Transportation (DOT) Emergency Medical Technician - Paramedic (EMT-P) National Standard Curriculum education or its equivalent, obtains state certification or licensure, and provides medical care in the 9-1-1 Emergency Medical Services (EMS) system, where the focus is patient stabilization and transport. Over time, opportunities for paramedics to practice have expanded. Today, paramedics provide medical care to critically ill and injured patients in a variety of healthcare settings. However, no national standard exists for these critical care paramedics and only a few states require additional training and education above that of the National Standard Curriculum before paramedics can practice as critical care providers. As a result, across the country there exists a varied scope of practice and a vast difference in the quality and competence of the critical care paramedic.

Other national organizations have published statements supporting the need for an advanced level of provider to care for the critically ill or injured.<sup>1-6</sup>

The National Highway Traffic Safety Administration (NHTSA) released the “Guide for Interfacility Patient Transfer” in April of 2006 that defines critical care transport as:<sup>3</sup>

“The level of transport care that is provided to patients with an immediate life-threatening illness or injuries associated with single or multiple organ system failure. This level of care requires an expert level of provider knowledge and skills, provision of the necessary equipment, and the ability to handle the added challenge of transport. Critical care transport requires a high level of medical direction and sophistication of care because of the patient’s complex medical problems.”

The Centers for Medicare & Medicaid Services (CMS) defines specialty care transport (SCT) as:<sup>4</sup>

“Specialty care transport (SCT) is interfacility transportation of a critically injured or ill beneficiary by a ground ambulance vehicle, including



Approved by the IAFP Board of Directors, July 2009.

Correspondence to:  
4835 Riveredge Cove  
Snellville, GA 30039

Phone: 770-979-6372  
FAX: 770-979-6500  
info@flightparamedic.org



the provision of medically necessary supplies and services, at a level of service beyond the scope of the EMT-Paramedic. SCT is necessary 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, emergency or critical care nursing, emergency medicine, respiratory care, cardiovascular care, or a paramedic with additional training.”

The Association of Air Medical Services (AAMS) position statement “Appropriate Utilization of Ground Critical Care Transport Services” published in 2004 reads: <sup>5</sup>

“A patient who needs services that exceed the available resources of a facility should be transferred to another facility with the required technologies and with appropriately trained personnel and equipment. Consumers utilizing critical care ground transport services have the right to receive a nationally consistent standard of care. To assure the provision of appropriate critical care to the consumers of these services, the skill and training of the personnel must commensurate with the complex environment of transport.”

The “Expanded roles of EMS Personnel” position statement of the American College of Emergency Physicians (ACEP) updated in April 2008 opens: <sup>6</sup>

“The American College of Emergency Physicians (ACEP) acknowledges expanded scope of practice programs are being developed in response to community needs. ACEP recognizes that EMS providers are likely to be used in the workforce for these programs.”

and continues:

“To expand the scope of practice for EMS personnel, the following principles must be met:

- Education programs with quality assurance mechanisms to ensure maintenance of standards must be in place before implementing an expanded scope for EMS providers.”

These statements indicate support for additional education and training for critical care paramedics above the National Standard Curriculum.

In 1999, the National Flight Paramedic Association (NFPA) [now the International Association of Flight Paramedics (IAFP)] developed the national standard for the Certified Flight Paramedic (FP-C<sup>®</sup>) <sup>7</sup> through the examination administered by the Board for Critical Care Transport Paramedic Certification (BCCTPC<sup>®</sup>). <sup>8</sup> Today, the role of the critical care paramedic in healthcare delivery has evolved beyond the air medical transport environment.

In 2008, a role delineation study was conducted by the IAFP and Creighton University that



identified the current scope of practice of critical care paramedics.<sup>9</sup> A subsequent job task analysis conducted in 2009, by the BCCTPC<sup>®</sup> and Applied Measurement Professionals, Inc., established a valid, certifying examination to measure the advanced skill level and knowledge of the critical care paramedic.<sup>10</sup>

## POSITION

A paramedic who practices as a critical care paramedic needs to meet a national standard. To ensure that a consistent level of high quality and safe patient care is delivered, the IAFP proposes the following pathway to certification as a critical care paramedic:

1. Experience: Minimum three years of full time employment as a paramedic in a busy advanced life support EMS system.
2. Education:
  - a. *Primary*: Successful completion of the paramedic National Standard Curriculum or equivalent.
  - b. *Secondary*: Successful completion of a critical care education program that meets or exceeds the educational objectives of this position statement, including didactic sessions, practical sessions, skill proficiency demonstration, and clinical rotations.
  - c. *Tertiary*: Continuing mentored didactic education, skill maintenance, and clinical opportunities that maintain the educational objectives of this position statement.
3. Certifications:
  - a. Advanced Cardiac Life Support
  - b. Adult and Pediatric International Trauma Life Support / Pre-hospital Trauma Life Support / Advanced Trauma Life Support
  - c. Pediatric Advanced Life Support / Advanced Pediatric Life Support
  - d. Neonatal Resuscitation Program
  - e. Or an equivalent education in each of the aforementioned areas
4. Knowledge<sup>2-3, 7-13</sup>
  - a. Assessment of the critically ill or injured patient



- b. Advanced adult and pediatric airway management including, but not limited to:
    - i. Rapid sequence induction (RSI) intubation
    - ii. Alternative and rescue airways
    - iii. Surgical cricothyroidotomy
    - iv. Continuous waveform capnography to monitor end tidal carbon dioxide (ETCO<sub>2</sub>)
  - c. Mechanical and noninvasive ventilation theory, troubleshooting, and competence
  - d. Chest tube thoracostomy management and insertion (if applicable)
  - e. Obtain and maintain peripheral venous, central venous (if applicable), and/or intraosseous access
  - f. Administration of blood and blood products
  - g. Electrocardiogram (ECG) monitoring and 12 lead ECG interpretation
  - h. Defibrillation, cardioversion, and transcutaneous and transvenous pacing monitoring, maintenance, and treatment
  - i. Circulatory management and support including invasive hemodynamic monitoring and intra-aortic balloon pump (IABP) management (theory, transport considerations, troubleshooting, and operations, if applicable)
  - j. Intracranial pressure monitoring and management
  - k. Pharmacology included in the National Standard Curriculum augmented by knowledge of analgesics, antibiotics, antidysrhythmics, antiepileptics, paralytics, sedatives, and vasoactive medications
  - l. Laboratory value interpretation including arterial blood gas analysis
  - m. Targeted radiology study interpretation
5. Patient management: <sup>2-3, 7-13</sup>
- a. Acute respiratory emergencies
  - b. Cardiovascular emergencies
  - c. Hypertensive emergencies



- d. Shock and multiple organ system failure
- e. Infectious diseases
- f. Neurological emergencies including stroke and intracranial hemorrhage
- g. Trauma
- h. Spinal cord injury
- i. Burn
- j. Trauma in pregnancy
- k. Pediatric trauma
- l. Critical pediatric emergencies
- m. Obstetrical emergencies
- n. Neonatal emergencies (if applicable)
- o. Environmental emergencies
- p. Poisoning / toxic exposure / hazardous material awareness
- q. Bioterrorism

6. Transport medicine: <sup>3, 5, 7-11, 13-15</sup>

- a. Safety
  - i. Vehicle operations and emergency procedures
  - ii. Critical care transport equipment
  - iii. Patient / family factors
  - iv. Human factors (including but not limited to air medical resource management (AMRM) or equivalent)
- b. Evaluation of appropriateness for transport based on required level of care
- c. Transport logistics
- d. Critical care transport equipment (ventilator, IABP, neonatal isolette, etc.)
- e. Patient packaging for safety and accessibility
- f. Radio and communication technology



- g. Transport physiology
- h. Interaction and communication with medical oversight
- i. Medical provider communication / transfer of care
- j. Documentation

7. Quality management: understanding principles and best practice.

8. Certification examination: successful completion of a critical care paramedic certification examination. Along with the FP-C<sup>®</sup>, the IAFP recognizes the Critical Care Paramedic Certification Examination (CCP-C<sup>®</sup>) as a valid certification examination for the critical care paramedic.<sup>8</sup>

#### SUMMARY:

The IAFP appreciates that in certain areas of the United States, the availability of such an advanced level of paramedic provider may not exist. Our goal is not to limit access to critical care paramedics in underserved areas of the country, but rather to define a standard of care toward which critical care paramedics must aspire to provide the highest level of quality and safe patient care. Certification as a critical care paramedic both recognizes those paramedics who have achieved this level of practice, and provides a standard for paramedics to meet in order to provide critical care to patients in the future.

#### REFERENCES:

1. Haupt MT. Bekes CE. Brill R. Carl LC. Gray AW. Jastremski MS. Naylor DF. PharmD MR. Md AS. Wedel SK. Md MH. Task Force of the American College of Critical Care Medicine, Society of Critical Care Medicine. Guidelines on critical care services and personnel: Recommendations based on a system of categorization of three levels of care. Critical Care Medicine. 31(11):2677-83, 2003 Nov.
2. Warren J. Fromm RE Jr. Orr RA. Rotello LC. Horst HM. American College of Critical Care Medicine. Guidelines for the inter- and intrahospital transport of critically ill patients. Critical Care Medicine. 32(1):256-62, 2004 Jan.
3. National Highway Transport Safety Administration (NHTSA). Guide for Interfacility Patient Transfer. April 2006. Accessed June 13, 2009, available at: <http://www.nhtsa.dot.gov/people/injury/ems/Interfacility/pages/Introduction.htm>
4. Program Memorandum Intermediaries/Carriers. Transmittal AB-02/130. Subject: Definitions of Ambulance Services. September 27, 2002. Department of Health & Human Services. Centers for Medicare and Medicaid Services. Washington, DC.
5. Association of Air Medical Services (AAMS). Position Statement: "Appropriate Utilization of Critical Care Ground Transport Services." Critical Care Ground Special Interest Group, 2004. Accessed July 15, 2009, available at: <http://www.aams.org/Content/NavigationMenu/PublicationsProducts/ResourceDocuments/PostCCGAppropriateUsePaper.doc>



6. American College of Emergency Physicians. Practice Resources. ACEP Policy Statements: Expanded Roles of EMS Personnel (April 2008). Accessed June 13, 2009, available at: <http://www.acep.org/practres.aspx?id=29444>
7. Gryniuk J. National Flight Paramedics Association. The role of the certified flight paramedic (CFP) as a critical care provider and the required education. *Prehospital Emergency Care*. 5(3):290-2, 2001 Jul-Sep.
8. Applied Measurement Professionals, Inc. A Job Analysis of the Certified Flight Paramedic. Completed March 2004.
9. Hums, J; Raynovich, W. The Scope of Practice for Paramedics in the Critical Care Transport Setting. Presented at the Air Medical Transport Conference, Minneapolis, MN. October 20, 2008.
10. Applied Measurement Professionals, Inc. A Job Analysis of the Certified Critical Care Paramedic. Completed February 2009.
11. American Association for Respiratory Care. Position Statement: Pre-hospital ventilator management competency. Accessed June 13, 2009, available at: [http://www.aarc.org/resources/position\\_statements/preho.html](http://www.aarc.org/resources/position_statements/preho.html)
12. Harrison TH. Thomas SH. Wedel SK. Success rates of pediatric intubation by a non-physician-staffed critical care transport service. *Pediatric Emergency Care*. 20(2):101-7, 2004 Feb.
13. MacDonald RD. Farquhar S. Transfer of intra-aortic balloon pump-dependent patients by paramedics. *Prehospital Emergency Care*. 9(4):449-53, 2005 Oct-Dec.
14. Ellis D. From the air to the ground: air medical safety practices applied to ground critical care. *Air Medical Journal*. 25(4):158-9, 2006 Jul-Aug.
15. Commission on Accreditation of Medical Transport Systems (CAMTS). Accreditation standards - 7<sup>th</sup> Edition 2006. Accessed June 13, 2009, available at <http://www.camts.org>.