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POSITION PAPER

NATIONAL FLIGHT PARAMEDICS ASSOCIATION

THE ROLE OF THE CERTIFIED FLIGHT PARAMEDIC (CFP) AS A CRITICAL CARE PROVIDER AND THE REQUIRED EDUCATION

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During the mid 1990s the concept of the critical care paramedic erupted into the forefront of pre-hospital transport medicine. Advances in emergency care trickled into community hospitals and precipitated an increase in the population of unstable and complicated patients requiring transfer to tertiary care centers. The managed care environment of the late '90s further prompted medical centers to begin to specialize in specific areas of care rather than attempting to offer services to every type of patient population. Furthermore, managed care organizations began to develop networks of medical institutions capable of providing procedures on a pre-negotiated fee schedule to minimize expenses. These factors spurred an increase in the number of patients requiring critical care transport and thus an increase in the need for competent critical-care-trained transport providers. Born of this need was the critical care paramedic. The critical care paramedic receives training

above and beyond that of the "street" paramedic. This training prepares the paramedic to appropriately assess and manage the patient who has already received significant medical interventions, including the use of advanced pharmacological agents and the insertion of hemodynamic monitoring and assist devices. Historically, this has been an area of practice for physicians, nurses, and respiratory therapists. Through appropriate initial and continuing education and through the use of aggressive quality management, the ability of the paramedic to function as a critical care provider is undeniable and in fact is already occurring in many regions of the United States.

While the concept of the critical care paramedic is fairly new, the ability of the paramedic to function in this advanced capacity is not. The majority of air medical transport programs have utilized flight paramedics in a critical care provider capacity since the early beginnings of air medical transport. Due to the complex conditions of the patients transported by air medical programs, it became quickly necessary to expand the role of flight paramedics above that of their ground counterparts. Additional responsibilities such as surgical airway interventions, the use of anesthetic agents to facilitate intubation, and the use of portable ventilators became necessary in

order to optimize the care of critically ill and injured patients during air transport. A host of other skills followed as flight paramedics proved their abilities to grasp and maintain competency in skills previously afforded physicians only. These skills were commonly to include pericardiocentesis, chest tube thoracostomy, escharotomy, and insertion of central venous access devices. With advances in medical care, so followed the need to maintain care of increasingly complex patients. This required achieving an intensive care unit-like setting during transport. Invasive hemodynamic monitoring, administration of blood products, initiation and titration of potent vasoactive and sedative medications, and analysis of a variety of laboratory data through portable devices became an integral part of air medical transport programs. Today, it is not uncommon to find flight paramedics trained in monitoring and managing patient populations from the adult cardiac patient with an intra-aortic balloon pump or ventricular assist device to the preterm infant undergoing extracorporeal membrane oxygenation. Today's air medical program offers not just rapid patient transport, but also rapid response of highly trained emergency practitioners with the ability to extend hospital-level care into the prehospital environment.

While the majority of air medical

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programs have expanded the flight paramedic's role into that of a critical care provider, some programs still continue to provide basic paramedic-level care in the flight environment. This diversity in flight paramedic practice has clouded the definition of the profession. On one hand are a group of flight paramedics who define the practice as the ability to perform paramedic skills in the air medical environment; on the other hand, the majority of flight paramedics define their practice as that of a critical care provider. With the introduction of the National Flight Paramedics Association's (NFPA's) certified flight paramedic (CFP) exam, the ambiguity of the flight paramedic title can be greatly diminished. The CFP exam was created on the premise that the majority of flight paramedics function as critical care providers. Therefore, the certification process that defines the practice of the flight paramedic is not only based on an understanding of basic paramedic skills and flight physiology, but also incorporates an understanding of critical care theory and practice.

The critical care education required of the flight paramedic can be attained only through appropriate didactic and clinical training followed by testing and aggressive continuing education. While a variety of commercial educational courses offer to train and graduate "critical care paramedics," it is necessary to state that the use of this title is not governed by any private, state, or federal agencies. As of yet, the commercial providers of critical care education have not come to a consensus agreement regarding the length or content of critical care paramedic training programs. Therefore, the content of the individual course should be judged, and not the title. Education is the key element for success in acquiring the title of certified flight paramedic, whether through one of these commercial

courses or through education provided by individual transport programs.

The title of certified flight paramedic denotes an air medical professional with a broad expanse of knowledge. The CFP examination process is not regionally specific. It is understood that regional practice and/or state laws interfere with the ability of the flight paramedic to perform certain duties or administer particular medications. However, the NFPA does not believe this precludes the necessity of the flight paramedic to maintain a basic knowledge of these skills or medications. The CFP will demonstrate, through written testing, the ability to provide care beyond that which may be allowed within his or her own locale. By adopting this philosophy, successful completion of the CFP exam should be viewed as the pinnacle achievement in flight paramedic practice. Successful completion of the CFP exam stands as testament to the ability of the examinee to practice with equal proficiency and without regional discrimination in both the prehospital and interfacility transport arenas.

POSITION

Below is the position of the NFPA regarding the training necessary to pass examination and perform the duties of a certified flight paramedic:

1. The NFPA believes the CFP should have a *minimum* of 5 years of basic paramedic practice after graduation from a Department of Transportation (DOT)-recognized paramedic training program before attempting to master the practice of flight medicine.
2. The NFPA believes the CFP should maintain currency in the following certifications:

- Basic Cardiac Life Support

- Advanced Cardiac Life Support
- Basic Trauma Life Support
- Prehospital Trauma Life Support or Advanced Trauma Life Support audit
- Pediatric Advanced Life Support (PALS)
- Neonatal Resuscitation Program

3. The NFPA believes initial didactic education for the CFP should include content suitable to fill, at a *minimum*, the following number of hours in each area:

- History, philosophy, and indications for air medical transport (1 hour)
- Industry associations and standards: to include the standards of the Commission on Accreditation of Medical Transport Systems (CAMTS) (1 hour)
- Air medical outcome research, trauma systems, and trauma scoring (1 hour)
- Kinematics of trauma and injury patterns (1 hour)
- Aircraft fundamentals, safety and survival (3 hours)
- Flight physiology (1 hour)
- Stress management (1 hour)
- Advanced airway management techniques (2 hours)
- Radiographic interpretation (1 hour)
- Management of medical neurological emergencies (1 hour)
- Management of the critical cardiac patient: to include pacemakers and invasive hemodynamic monitoring (8 hours)
- Intra-aortic balloon pump theory and transport considerations (8 hours)
- 12-lead ECG interpretation (8 hours)
- Management of the acute respiratory patient: to include acid-base balance, arterial blood gas (ABG) interpretation, capnography, and ventilator management (6 hours)

- Management of septic shock (1 hour)
- Management of toxic exposures (1 hour)
- Management of the aortic emergency (1 hour)
- Management of hypertensive emergencies (1 hour)
- Management of obstetrical emergencies (3 hours)
- Management and delivery of the full-term or pre-term newborn (16 hours) (Neonatal Resuscitation Program and PALS are acceptable and encouraged alternatives)
- Management of the critical pediatric patient (5 hours)
- Management of adult thoracic and abdominal trauma (2 hours)
- Management of neurological trauma (1 hour)
- Management of the burn patient (1 hour)
- Management of pediatric trauma (1 hour)
- Management of environmental emergencies (1 hour)
- Trauma in pregnancy considerations (1 hour)

(Wherever appropriate, the above education should include information regarding radiographic findings, pertinent laboratory and bedside testing, and pharmacological interventions.)

4. The NFPA believes the CFP should have initial and annual

training in the indications, contraindications, desired effects, and adverse effects of the following skills. Furthermore, the NFPA believes that to ensure competency, the CFP should have the opportunity to perform the skills in a laboratory setting:

- Rapid-sequence induction intubation
- Pericardiocentesis
- Escharotomy
- Central venous access through subclavian, internal jugular, or femoral approach
- Chest tube thoracostomy
- Surgical cricothyroidotomy

5. The NFPA believes the CFP should be given clinical exposure to critical care suitable to fill at a *minimum* the following number of hours in each area:

- Labor and delivery (8 hours)
- Neonatal intensive care (8 hours)
- Pediatric intensive care (16 hours)
- Adult cardiac care (16 hours) (to include postoperative cardiothoracic surgery patients)
- Adult intensive care (16 hours)

(to include medical and surgical patients)

6. The NFPA believes the CFP should maintain a *minimum* of 24 hours per year of continuing education in areas pertaining to critical care transport and care.

7. The NFPA believes the CFP should maintain a *minimum* of 8 hours per year of patient contact hours in the following patient population areas (*this time may be met through actual patient contact time during transports or through clinical time spent in the appropriate intensive care unit or specialty unit*):

- Labor and delivery
- Neonatal intensive care
- Pediatric intensive care
- Adult cardiac care
- Adult intensive care
- Emergency/trauma care

The above curriculum and minimum hours of content should not be considered endpoints for the CFP. The NFPA recognizes that individual learning styles and variances in transport program cultures and practices may require additional content to meet the needs of the individual CFP provider.