

STATE OF COLORADO

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Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
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National Scope of Practice/Education Standards Implications for Colorado EMT Certification and Practice November 2007

Introduction

In February 2007, the National Highway Traffic Safety Administration - Office of EMS released the *National EMS Scope of Practice* guidance document. This document was completed following several years' development intended to move the nation's EMS community toward the implementation of the *National EMS Agenda for the Future*, and the *National EMS Education Agenda for the Future*. Both of these documents have been in existence for almost 10 years and collectively outline the vision for nationally consistent EMS education standards and credentialing services across the U.S. The final cornerstone document, *National EMS Education Standards*, is presently under development and should become available to the national EMS community in mid to late 2008. Collectively, these four documents combine to describe the necessary components of our nation's EMS system, methods and content for delivering EMS education to care givers, and outline the scopes of practice for each identified level of prehospital care provider.

Although individual states have the latitude to determine how they choose to implement these national recommendations, it is clear that the national EMS certification organization (NREMT), the federal disaster response system, vendors that provide EMS educational material and equipment, and other participants in the national EMS support system, will ultimately follow these collective national EMS recommendations in terms of material, products and services made available to the U.S. prehospital care system. Therefore, it is important to become familiar with these national recommendations, especially those centered on EMS education and certification strategies, and determine at the state and local level what policies should be developed and implemented that will support the EMS industry as a whole and meet the national standards of care, as well as ensuring appropriate care and transportation for patients throughout the state of Colorado.

Discussion

Colorado's Emergency Medical and Trauma System (EMTS) has historically followed the national standards and recommendations for EMS training and certification. Since the 1980's, the state has modeled its EMS education process after the national standard curricula provided by the National Highway Traffic Safety Administration. In 2001, Colorado adopted all of the revised national standard training curricula (EMT-Basic, EMT-Intermediate -99, and EMT-

Paramedic), including adoption of the national accreditation system for Paramedic programs. In 2004, Colorado adopted the National Registry of EMTs certification process as the basis for initial state EMT certification. Ultimately, these decisions have resulted in a system of education and certification that is consistent with national standards, ensuring that entry level EMS personnel are capable of providing care not only in our state, but also in other states with a minimum of additional credentialing. These education requirements have predicated the development of the state's standard scope of practice under B.M.E. Rule 500 and become the baseline from which EMS agencies, medical directors, and the public can expect specific levels of patient care and transportation.

Although the recommendations in *the National EMS Scope of Practice Model* are essentially consistent with current Colorado practice at the EMT-Basic and EMT-Paramedic levels of care, there is a dichotomy between Colorado's EMT-Intermediate-99 and the Advanced EMT (AEMT). The EMT-I-99 scope of practice was developed in the late 1990's in an effort to identify specific advanced psychomotor skills that when performed appropriately under the right circumstances, can provide a limited level of advanced life support in communities that are unable to support paramedic services. The philosophy behind the development of the AEMT is similar in that it identifies high value, relatively low risk, advanced life support procedures. The AEMT is not intended as a replacement for paramedics, but rather an opportunity to provide limited advanced life support in environments where fully paramedic staffed transport systems cannot be maintained. However, the AEMT scope of practice does not include the complete skill set of the EMT-I-99.

Attached is a comparative analysis of the skills in the *National EMS Scope of Practice Model* evaluated against the existing scope of practice for Colorado EMTs contained within B.M.E. Rule 500. For the purposes of this document, the content in Rule 500 dealing with advanced transport medication and skills has been omitted as neither the *National EMS Education Standards* nor the *National EMS Scope of Practice* address these issues and can continue to be authorized on a state-by-state basis.

The National Registry of EMTs has announced that its testing and certification process will continue to follow the national standards. Thus, as the *EMS Education Standards* are finalized and implementation begins throughout the U.S., National Registry examinations and certification requirements will adjust accordingly. The national EMS community can expect that testing content and certification levels issued by the NREMT could change as early as the 2nd half of 2009 or perhaps as late as 2010. These changes will inherently predicate changes in educational materials, local EMS curricula, and testing standards. Given that Colorado requires successful National Registry certification as the basis for initial Colorado EMT certification, the state's EMS educational system must adjust accordingly to ensure that new EMTs are adequately prepared to achieve certification and enter the EMS workforce.

Conclusion

As the analysis shows, the most significant differences in skills and content between the current national standard curricula (EMT-Basic, EMT-Intermediate/99, and Paramedic) and the newly proposed levels (EMT, AEMT, Paramedic) exists between the EMT-Intermediate-99 and the AEMT as presently outlined in the national documents. From a psychomotor skill perspective, the most significant differences are in the area of advanced airway placement (endotracheal intubation) and advanced cardiac arrest skills. Beyond these two educational components, it

seems very possible for the remaining material from Colorado's current EMT-Intermediate-99 curriculum to be included in the AEMT educational program in Colorado.

The Colorado EMTS community must address the following issues:

- Should Colorado adopt the *National EMS Scope of Practice Model* as the **basis** for the education and certification of EMTs?
- If Colorado adopts the *National EMS Scope of Practice Model*, what changes to scopes of practice should be incorporated into this process and can the need for local/regional variations be accommodated through the Colorado waiver process?
- What steps must be taken to ensure appropriate recognition and accommodation of currently state certified personnel and ensure that new/updated material is disseminated to practicing EMTs.
- What steps must be taken to account for appropriate implementation time lines, including allowance for rule-making processes?

As a starting point for discussion, these options are offered for consideration.

1. Implement the *National EMS Scope of Practice Model* at the EMT and Paramedic levels of practice while maintaining the current Colorado standards for EMT-Intermediate-99. The testing system to evaluate EMT-I-99 to be developed and supported outside of NREMT program.
2. Adopt and implement the *National EMS Scope of Practice Model* at the EMT, Advanced EMT, and Paramedic levels of practice. Maintain the current cadre of Colorado certified EMT-I-99s, but cease training additional EMT-I-99s while allowing local systems to use BME waiver process for additional skills as might be appropriate.
3. Adopt and implement the *National EMS Scope of Practice Model* at the EMT, Advanced EMT, and Paramedic levels of practice. For Advanced EMTs, develop additional education module to make them commensurate with EMT-Intermediate-99 and evaluate the "gap" skills and knowledge at the educational program or state level.

It is important to understand that these changes in the *National EMS Scope of Practice Model* and the *National EMS Scope of Practice* are extremely vital to the continued development of Colorado's EMS industry. However, it is equally important to appreciate the role Colorado EMS providers play in terms of the national EMS system and the ability of providers to practice their profession throughout the U.S. It is critical that new policies to regulate and support the care and transportation of patients remain consistent with current medical practice as well as being cost effective and achievable for all of Colorado's local EMS systems. These many factors must be considered as the stakeholders work collectively to develop the EMTS system's future.

Questions or comments regarding these issues can be directed to the Emergency Medical and Trauma Services section at (303) 692-2980 or by contacting Section Chief D. Randy Kuykendall at Randy.Kuykendall@state.co.us.

**Comparative Analysis
Current Skills vs. 2008 Education Standards**

Airway/Ventilation/Oxygen Administration		New		New		New
SKILL	B	Basic	I	AEMT	P	Paramedic
Airway – Esophageal-Single Lumen	N	N	N	Y	N	Y
Airway – Laryngeal Mask	Y ¹	N	Y	Y	Y	Y
Airway – Esophageal/Tracheal – Multi Lumen	Y ¹	N	Y	Y	Y	Y
Airway – Nasal	Y	Y	Y	Y	Y	Y
Airway – Oral	Y	Y	Y	Y	Y	Y
Bag – Valve – Mask (BVM)	Y	Y	Y	Y	Y	Y
Oxygen Powered Ventilation Device	Y	Y	Y	Y	Y	Y
Chest Decompression – Needle	N	N	Y	N	Y	Y
Chest Tube Insertion	N	N	N	N	N	N
Chest Tube Monitoring	N	N	N	N	N	Y
CPAP/BiPAP/PEEP	N	N	N	N	Y	Y
Cricoid Pressure (Sellick)	Y	N	Y	N	Y	Y
Cricothyroidotomy – Needle	N	N	N	N	Y	Y
Cricothyroidotomy – Surgical	N	N	N	N	N	Y
Demand Valve – Oxygen Powered	Y	Y	Y	Y	Y	Y
End Tidal CO ₂ Monitoring/Capnometry/ Capnography	Y ¹	N	Y	N	Y	Y
Gastric Decompression – NG/OG Tube Insertion	N	N	N	N	Y	Y
Head-tilt/Chin-lift	Y	Y	Y	Y	Y	Y
Intubation – Digital	N	N	N	N	Y	Y
Intubation – Lighted Stylet	N	N	Y	N	Y	Y
Intubation – Medication Assisted (non-paralytic)	N	N	N	N	N	NA
Intubation – Medication Assisted (paralytics) (RSI)	N	N	N	N	N	NA
Intubation – Maintenance with (paralytics)	N	N	N	N	N	NA
Intubation – Nasotracheal	N	N	N	N	Y	Y

Intubation – Orotracheal	N	N	Y	N	Y	Y
Intubation – Retrograde	N	N	N	N	N	
Extubation	N	N	Y	N	Y	Y
Jaw-thrust	Y	Y	Y	Y	Y	Y
Jaw-thrust – Modified (trauma)	Y	Y	Y	Y	Y	Y
Mouth-to-Barrier	Y	Y	Y	Y	Y	Y
Mouth-to-Mouth	Y	Y	Y	Y	Y	Y
Mouth-to-Nose	Y	Y	Y	Y	Y	Y
Mouth-to-Stoma	Y	Y	Y	Y	Y	Y
Obstruction – Direct Laryngoscopy	N	N	Y	N	Y	Y
Obstruction – Manual	Y	Y	Y	Y	Y	Y
Oxygen Therapy – Humidifiers	Y	Y	Y	Y	Y	Y
Oxygen Therapy – Nasal Cannula	Y	Y	Y	Y	Y	Y
Oxygen Therapy – Non-rebreather Mask	Y	Y	Y	Y	Y	Y
Oxygen Therapy – Simple Face Mask	Y	Y	Y	Y	Y	Y
Oxygen Therapy – Venturi Mask	N	N	Y	N	Y	Y
Peak Expiratory Flow Testing	N	N	Y	N	Y	Y
Pulse Oximetry	Y ¹	Y	Y	Y	Y	Y
Suctioning – Tracheobronchial	N	N	Y	Y	Y	Y
Suctioning – Upper Airway	Y	Y	Y	Y	Y	Y
Tracheal Tube Maintenance – Includes replacement	N	N	Y	N	Y	Y
Ventilators – Automated Transport (ATV)	N	Y	N	Y	Y	Y

Cardiovascular/Circulatory Support		New		New		New
SKILL	B	Basic	I	AEMT	P	Paramedic
Cardiac Monitoring –Non-interpretive	Y1	N	Y	N	Y	Y
Cardiac Monitoring - 3 Lead, interpretative	N	N	Y	N	Y	Y
Cardiac Monitoring – 12 Lead, interpretative	N	N	N	N	Y	Y
Cardiopulmonary Resuscitation (CPR)	Y	Y	Y	Y	Y	Y

Cardioversion – Electrical	N	N	N	N	Y	Y
Carotid Massage	N	N	N	N	Y	Y
Defibrillation – Automated/Semi-Automated (AED)	Y	Y	Y	Y	Y	Y
Defibrillation – Manual	N	N	Y	N	Y	Y
External Pelvic Compression	Y	N	Y	N	Y	Y
Hemorrhage Control – Direct Pressure	Y	Y	Y	Y	Y	Y
Hemorrhage Control – Pressure Point	Y	Y	Y	Y	Y	Y
Hemorrhage Control – Tourniquet	Y	Y	Y	Y	Y	Y
MAST/Pneumatic Anti-Shock Garment	Y	Y	Y	Y	Y	Y
Mechanical CPR Device	Y	Y	Y	Y	Y	Y
Transcutaneous Pacing	N	N	Y	N	Y	Y
Transvenous Pacing – Maintenance	N	N	N	N	N	N
Implantable Cardioverter/Defibrillator Magnet Use	N	N	N	N	N	N
Arterial Blood Pressure Indwelling Catheter – Maintenance	N	N	N	N	N	Y
Invasive Intracardiac Catheters – Maintenance	N	N	N	N	N	N
Central Venous Catheter Insertion	N	N	N	N	N	N
Central Venous Catheter Maintenance/ Interpretation	N	N	N	N	N	Y
Percutaneous Pericardiocentesis	N	N	N	N	N	N

Immobilization		New		New		New
SKILL	B	Basic	I	AEMT	P	Paramedic
Spinal Immobilization – Cervical Collar	Y	Y	Y	Y	Y	Y
Spinal Immobilization – Long Board	Y	Y	Y	Y	Y	Y
Spinal Immobilization – Manual Stabilization	Y	Y	Y	Y	Y	Y
Spinal Immobilization – Seated Patient, etc.	Y	Y	Y	Y	Y	Y
Splinting – Manual	Y	Y	Y	Y	Y	Y
Splinting – Rigid	Y	Y	Y	Y	Y	Y
Splinting – Soft	Y	Y	Y	Y	Y	Y
Splinting – Traction	Y	Y	Y	Y	Y	Y

Splinting – Vacuum	Y	Y	Y	Y	Y	Y
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Intravenous Cannulation/Fluid Administration/Fluid Maintenance		New		New		New
SKILL	B	Basic	I	AEMT	P	Paramedic
Blood/Blood By-Products Initiation (out of facility initiation)	N	N	N	N	N	N
Blood/Blood By-Products Initiation (post facility initiation)	N	N	N	N	N	Y
+Blood/Blood By-Products Monitoring	N	N	N	N	N	Y
Colloids - (Albumin, Dextran) – Initiation	N	N	N	N	N	N
Crystalloids (D5W, LR, NS) – Initiation/Maintenance	N	N	Y	Y	Y	Y
Intraosseous – Initiation	N	N	Y	Y	Y	Y
Medicated IV Fluids Maintenance – As Authorized in Appendix B	N	N	Y	N	Y	Y
Peripheral – Excluding External Jugular - Initiation	N	N	Y	Y	Y	Y
Peripheral – Including External Jugular – Initiation	N	N	Y	N	Y	Y
Use of Indwelling Catheter for IV medications	N	N	Y1	N	Y	Y

Medication Administration – Routes		New		New		New
SKILL	B	Basic	I	AEMT	P	Paramedic
Aerosolized/Nebulized	N	N	Y	Y	Y	Y
Buccal	Y	Y	Y	Y	Y	Y
Endotracheal Tube (ET)	N	N	Y	N	Y	Y
Extra-abdominal umbilical vein	N	N	Y1	UNK	Y1	Y
Intradermal	N	N	Y	Y	Y	Y
Intramuscular (IM)	Y1	NA	Y	Y	Y	Y
Intranasal (IN)	N	N	Y	Y	Y	Y
Intraosseous	N	N	Y	Y	Y	Y
Intravenous (IV) Piggyback	N	N	Y	N	Y	Y

Intravenous (IV) Push	N	N	Y	Y	Y	Y
Nasogastric	N	N	N	N	Y	Y
Ophthalmic	N	N	Y	N	Y	Y
Oral	Y	Y	Y	Y	Y	Y
Rectal	N	N	Y	N	Y	Y
Subcutaneous	Y	NA	Y	Y	Y	Y
Sublingual	Y	Y	Y	Y	Y	Y
Topical	N	N	Y	Y	Y	Y
Use of Mechanical Infusion Pumps	N	N	Y	N	Y	Y

Miscellaneous		New		New		New
SKILL	B	Basic	I	AEMT	P	Paramedic
Aortic Balloon Pump Monitoring	N	N	N	N	N	N
Assisted Delivery	Y	Y	Y	Y	Y	Y
Blood Glucose Monitoring	Y1	N	Y	Y	Y	Y
Dressing/Bandaging	Y	Y	Y	Y	Y	Y
Eye Irrigation Noninvasive	Y	Y	Y	Y	Y	Y
Eye Irrigation Morgan Lens	N	N	Y	N	Y	Y
Maintenance of Intracranial Monitoring Lines	N	N	N	N	N	N
Urinary Catheterization - Initiation	N	N	N	N	Y	Y
Urinary Catheterization – Maintenance	Y1	N	Y	Y	Y	Y
Venous Blood Sampling – Obtaining	N	N	Y	Y	Y	Y