



U.S. Department  
of Transportation  
**National Highway  
Traffic Safety  
Administration**



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December 2017

# **2007 National EMS Scope of Practice Model**

## **Including Change Notices 1.0 and 2.0**



U.S. Department of Transportation  
**National Highway Traffic Safety  
Administration**



1200 New Jersey Avenue SE.  
Washington, DC 20590

Date: November 1, 2017  
To: State EMS Directors  
From: Jon R. Krohmer, M.D., FACEP  
Director, Office of Emergency Medical Services  
RE: 2007 National EMS Scope of Practice Model, Change Notice

The *National EMS Scope of Practice Model* (model) was published in February 2007 by the National Highway Traffic Safety Administration. The model was developed by the National Association of State EMS Officials (NASEMSO) with funding provided by NHTSA and the Health Resources and Services Administration (HRSA). Over the past 10 years, the model has provided guidance for States in developing their EMS Scope of Practice legislation, rules, and regulation. While the model provides national guidance, each State maintains the authority to regulate EMS within its border, and determine the scope of practice of State-licensed EMS practitioners.

Recognizing that the model may impact States' ability to urgently update their Scope of Practice rules, in 2016 the National EMS Advisory Council (NEMSAC) recommended that NHTSA develop a standardized urgent update process for the model and urgently address the issue of naloxone administration at EMS practitioner level.

As part of the revision of the 2007 model, NHTSA asked NASEMSO to develop a rapid process for emergent changes to the model. Following a deliberative process informed by peer-reviewed literature and data from the National EMS Information System (NEMSIS), NASEMSO and the project's subject matter expert panel used this new evidence and data to develop the two attached change notices on naloxone and hemorrhage control.

I hope you find these change notices useful to you in meeting the urgent needs of your patients and the practitioners you regulate. In the very near future we will publish a revised version of the model which incorporates these change notices.

Please feel free to contact me should you have any questions.

## 2007 NATIONAL EMS SCOPE OF PRACTICE MODEL CHANGE NOTICES

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### Change Notice 1.0

November 1, 2017

The following changes to the *National EMS Scope of Practice Model* (February 2007), Report No. DOT HS 810 657, are effective immediately:

Page 23. Emergency Medical Responder Psychomotor Skills/Pharmacological Interventions. The following has been added: **Administer a narcotic antagonist to a patient suspected of narcotic overdose.**

Page 26. Advanced Emergency Medical Technician Psychomotor Skills/Pharmacologic Interventions. The following has been deleted: **Administer a narcotic antagonist to a patient suspected of a narcotic overdose**; \*see note below.

Page 30. Pharmacological Intervention Minimum Psychomotor Skill Set/Emergency Medical Responder. The following has been added: Technique of Med Administration – Unit-dose, premeasured, intranasal or autoinjector.

Page 30. Pharmacological Intervention Minimum Psychomotor Skill Set/Emergency Medical Responder. Administered Meds. The following has been added: **Narcotic antagonist.**

Page 30. Pharmacological Intervention Minimum Psychomotor Skill Set/Advanced Emergency Medical Technician. Administered Meds. The following has been deleted: **Narcotic antagonist**; \*see note below.

\*Please note: The *National EMS Scope of Practice Model* and National EMS Education Standards assume there is a progression in practice from the Emergency Medical Responder (EMR) level to the paramedic level. That is, licensed personnel at each level are responsible for all knowledge, judgments, and skills at their level and all levels *preceding* their level. Therefore, content applied at the EMR level pertains to all EMS levels.

**BACKGROUND:** At the request of NHTSA’s Office of Emergency Medical Services under contract for 2018 National EMS Scope of Practice Revision, NASEMSO and a subject matter expert panel that included representatives of several national EMS organizations considered the following questions to facilitate urgent changes to the 2007 *National EMS Scope of Practice Model* to add the administration of opioid antagonists to the Emergency Medical Responder and EMT scopes of practice:

1. Is there evidence that the procedure or skill is beneficial to public health?
2. What is the clinical evidence that the new skill or technique as used by EMS practitioners will promote access to quality healthcare or improve patient outcomes? (The base of evidence should include the best available clinical evidence, clinical expertise, and research.)

**METHODS:** NASEMSO engaged the services of a board-certified emergency physician and researcher to lead a systematic review of literature to review the available evidence. An administrative team comprised of the project leadership established the following “PICO” question:

*(P) For adults with opiate/opioid toxicity in the prehospital environment, (I) does administration of naloxone (intramuscular or intranasal) by ALS (paramedics/EMT-I/AEMT) responders (C) compared to bystanders, law enforcement, or BLS (EMT-B/EMT/EMR) (O) improve patient mental and respiratory status?*

This PICO question evaluated all data from 1980 to the date of the search.

**RESULTS OF SYSTEMATIC REVIEW OF LITERATURE:** The search terms were exploded and are as follows: Search 1: “ambulance” OR “emergency medical services” OR “pre-hospital care” OR “mobile health units” OR “paramedic” AND “naloxone” OR “narcan” OR “opiate antagonist”; Search 2: “bystander” OR “law enforcement” OR “rescue personnel” OR “untrained” AND “naloxone” OR “narcan” OR “opiate antagonist.” Additionally, review articles were hand-searched for relevant papers. Inclusion criteria used for the evaluation of this search were manuscripts that satisfied the PICO question, were published in English in peer-reviewed journals, and whose subjects were human (no basic science or animal models). Exclusion criteria included studies that did not specifically compare ALS (paramedics/EMT-I/AEMT) responders to bystanders, law enforcement or BLS (EMT-B/EMT/EMR), studies not in the prehospital setting, and studies that examined perceptions of responders only (no clinical patient outcomes). Using a comprehensive search strategy, 850 articles were extracted. After independent evaluation by two reviewers, no manuscripts satisfied inclusion. No publications evaluated satisfied the stated PICO question concerning naloxone use between these

groups. We suggest that this finding is not unusual or unreasonable since the administration of opioid antagonists at the EMR and EMT levels is not currently supported in the 2007 model, creating a barrier to the use of naloxone by these providers.

**DISCUSSION:** Naloxone is a medication approved by the Food and Drug Administration to reverse overdose by opioids such as fentanyl, heroin, morphine, and oxycodone. It blocks opioid receptor sites, reversing the toxic effects of the overdose. Naloxone is administered when a patient is showing signs of opioid overdose. While we were not able to determine broad patient outcomes related to BLS (EMT and EMR) administration compared to ALS practitioners, NASEMSO also considered expert medical opinion, patient care outcomes identified by consensus panels, available research on the use of naloxone administration by lay bystanders, and the outcomes of State/regional demonstration projects in an attempt to inform a recommendation. We considered the safety of the drug and relative inability to do harm, the potential lifesaving benefits for opioid overdose patients, the availability of unit dose packaging, the relatively clear indications for use of the drug, the response to the rising problem of opioid overdoses nationwide, the ease of training BLS practitioners to use the drug safely and effectively, the minimal background in patient assessment, pharmacology, pathophysiology, airway management, etc., to use this drug. We conclude that the benefits outweigh the risks of incorporating opioid antagonist administration into the scope of practice at the EMR and EMT level for patients with suspected opioid overdose.

EMRs and EMTs shall only undertake the practice if they possess the necessary educational preparation, experience, and knowledge to properly administer an opioid antagonist via unit-dose, premeasured, intranasal or autoinjector routes. The execution of the procedures shall include the identification and discrimination of expected and unexpected human responses and the post-treatment management of administering opioid antagonists to EMS patients with suspected opioid overdose.

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## Change Notice 2.0

November 1 2017

The following changes to the *National EMS Scope of Practice Model* (February 2007), Report No. DOT HS 810 657, are effective immediately:

Page 23. Emergency Medical Responder Psychomotor Skills/Trauma Care. The following has been added: **Use of tourniquets and wound packing for hemorrhage control.**

Page 30. Emergency Trauma Care Minimum Psychomotor Skill Set/Emergency Medical Responder. The following has been added: **Tourniquet and wound packing.**

Page 30. Emergency Trauma Care Minimum Psychomotor Skill Set/Emergency Medical Technician. The following has been deleted: **Tourniquet**; see note below.

\*Please note: The *National EMS Scope of Practice Model* and National EMS Education Standards assume there is a progression in practice from the Emergency Medical Responder level to the Paramedic level. That is, licensed personnel at each level are responsible for all knowledge, judgments, and skills at their level and all levels *preceding* their level. Therefore, content applied at the EMR level pertains to all EMS levels.

**BACKGROUND:** At the request of NHTSA's Office of Emergency Medical Services under contract for 2018 National EMS Scope of Practice Revision, NASEMSO and a subject matter expert panel were asked to consider the addition of tourniquet application and wound packing for hemorrhage control to the scope of practice for EMS personnel at all levels. The following questions were considered in support of the request for urgent changes to the 2007 *National EMS Scope of Practice Model* .

1. Is there evidence that the procedure or skill is beneficial to public health?
2. What is the clinical evidence that the new skill or technique as used by EMS practitioners will promote access to quality healthcare or improve patient outcomes? (The base of evidence should include the best available clinical evidence, clinical expertise, and research.)

**METHODS:** NASEMSO engaged the services of a focused research team to lead a systematic review of medical literature to review the available evidence regarding tourniquet use and wound packing with hemostatic dressings. The published medical literature from 2013 to February 2017 was reviewed and evaluated. The literature review start date began with 2013 as the published prehospital hemorrhage control evidence-based guideline had previously evaluated the medical literature through 2012 on the

subject. The methods and detailed results of the updated literature review are attached as Addendum 1.

**RESULTS AND DISCUSSION:** Uncontrolled bleeding remains the most preventable cause of death following traumatic injury. The increasing incidence of intentional mass-casualty and active-shooter incidents has led to the development of educational initiatives designed to prepare the civilian bystander to act as an “immediate responder” to control bleeding until trained medical help arrives. The Hartford Consensus<sup>2</sup> advocated tourniquets for use by “immediate responders” and the “Stop the Bleed” campaign encourages citizen access to bleeding control equipment and immediate application of direct pressure, a tourniquet, or wound packing to control active hemorrhage when indicated. Yielding low complication rates and high potential benefits, an expert panel has noted that tourniquets are already in the model for EMTs and concluded that the application of a tourniquet should be included in the model for all EMS personnel, including EMR.

Direct (wound) pressure is already a component of the model for hemorrhage control for all EMS personnel. The panel’s discussion, therefore, focused on the role of wound packing (with or without hemostatic dressings) for bleeding from areas not amenable to either direct pressure or tourniquet application. Hemostatic dressings are available over-the-counter without prescription and are frequently included with commercially available bleeding control kits. It was noted that plain gauze could effectively be utilized for wound packing, but that there may be advantages to the use of specialized hemostatic dressings, which are impregnated with various compounds to enhance hemostasis. The evidence demonstrated that wound packing and hemostatic dressings are useful for this purpose. Wound packing, with a hemostatic dressing or with plain gauze, should be included in the *Practice Model* for all EMS personnel.

All EMS personnel are encouraged to undertake such practices only if they possess the necessary educational preparation, experience and knowledge to properly administer tourniquets and wound packing and manage potential complications from the procedures.

#### References:

1. Bulger, E. M., Snyder, D., Schoelles, K., Gotschall, C., Dawson, D., Lang, E., ... & McSwain, N., Jr.. (2014), An Evidence Based Prehospital Guideline for External Hemorrhage Control: American College of Surgeons Committee on Trauma. *Prehospital Emergency Care*, Apr-Jun;18(2):163-73. DOI: 10.3109/10903127.2014.896962 Available at

[www.facs.org/~media/files/quality%20programs/trauma/education/acscot%20evidencebased%20prehospital%20guidelines%20for%20external%20hemorrhage%20control.ashx](http://www.facs.org/~media/files/quality%20programs/trauma/education/acscot%20evidencebased%20prehospital%20guidelines%20for%20external%20hemorrhage%20control.ashx)

2. Jacobs, L. M., Jr., & the Joint Committee to Create a National Policy to Enhance Survivability for Intentional Mass Casualty Shooting Events. (2015) The Hartford Consensus III: Implementation of Bleeding Control. Chicago: Bulletin of the American College of Surgeons. Retrieved from <http://bulletin.facs.org/2015/07/the-hartford-consensus-iii-implementation-of-bleeding-control/>.

### **Addendum 1**

An administrative team comprised of the project leadership established the following PICO questions, which were then investigated by the research team:

1. *(P) In patients with severe external limb bleeding in the prehospital setting, (I) does the application of a tourniquet compared with not applying a tourniquet (C), change hemostasis, overall mortality, vital signs, functional limb recovery, complications, and blood loss (O)?*
2. *(P) In patients with severe external bleeding, (I) does the application of topical hemostatic dressings plus standard first aid, (C) compared with standard first aid alone, (O) change overall mortality, vital signs, hemostasis, complications, blood loss, and major bleeding?*

### **RESULTS OF SYSTEMATIC REVIEW OF LITERATURE:**

Use of Prehospital Tourniquets for Hemorrhage Control: A systematic review of the literature from 2013 to February 2017 identified of 466 articles matching search criteria. No additional records were identified by hand-searching relevant review articles. Duplicates were removed and 415 records were screened by two independent reviewers. Of these, 21 satisfied inclusion criteria and underwent full text review for eligibility in the analysis. Multiple articles were excluded from the final inclusion list due to the lack of a control group (usual care/not applying a tourniquet). Five manuscripts were selected for the final list of manuscripts that met inclusion criteria after full text review. Between this review and work done through the 2015 AHA Guidelines process, 13 manuscripts were published that evaluated the PICO question concerning prehospital tourniquet use for hemorrhage control.

Use of Prehospital Hemostatic Dressings for Hemorrhage Control: Inclusion criteria used for the evaluation of this search were manuscripts that satisfied the PICO question, were



published in English in peer-reviewed journals, and whose subjects were human (no basic science or animal models). Exclusion criteria included studies that did not specifically compare hemostatic dressing with first aid to first aid alone, and studies that did not specifically examine severe external bleeding in the prehospital setting (no operating room). A systematic review of the literature from 2013 to February 2017 identified 356 articles matching search criteria. No additional records were identified by hand-searching relevant review articles. Duplicates were removed and 351 records were screened by two independent reviewers. Of these, 13 satisfied inclusion criteria and underwent full text review for eligibility in the analysis. Four manuscripts were selected for the final list of manuscripts that met inclusion criteria after full text review. Between this review and work done through the 2015 AHA Guidelines process, 15 manuscripts were published that evaluate the PICO question concerning prehospital hemostatic dressing use.

# The National EMS Scope of Practice Model

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## The Vision of the *EMS Agenda for the Future*

The *National EMS Scope of Practice Model* is part the National Highway Traffic Safety Administration's commitment to the *EMS Agenda for the Future*. Released in 1996, the *EMS Agenda for the Future* established a long-term vision for the future of emergency medical services in the United States. According to the *Agenda*,

Emergency Medical Services (EMS) of the future will be community-based health management that is fully integrated with the overall health care system. It will have the ability to identify and modify illness and injury risks, provide acute illness and injury care and follow-up, and contribute to treatment of chronic conditions and community health monitoring. This new entity will be developed from redistribution of existing health care resources and it will be integrated with other health care providers and public health and safety agencies. It will improve community health and result in a more appropriate use of acute health care resources. EMS will remain the public's emergency medical safety net.

As a follow-up to the *EMS Agenda for the Future*, *The EMS Education Agenda for the Future: A Systems Approach*, released in 2000, called for the development of a system to support the education, certification and licensure of entry-level EMS personnel that facilitates national consistency.

The *Education Agenda* is a vision for the future of EMS education, and a proposal of an improved structured system to educate the next generation of EMS professionals. The *Education Agenda* builds on the broad concepts from the *1996 Agenda* to create a vision for an educational system that will result in improved efficiency for the national EMS education process. This system will enhance consistency in education quality and ultimately lead to greater entry-level graduate competence.

The *Education Agenda for the Future* proposed an EMS education system that consists of five integrated components: National EMS Core Content, National EMS Scope of Practice Model, National EMS Education Standards, National EMS Certification, and National EMS Education Program Accreditation.

The *National EMS Core Content*, released in 2004, defines the domain of out-of-hospital care. The *National EMS Scope of Practice Model* divides the core content into levels of practice, defining the minimum corresponding skills and knowledge for each level.

## Executive Summary

The *National EMS Scope of Practice Model* is a continuation of the commitment of the National Highway Traffic Safety Administration and the Health Resources and Services Administration to the implementation of the *EMS Agenda for the Future*. It is part of an integrated, interdependent system, first proposed in the *EMS Education Agenda for the Future: A Systems Approach* which endeavors to maximize efficiency, consistency of instructional quality, and student competence.

The *National EMS Scope of Practice Model* supports a system of EMS personnel licensure that is common in other allied health professions and is a guide for States in developing their Scope of Practice legislation, rules, and regulation. States following the *National EMS Scope of Practice Model* as closely as possible will increase the consistency of the nomenclature and competencies of EMS personnel nationwide, facilitate reciprocity, improve professional mobility and enhance the name recognition and public understanding of EMS.

The *National EMS Scope of Practice Model* defines and describes four levels of EMS licensure: emergency medical responder (EMR), emergency medical technician (EMT), advanced EMT (AEMT), and paramedic. Each level represents a unique role, set of skills, and knowledge base. *National EMS Education Standards* will be developed for each level. When used in conjunction with the *National EMS Core Content*, National EMS Certification, and National EMS Education Program Accreditation, the *National EMS Scope of Practice Model* and the *National EMS Education Standards* create a strong and interdependent system that will provide the foundation to assure the competency of out-of-hospital emergency medical personnel throughout the United States.

## Introduction

Emergency Medical Services (EMS) personnel treat nearly 20 million patients a year in the United States. Many of these patients have complicated medical or traumatic conditions that require considerable knowledge, skill, and judgment to be treated effectively in the out-of-hospital setting. Some are critically ill or injured, and the proper care can literally make the difference between life and death. For most patients, their crisis may not be a matter of life or death, but it is no less significant to them and their family. High quality out-of-hospital emergency care is an important part of the United States health care system.

As of 2003, there were 840,669 certified out-of-hospital care personnel in the United States (Lindstrom and Losavio, 2004), and the nation's annual expenditure for EMS topped \$6.75 billion (Sayer, Brown et al., 2001). Emergency Medical Services are diverse and complex systems. Until now, there has not been a national system to aid States in the evolution of their EMS personnel scopes of practice and licensure. In 1996, there were at least 44 different levels of EMS personnel certification in the United States

(National Highway Traffic Safety Administration, 1996). As part of this project, a survey of all of the States and territories was conducted in 2005. Of the 30 States and Territories that responded, we were able to identify 39 different licensure levels between the EMT and Paramedic levels. This patchwork of EMS personnel certifications has created considerable problems, including but not limited to:

- public confusion;
- reciprocity challenges;
- limited professional mobility; and
- decreased efficiency due to duplication of effort.

The *EMS Education Agenda for the Future: A Systems Approach* (2000) identified the need for a *National EMS Scope of Practice Model* as one of five components of an integrated, systematic approach to regulation of EMS education, certification, and licensure. This system will help ensure safe and effective out-of-hospital, emergency care. It relies on a “hand-in-glove” relationship between competency certification and professional licensure. The development of the *National EMS Scope of Practice Model* is part of the continued commitment to realize the vision of the *EMS Agenda for the Future* and the *EMS Education Agenda for the Future: A Systems Approach*.

The authors of the *National EMS Scope of Practice Model* recognize the responsibility of the State regulatory process to help assure the protection of the public. A part of a State’s regulatory responsibility includes the authority to establish the scopes of practice for EMS personnel. While this model is not intended to force standardization, it is a tool for States’ use that will encourage national consistency of EMS licensure levels and their minimum competencies while still accommodating State flexibility.

The *National EMS Scope of Practice Model* supports a system of licensure common in other allied health professions. Such a system offers the following benefits:

- establishes national standards for the minimum psychomotor skills and knowledge for EMS personnel;
- improves consistency among States’ scopes of practice;
- facilitates reciprocity;
- improves professional mobility;
- promotes consistency of EMS personnel titles; and
- improves the name recognition and public understanding of EMS personnel.

The licensure of EMS personnel, like that of other health care licensure systems, is part of an integrated and comprehensive system to improve patient care and safety and to protect the public.

The challenge facing the EMS community is to develop a system that establishes national standards for personnel licensure and their minimum competencies while remaining flexible enough to meet the unique needs of State and local jurisdictions. This document recognizes the need for “freedom within limits.”

## ***History of Occupational Regulation in EMS***

The development of modern civilian Emergency Medical Services stems largely from lessons learned in providing medical care to soldiers injured in military conflict. Building on these lessons, a number of rescue squads and ambulance services emerged in the civilian sector. While well intentioned, most of these personnel were untrained, poorly equipped, unorganized, and unsophisticated. The systems were unregulated, and no standards existed. By the 1960s, prehospital care in the United States had evolved into a patchwork of well intentioned but uncoordinated efforts. This all changed in the mid-1960s.

In 1960, the President's Committee for Traffic Safety recognized the need to address "Health, Medical Care and Transportation of the Injured" to reduce the nation's highway fatalities and injuries.

In 1966, the National Academy of Sciences published a "white paper" report titled *Accidental Death and Disability: The Neglected Disease of Modern Society*. This report quantified the magnitude of traffic-related death and disability while vividly describing the deficiencies in prehospital care in the United States. The white paper made a number of recommendations regarding ambulance systems, including a call for ambulance standards, State-level policies and regulations, and adopting methodology for providing consistent ambulance services at the local level (National Academy of Sciences National Research Council, 1966).

The Highway Safety Act of 1966 required each State to have a highway safety program which complied with uniform Federal standards, including "emergency services." This provided the impetus for the National Highway Traffic Safety Administration's early leadership role in EMS system improvements. Initial NHTSA EMS efforts were focused on improving the education of prehospital personnel such as the writing of the National Standard Curricula (NSC). Funding was also provided to assist States with the development of State EMS Offices. Subsequent NHTSA efforts were oriented toward comprehensive EMS system development and included, for instance, model State EMS legislation (Weingroff and Seabron, circa 2003).

The genesis of State EMS systems can also be traced to the early 1970s, when an unprecedented level of funding from the Federal Government and the Robert Wood Johnson Foundation prompted the establishment of regional EMS systems and demonstration projects throughout the country. The Emergency Medical Services Systems Act of 1973, enacted by Congress as Title XII of the Public Health Service Act, yielded eight years and over \$300 million of investment in EMS systems planning and implementation. The availability of EMS personnel and their training were two components that States were required to focus on, resulting in the first generation of legislation and regulation of EMS personnel levels (National Highway Traffic Safety Administration, 1996).

One function of State EMS offices was to ensure the competence of the State's EMS personnel. States employed a number of strategies to help assure safe and effective EMS practice, including licensure and certification. Unfortunately, these terms developed multiple connotations in EMS. In some cases, the meanings differed from other disciplines, causing confusion and inconsistency at the national level.

By 1990, EMS in the United States had enjoyed many successes. Not only did EMS systems grow, but EMS became a career and volunteer activity for hundreds of thousands of talented, committed, and dedicated individuals. Emergency medical care was available to virtually every citizen in the country by simply dialing 9-1-1 from any telephone. Despite this progress, EMS was affected by a number of factors in the broader health care system.

In 1992, the National Association of EMS Physicians (NAEMSP) and the National Association of State EMS Directors (NASEMSD) saw a need for a long-term strategic direction for EMS, and the *EMS Agenda for the Future* was initiated with support from the National Highway Traffic Safety Administration and the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA). Published in 1996, the *EMS Agenda for the Future* proposed a bold vision for greater integration of EMS into the U.S. health care system.

In 1993, the National Registry of EMTs (NREMT) released the *National Emergency Medical Services Education and Practice Blueprint*. The *Blueprint* defined an EMS educational and training system that would provide both the flexibility and structure needed to guide the development of national standard training curricula and guide the issuance of licensure and certification by the individual States.

In 1998, the Pew Health Professions Commission Taskforce on Health Care Workforce Regulation published *Strengthening Consumer Protection: Priorities for Health Care Workforce Regulation* (Finocchio, Dower et al., 1998). The report recommended that a national policy advisory board develop standards, including model legislative language, for uniform scopes of practice authority for the health professions. The report emphasized the need for States to enact and implement scopes of practice that are nationally uniform and based on the standards and models developed by the national policy advisory body.

Also in 1998, demonstrating their commitment to the *EMS Agenda*, NHTSA and HRSA jointly supported a two-year project to develop an integrated system of EMS regulation, education, certification, licensure, and educational program accreditation. The result was the *EMS Education Agenda for the Future: A Systems Approach*, which recognized the need for a systematic approach to meet the needs of the current EMS system while moving toward the vision proposed in the 1996 *EMS Agenda for the Future*. The *EMS Education Agenda* called for a more traditional approach to licensing EMS personnel.



A coordinated national EMS system is in the best interest of States, EMS personnel, and the public. State EMS offices, while working in cooperation with their stakeholders, should implement scope of practice regulations that are as close as possible to those described in the *National EMS Scope of Practice Model*. This will help with professional recognition of EMS personnel, facilitate reciprocity, decrease confusion, and enable the development of high quality support systems to benefit the entire system.

### ***The Development of the National EMS Scope of Practice Model***

As a relatively young discipline, EMS has a limited research base which makes it difficult to make evidence-based decisions; however, this project was guided by research whenever possible. The development process used the National EMS Core Content, State EMS office and medical director surveys, the *National EMS Practice Analysis*, the National EMS Information System (NEMSIS) pilot project data, the Longitudinal EMT Attributes and Demographics Study (LEADS), and peer-reviewed literature where appropriate.

The Scope of Practice Model was also influenced by extensive literature review of other professions, systematic analysis of policy documents regarding health care licensing and patient safety, presentations by other allied health credentialing bodies, and cross-professional and international comparative analysis.

Statistical analysis and research on patient safety, scope of practice, and EMS personnel competency must become a priority among the leadership of national associations, Federal agencies, and research institutions. When EMS data collection, subsequent analysis, and scientific conclusions are published and replicated, later versions of the *National EMS Scope of Practice Model* should be driven by those findings.

### ***The Role of State Government***

Each State has the statutory authority and responsibility to regulate EMS within its borders, and to determine the scope of practice of State-licensed EMS personnel. The *National EMS Scope of Practice Model* is a consensus-based document that was developed to improve the consistency of EMS personnel licensure levels and nomenclature among States; it does not have any regulatory authority.

The development and publication of the *National EMS Scope of Practice Model* represents a transition from the historical connection between scope of practice and the EMS National Standard Curricula. The *Scope of Practice Model* is a consensus document, guided by data and expert opinion that reflects the skills representing the *minimum* competencies of the levels of EMS personnel. The *Scope of Practice Model* will serve EMS in the future as it is revised and updated to include changes in medical science, new technology, and research findings.

The *National EMS Scope of Practice Model* identifies the psychomotor skills and knowledge necessary for the minimum competence of each nationally identified level of EMS provider. This model will be used to develop the National EMS Education Standards, national EMS certification exams, and national EMS educational program accreditation. Under this model, to be eligible for State licensure, EMS personnel must be verifiably competent in the minimum knowledge and skills needed to ensure safe and effective practice at that level. This competence is assured by completion of a nationally accredited educational program and national certification.

While each State has the right to establish its own levels of EMS providers and their scopes of practice, staying as close to this model as possible, *and especially not going below it for any level*, will facilitate reciprocity, standardize professional recognition, and decrease the necessity of each State developing its own education and certification materials. The National EMS Education Standards, national certification, national educational program accreditation, and publisher-developed instructional support material provide States with essential infrastructure support for each nationally defined EMS licensure level.

The adoption of skills and roles beyond those proposed in this model will diminish national consistency and may impede interstate mobility and legal recognition for EMS personnel. Additionally, content in future national EMS education standards, national certification examinations, and curriculum-focused aspects of national education program accreditation standards will be consistent with the National EMS Scope of Practice Model and may not be appropriate for State use if there is significant State deviation from the Model. This will necessitate States developing and implementing State-specific educational content, education program approval, certification examinations, credentialing processes, and quality assurance procedures.

Some States permit licensed EMS personnel to perform skills and roles beyond the minimum skill set as they gain knowledge, additional education, experience, and (possibly) additional certification. Care must be taken to consider the level of cognition necessary to perform a skill safely. For instance, some skills may appear simple to perform, but require considerable clinical judgment to know when they should, and should not, be performed.

## Scope of Practice

“Scope of practice” is a legal description of the distinction between licensed health care personnel and the lay public and among different licensed health care professionals. It describes the authority, vested by a State, in licensed individuals practicing within that State. Scope of practice establishes which activities and procedures represent illegal activity if performed without licensure. In addition to drawing the boundaries between the professionals and the lay

Scope of Practice is a description of what a licensed individual legally can, and cannot, do.

person, scope of practice also defines the boundaries among professionals, creating either exclusive or overlapping domains of practice.

The *Scope of Practice Model* should be used by the States to develop scope of practice legislation, rules and regulation. The specific mechanism that each State uses to define the State’s scope of practice for EMS personnel varies. State scopes of practice may be more specific than those included in this model and may specifically identify both the minimum and maximum skills and roles of each level of EMS licensure.

Scopes of practice are typically defined in law, regulations, or policy documents. Some States include specific language within the law, regulation or policy, while others refer to a separate document using a technique known as “incorporation by reference.” In EMS, many States have defined their scope of practice by referencing the National Standard Curricula. The *National EMS Scope of Practice Model* offers a contemporary replacement for incorporation by reference or language for inclusion in law, regulation, or policy.

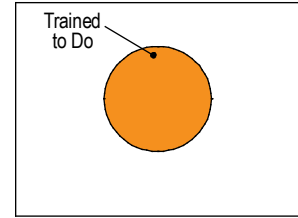
Generally, changing a law is more difficult than changing a regulation; changing a regulation is more difficult than changing a policy.

Scopes of practice do not define every activity of a licensed individual (for example, lifting and moving patients, taking a blood pressure, direct pressure for bleeding control, etc.). In general, scopes of practice focus on activities that are regulated by law (for example, starting an intravenous line, administering a medication, etc.). This includes technical skills that, if done improperly, represent a significant hazard to the patient and therefore must be kept out of the hands of the untrained. The *National EMS Scope of Practice Model* includes suggested verbiage for the State scopes of practice in the section entitled “EMS Personnel Scopes of Practice.” The interpretive guidelines (Appendix A) include a more detailed list of skills discussed by the National EMS Scope of Practice Task Force. These skills, which generally should not appear in scope of practice regulatory documents, are included to provide the user with greater insight as to the deliberations and discussion of the group.

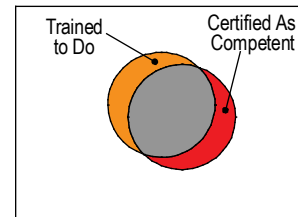
### ***The Interdependent Relationship Between Education, Certification, Licensure, and Credentialing***

The *National EMS Scope of Practice Model* establishes a framework that ultimately determines the range of skills and roles that an individual possessing a State EMS license is authorized to do on a given day, in a given EMS system. It is based on the notion that education, certification, licensure, and credentialing represent four separate but related activities.

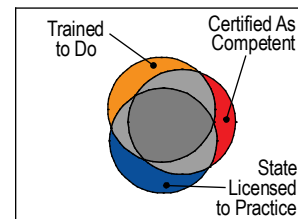
Education includes all of the cognitive, psychomotor, and affective learning that individuals have undergone throughout their lives. This includes entry-level and continuing professional education, as well as other formal and informal learning. Clearly, many individuals have extensive education that, in some cases, exceeds their EMS skills or roles.



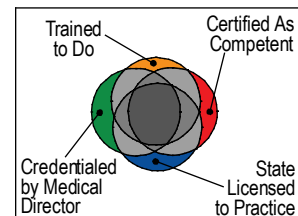
Certification is an external verification of the competencies that an individual has achieved and typically involves an examination process. While certification exams can be set to any level of proficiency, in health care they are typically designed to verify that an individual has achieved minimum competency to assure safe and effective patient care.



Licensure represents permission granted to an individual by the State to perform certain restricted activities. Scope of practice represents the legal limits of the licensed individual's performance. States have a variety of mechanisms to define the margins of what an individual is legally permitted to perform.



Credentialing is a local process by which an individual is permitted by a specific entity (medical director) to practice in a specific setting (EMS agency). Credentialing processes vary in sophistication and formality.

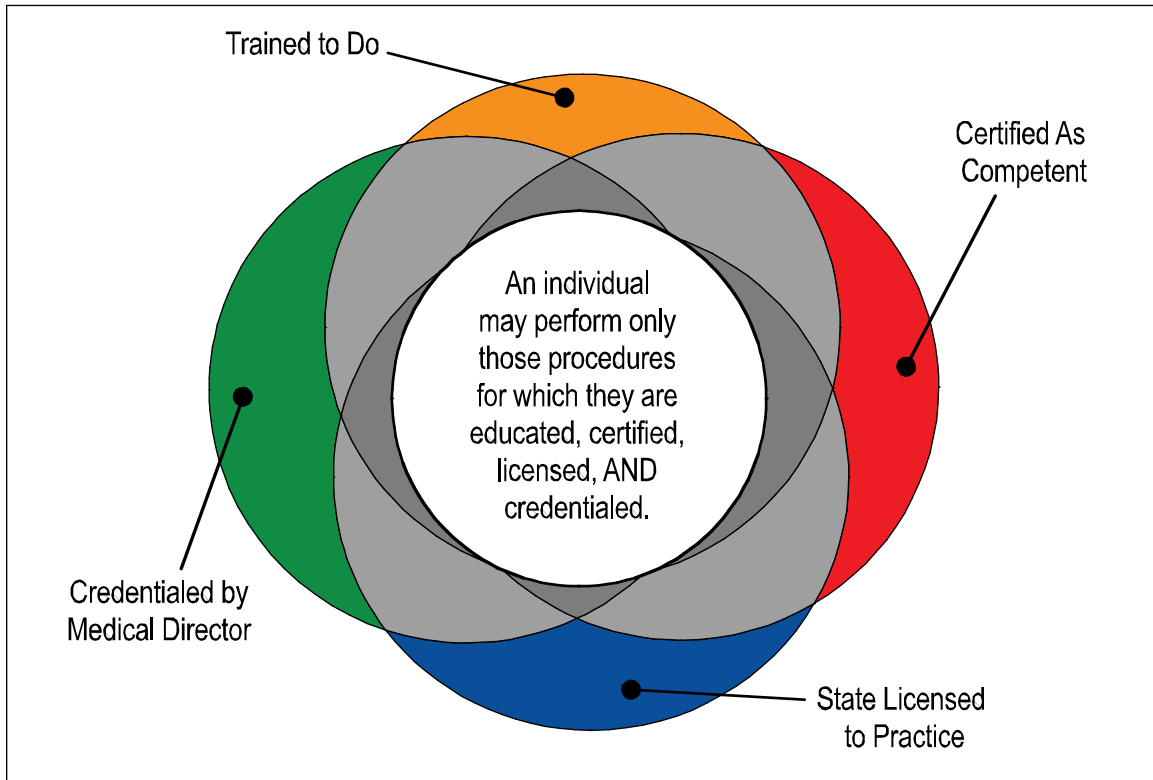


For every individual, these four domains are of slightly different relative sizes. However, one concept remains constant: an individual may only perform a skill or role for which that person is:

- educated (has been trained to do the skill or role), AND
- certified (has demonstrated competence in the skill or role), AND
- licensed (has legal authority issued by the State to perform the skill or role), AND
- credentialed (has been authorized by medical director to perform the skill or role).

This relationship is represented graphically in Fig. 1.

Fig 1: The Relationship among education, certification, licensure, and credentialing.

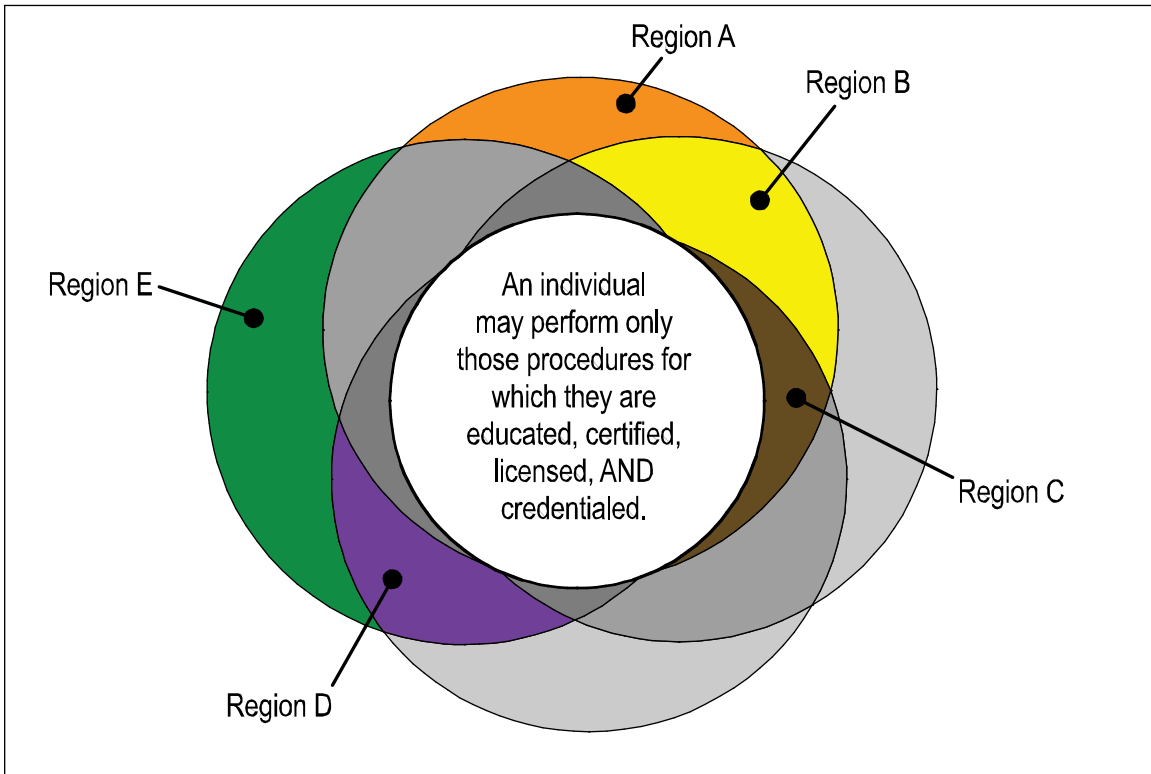


The center of Fig 1, where all the four elements overlap, represents skills and roles for which an individual has been educated, certified, licensed by a State, and credentialed. This is the only acceptable region of performance, as it entails four overlapping and mutually dependent levels of public protection: education, certification, licensure, and credentialing.

Individuals may perform those procedures for which they are educated, certified, licensed, AND credentialed.

A significant risk to patient safety occurs when EMS personnel are placed into situations and roles for which they are not experientially or educationally prepared. It is the shared responsibility of medical oversight, clinical and administrative supervision, regulation, and quality assurance to ensure that EMS personnel are not placed in situations where they exceed the State's scope of practice. For the protection of the public, regulation must assure that EMS personnel are functioning within their scope of practice, level of education, certification, and credentialing process.

Fig 2: Skill and role situations not covered by all four elements for protection of the public.



- Region “A”:** represents skills and roles for which an individual has received education, but is neither certified, licensed, nor credentialed. For example, an EMT in a paramedic class is taught paramedic level skills; despite being trained, the EMT cannot perform those skills until such time that he is certified, licensed, and credentialed by the Local EMS Medical Director.
  
- Region “B”:** represents skills and roles in which an individual has been educated and certified, but are not part of the State license and credentialing. For example, a Paramedic is educated and certified in needle cricothyrotomy. Should he be functioning in a State in which that skill is prohibited for Paramedics, it would now be out of his scope of practice.
  
- Region “C”:** represents skills and roles for which an individual is educated, certified, and licensed, but has no credentialing. For example, an off duty Paramedic arriving at the scene of an incident outside of his jurisdiction usually is not credentialed to perform advanced skills. In this case, performing an advanced skill would represent a violation of his scope of practice.
  
- Region “D”:** represents skills or roles the State has authorized (licensed) but which also require local entities to assure the education, competence, and provide medical direction. For example, rapid sequence intubation (RSI) in some States is legally permitted, but usually not taught as part of the initial education, nor is it part of the certification process, and most medical directors do not credential individuals to perform RSI. Some individuals (for example, flight paramedics) may perform RSI; however, the local medical director assumes responsibility for training, competency verification, and medical direction.
  
- Region “E”:** represents skills or roles which a medical director wants an individual to perform but for which he has not been educated, certified, or licensed. There is considerable State-to-State variability in dealing with this situation. Most States have regulations that restrict licensed individuals from functioning beyond their scope of practice, and may take action against an individual who performs a skill or role for which they are not licensed. In contrast, some States

have regulatory mechanisms that enable a local physician to assume complete responsibility for the performance of skills and roles performed by an individual. Most States fall somewhere between these extremes and have mechanisms by which local medical directors can appeal for an expansion of a scope of practice if they can demonstrate need and appropriate mechanism to reasonably assure patient safety.

In many States, day-to-day clarification of scopes of practice, management of the “appeal process”, or otherwise assuring the adequacy of medical direction is the role of the State EMS Medical Director.

## **Scope of Practice versus Standard of Care**

Scope of practice does not define a standard of care, nor does it define what should be done in a given situation (i.e., it is not a practice guideline or protocol). It defines what is legally permitted to be done by some or all of the licensed individuals at that level, not what must be done. Table 1 describes some of the differences between scope of practice and standard of care.

Table 1. Relationship between scope of practice and standard of care

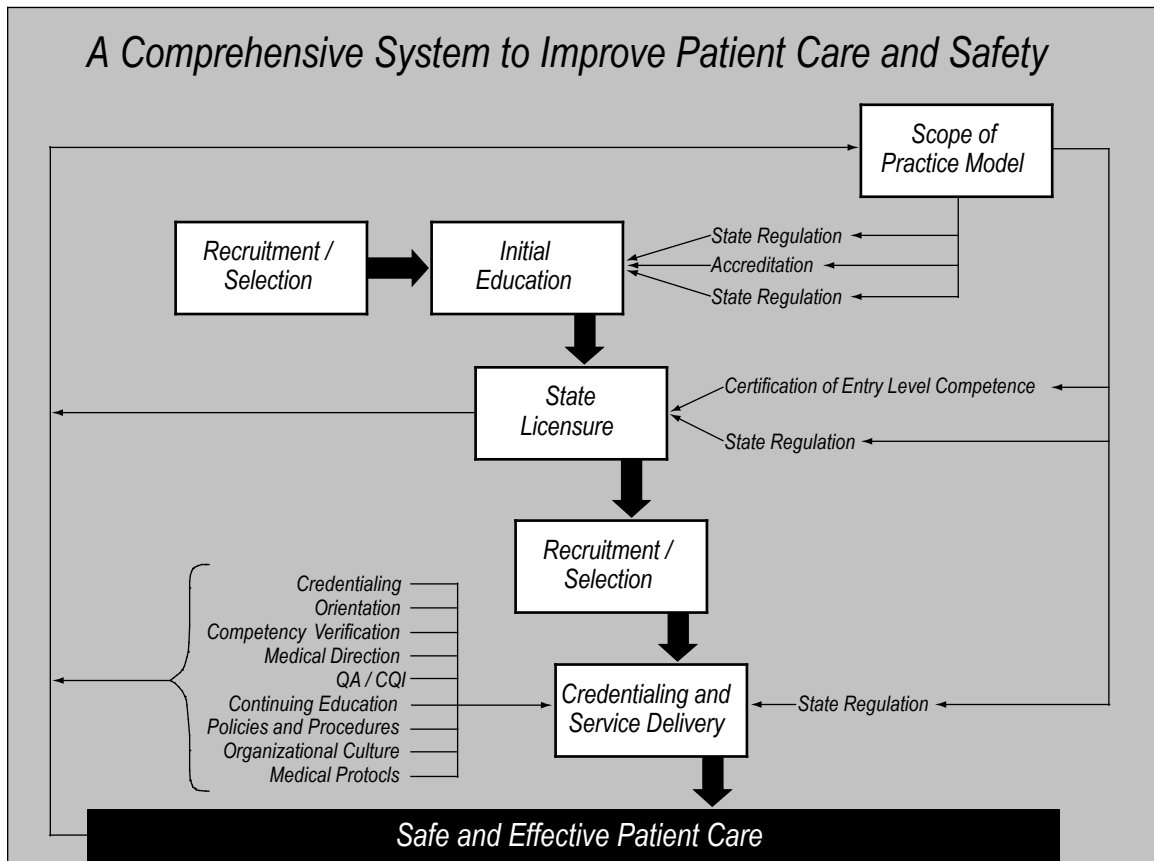
|                           | <b>Scope of Practice</b>  | <b>Standard of Care</b>   |
|---------------------------|---|---|
| <b>Purpose</b>            | Deals with the question, “Are you/were you <i>allowed</i> to do it?”                          | Deals with the question, “Did you do the right thing and did you do it properly?” |
| <b>Legal implications</b> | Act of commission is a criminal offense   | Acts of commission or omission may lead to civil liability                        |
| <b>Variability</b>        | May vary from individual to individual. Does not vary based on circumstances.                 | Situational, depends on many variables  |
| <b>Defined by</b>         | Established by statute, rules, regulations, precedent, and/or licensure board interpretations | Determined by scope of practice, literature, expert witnesses, and juries         |
| <b>Miscellaneous</b>      | It is difficult to regulate knowledge through scope of practice.                              | Used to evaluate professional judgment  |

## **A Comprehensive Approach to Safe and Effective Out-of-Hospital Care**

Scope of practice is only one part of health care regulation, and regulation is only one component of a comprehensive approach to improved patient care and safety. Safe and effective EMS care is the cumulative effect of a cascade of thousands of individual decisions involving every level of EMS leadership, supervision, management, and regulation. Safe and effective patient care is the shared responsibility of everybody within the EMS system, and must be our collective first priority. Safe and effective care cannot be accomplished through any single activity, but is best accomplished with an integrated system of checks and balances. All components of the comprehensive approach to safe and effective patient care are mutually supportive and dependent. Figure 2 illustrates the interconnected nature of many of the components of a comprehensive system.



Figure 3: A comprehensive approach to safe and effective out-of-hospital care.



### **Scope of Practice for Special Populations**

EMS professionals are expected to meet the urgent health care needs of all patients, regardless of age or co-morbidity, consistent with their defined scope of practice. Recognized special populations include, but may not be limited to, children, older patients, patients with disabilities, and patients with limited access to health care due to geographic, demographic, socioeconomic, or other reasons.

### **Scope of Practice for EMS Personnel Functioning in Nontraditional Roles**

An increasing number of EMS professionals are functioning in health care settings other than out-of-hospital care. Common settings include, but are not limited to, emergency departments, hospital units (including critical care), physician’s offices, urgent care settings, occupational medicine, summer camps, wildland fire medical units, athletic facilities, etc. State regulations must be clear as to the extent to which the State’s EMS scope of practice applies to EMS personnel functioning in these nontraditional roles and settings. The employers of EMS personnel working in nontraditional roles and settings

must also be aware to what extent the person's State EMS license permits or prohibits such activities.

## ***Scope of Practice During Disasters, Public Health Emergencies, and Extraordinary Circumstances***

It is virtually impossible to create a scope of practice that takes into account every unique situation, extraordinary circumstance, and possible practice situation. This is further complicated by the fact that EMS personnel are an essential component of disaster preparedness and response. In many cases, EMS personnel are the only medically trained individuals at the scene of a disaster when other health care resources may be overwhelmed. This document cannot account for every situation, but rather is designed to establish a system that works for entry-level personnel under normal circumstances. It is assumed that the scope of practice of EMS personnel may be modified or changed in times of disaster or crisis with proper education, medical oversight, and quality assurance to reasonably protect patient safety.

## ***Specializations***

In some cases, specialty certifications may be used to respond to local needs for flexibility or to recognize continuing education. Specialty certifications may evolve to accommodate subtle differences in skills, practice environment, knowledge, qualifications, services provided, needs, risk, level of supervisory responsibility, amount of autonomy and/or judgment/critical thinking/decision making.

It is beyond the purview of this document to define the wide array of possible specialty certifications that might exist now or in the future.

## ***Implementation***

The *National EMS Scope of Practice Model* represents an important step in the maturation of Emergency Medical Services as a profession. The model is evolutionary, not revolutionary. It is intended to be implemented deliberately and incrementally, over time. States are encouraged to implement these changes at the next promulgation opportunity.

Implementing the *National EMS Scope of Practice Model* will require consideration of: funding, reimbursement, transition courses, grandfathering of current providers, development of educational and instructional support materials, workforce issues, labor negotiations, impact on volunteerism, and other important issues.

The National Highway Traffic Safety Administration and its Federal partners are committed to realizing the vision of the *EMS Agenda for the Future*. Full implementation

of the *EMS Education Agenda for the Future: A Systems Approach* is an important step towards achieving this goal. NHTSA will continue to support the national EMS community in its effort to facilitate the implementation of the *Education Agenda*.

## Overview of the EMS Profession

The *National EMS Scope of Practice Model* defines the practice of EMS personnel. EMS personnel are unique health care professionals in that they provide medical care and transportation in an out-of-hospital setting with medical oversight. EMS personnel are not independent practitioners. While the practice is not independent, it is relatively unsupervised and often has little backup. Therefore, EMS personnel must be able to exercise considerable judgment, problem-solving, and decision-making skills.

Most EMS personnel work in emergency medical organizations that respond to emergency calls. Emergency response is typically a local government function (or contracted by local government to a private entity). In most communities, citizens call 9-1-1 when they need emergency medical care, and the appropriate EMS resources are dispatched. EMS personnel respond and provide care to the patient in the setting in which the patient became ill or injured, including the home, field, work, industrial, and recreational settings. In the case of emergency calls, EMS personnel are unique in that they typically have a “duty to act.”

Many EMS personnel provide medical transportation services for patients requiring medically supervised transportation, either exclusively or in addition to emergency response. These “medical transports” generally do not fall under the “duty to act” responsibility of emergency response. Some EMS personnel provide interfacility transfers of very high acuity patients.

In some cases, EMS personnel “stand by” at mass gatherings (for example, concerts, sporting events, etc.) and high-risk activities (for example, fireground operations, etc.). EMS personnel occasionally serve a combined emergency response and occupational/primary care role in remote areas (for example, off-shore oil rigs, wildland fires, etc.) Increasing numbers of EMS personnel are working in more traditional health care settings in the hospital (especially emergency departments), urgent care centers, doctor’s offices and long-term care facilities. Finally, EMS personnel are becoming involved in numerous public health initiatives (immunizations, illness and injury prevention programs, etc.).

Emergency Medical Services are a local function and organized in a variety of ways. Common models are municipal government (fire-based or third-service) or a contracted service with a private (profit or nonprofit) entity. EMS personnel also can be categorized in a variety of ways. Those trained to higher levels tend to be paid (either full- or part-time) while those trained to lower levels tend to be volunteers or partially paid.

EMS provides out-of-hospital medical care to those with perceived urgent needs. It is a component of the overall health care system. EMS delivers care as part of a system intended to attenuate the morbidity and mortality associated with sudden illnesses and injury. The positive effects of EMS care are enhanced by linkages with other community health resources and integration within the health care system.

## **EMS Personnel Licensure Levels**

During the first 40 years of EMS system development, the periodic development of the national standard curricula provided the major forum for discussing national EMS scope of practice issues. While the NSC were intended to be curricular documents, designed for instructional purposes, most of the controversies that emerged related to scopes of practice rather than education. The *National EMS Scope of Practice Model* creates a mechanism to address the introduction of new technologies, research findings, and similar progression of EMS practice separately from education. The *National EMS Scope of Practice Model* is a tool to promote national consistency and public understanding of EMS practice while at the same time recognizing the authority and responsibility of States to implement scopes of practice that reflect their individual needs and circumstances. This model more closely parallels the process used by other health care professions and reflects the approach called for in the *EMS Education Agenda for the Future: A Systems Approach*.

This document, one of five components of the *EMS Education Agenda for the Future: A Systems Approach*, is a model for State EMS system regulatory functions as they continue to refine their scopes of practice. This model recognizes the utility of standardization of levels of licensure within and across States as well as States' ability to authorize adjustments at the regional or local level based on a variety of factors (such as medical oversight, local EMS agency capacity, etc.). The ultimate goals of adopting this model, and the other components of the *EMS Education Agenda for the Future: A Systems Approach*, are to enhance national consistency, improve patient care, ensure patient safety, facilitate reciprocity, and decrease confusion for the public and EMS personnel.

In reality, only a few licensure levels are practical. The support of the educational infrastructure (developing educational standards, national accreditation, national certification, continued competency requirements, etc.) requires a tremendous expenditure of resources and is only viable if there are a finite number of levels. Therefore, the challenge is to create a system that meets the diverse needs of the country, while keeping the number of licensure levels to a minimum number.

For the purpose of this model, one licensure level is *substantially* different from other licensure levels in:

- Skills
- Practice environment
- Knowledge
- Qualifications
- Services provided
- Risk
- Level of supervisory responsibility
- Amount of autonomy
- Judgment/critical thinking/decision making.

Specialty certifications are sometimes used to accommodate smaller differences in some or all of the above.

### ***Emergency Medical Responder***

The primary focus of the Emergency Medical Responder is to initiate immediate lifesaving care to critical patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide lifesaving interventions while awaiting additional EMS response and to assist higher level personnel at the scene and during transport. Emergency Medical Responders function as part of a comprehensive EMS response, under medical oversight. Emergency Medical Responders perform basic interventions with minimal equipment.

Educational Requirements: One of the eligibility requirements for licensure at this level requires successful completion of an accredited Emergency Medical Responder training program.

### ***Emergency Medical Technician***

The primary focus of the Emergency Medical Technician is to provide basic emergency medical care and transportation for critical and emergent patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide patient care and transportation. Emergency Medical Technicians function as part of a comprehensive EMS response, under medical oversight. Emergency Medical Technicians perform interventions with the basic equipment typically found on an ambulance. The Emergency Medical Technician is a link from the scene to the emergency health care system.

Educational Requirements: One of the eligibility requirements for licensure at this level requires successful completion of an accredited Emergency Medical Technician course.

## ***Advanced Emergency Medical Technician***

The primary focus of the advanced emergency medical technician is to provide basic and limited advanced emergency medical care and transportation for critical and emergent patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide patient care and transportation. Advanced emergency medical technicians function as part of a comprehensive EMS response, under medical oversight. Advanced emergency medical technicians perform interventions with the basic and advanced equipment typically found on an ambulance. The advanced emergency medical technician is a link from the scene to the emergency health care system.

Educational Requirements: One of the eligibility requirements for licensure at this level requires successful completion of an accredited advanced emergency medical technician course.

## ***Paramedic***

The Paramedic is an allied health professional whose primary focus is to provide advanced emergency medical care for critical and emergent patients who access the emergency medical system. This individual possesses the complex knowledge and skills necessary to provide patient care and transportation. Paramedics function as part of a comprehensive EMS response, under medical oversight. Paramedics perform interventions with the basic and advanced equipment typically found on an ambulance. The Paramedic is a link from the scene into the health care system.

Educational Requirements: Because of the amount of complex decision making, one of the eligibility requirements for licensure requires successful completion of a nationally accredited Paramedic program at the certificate or associates degree level.

## **EMS Personnel Scope of Practice Models**

EMS skills and knowledge represent a continuum of complexity and risk. As the licensure level increases, the knowledge required to practice safely, the skill complexity (the difficulty in acquiring and maintaining skill competency), and the potential for harm increase. Communities must assess their needs and the resources they are willing and able to invest in out-of-hospital emergency care.

The primary role of each EMS licensure level is outlined in the “Description of the Profession” sections. The language in the “Description of the Profession” and “Psychomotor Skills” sections may be helpful to States as they integrate the *National EMS Scope of Practice Model* into their laws or administrative regulations.

The Psychomotor Skills sections describe the minimum skill set associated with each licensure level. The Psychomotor Skills sections do not reference specific pieces of equipment or procedures, but rather, are written with more explanatory language. This is intended to minimize the need for changes to the *EMS Scope of Practice Model* as technology and medical science evolve. This approach also allows States a degree of latitude in how detailed they choose to be in defining specific psychomotor skills and procedures that will be allowed by the State for licensed EMS personnel.

Because of the general language used in writing the Psychomotor Skills sections, interpretive guidelines (Appendix A) provide additional clarification and direction. The interpretive guidelines will assist in developing the *National EMS Education Standards* and National EMS Certification examinations. The interpretive guidelines are not intended to be inclusive of every skill that a State might allow to be performed at an EMS licensure level.

## ***Emergency Medical Responder***

### **Description of the Profession**

The emergency medical responder's scope of practice includes simple skills focused on lifesaving interventions for critical patients. Typically, the emergency medical responder renders on-scene emergency care while awaiting additional EMS response and may serve as part of the transporting crew, but not as the primary care giver.

In many communities, emergency medical responders provide a mechanism to increase the likelihood that trained personnel and lifesaving equipment can be rapidly deployed to serious emergencies. In all cases, emergency medical responders are part of a tiered response system. Emergency medical responders work alongside other EMS and health care professionals as an integral part of the emergency care team.

The emergency medical responder's scope of practice includes simple, non-invasive interventions to reduce the morbidity and mortality associated with acute out-of-hospital medical and traumatic emergencies. Emergency care is based on assessment findings. Additionally, the emergency medical responder provides care designed to minimize secondary injury and comfort the patient and family while awaiting additional EMS resources.

A major difference between the lay person and the emergency medical responder is the "duty to act" as part of an organized EMS response.

In some systems, emergency medical responders serve as a part of the crew on transporting EMS units; however, the EMR is not intended to be the highest level caregiver in such situations. They must function with an EMT or higher level personnel during the transportation of emergency patients. The scope of practice model of an EMR

is limited to simple skills that are effective and can be performed safely in an out-of-hospital setting with medical oversight.

After initiating care, the emergency medical responder transfers care to higher level personnel. The emergency medical responder serves as part of an EMS response system that ensures a progressive increase in the level of assessment and care.

## **Psychomotor Skills**

The following are the minimum psychomotor skills of the EMR:

- Airway and Breathing
  - Insertion of airway adjuncts intended to go into the oropharynx
  - Use of positive pressure ventilation devices such as the bag-valve-mask
  - Suction of the upper airway
  - Supplemental oxygen therapy
- Pharmacological interventions
  - Use of unit dose auto-injectors for the administration of life saving medications intended for self or peer rescue in hazardous materials situations (MARK I, etc.)
  - Administer a narcotic antagonist to a patient suspected of narcotic overdose (updated November 2017)
- Medical/Cardiac Care
  - Use of an automated external defibrillator
- Trauma Care
  - Manual stabilization of suspected cervical spine injuries
  - Manual stabilization of extremity fractures
  - Bleeding control
  - Emergency moves
  - Use of tourniquets and wound packing for hemorrhage control (updated November 2017)

## ***Emergency Medical Technician***

### **Description of the Profession**

The emergency medical technician's scope of practice includes basic skills focused on the acute management and transportation of critical and emergent patients. This may occur at an emergency scene until transportation resources arrive, from an emergency scene to a health care facility, between health care facilities, or in other health care settings.

In many communities emergency medical technicians provide a large portion of the out-of-hospital care. In some jurisdictions, especially rural areas, emergency medical technicians provide the highest level of out-of-hospital care. Emergency medical technicians work alongside other EMS and health care professionals as an integral part of the emergency care team.



Emergency medical technicians' scope of practice includes basic, non-invasive interventions to reduce the morbidity and mortality associated with acute out-of-hospital medical and traumatic emergencies. Emergency care is based on assessment findings. Additionally, emergency medical technicians provide care to minimize secondary injury and provide comfort to the patient and family while transporting the patient to an emergency care facility.

An emergency medical technician's knowledge, skills, and abilities are acquired through formal education and training. The emergency medical technician has the knowledge of, and is expected to be competent in, all of the skills of the EMR. A major difference between the emergency medical responder and the emergency medical technician is the knowledge and skills necessary to provide medical transportation of emergency patients.

The emergency medical technician level is the minimum licensure level for personnel transporting patients in ambulances. The scope of practice is limited to basic skills that are effective and can be performed safely in an out-of-hospital setting with medical oversight and limited training.

The emergency medical technician transports all emergency patients to an appropriate medical facility. The emergency medical technician is not prepared to make decisions independently regarding the appropriate disposition of patients. The emergency medical technician serves as part of an EMS response system, assuring a progressive increase in the level of assessment and care. The emergency medical technician may make destination decisions in collaboration with medical oversight. The principal disposition of the patient encounter will result in the direct delivery of the patient to an acute care facility.

In addition to emergency response, emergency medical technicians often perform medical transport services of patients requiring care within their scope of practice.

## **Psychomotor Skills**

The following are the minimum psychomotor skills of the EMT:

- Airway and Breathing
  - Insertion of airway adjuncts intended to go into the oropharynx or nasopharynx
  - Use of positive pressure ventilation devices such as manually triggered ventilators and automatic transport ventilators
- Pharmacological Interventions
  - Assist patients in taking their own prescribed medications
  - Administration of the following over-the-counter medications with appropriate medical oversight:
    - Oral glucose for suspected hypoglycemia
    - Aspirin for chest pain of suspected ischemic origin
- Trauma Care

- Application and inflation of the pneumatic anti-shock garment (PASG) for fracture stabilization

## ***Advanced Emergency Medical Technician***

### **Description of the Profession**

The Advanced Emergency Medical Technician's scope of practice includes basic and limited advanced skills focused on the acute management and transportation of critical and emergent patients. This may occur at an emergency scene until transportation resources arrive, from an emergency scene to a health care facility, between health care facilities, or in other health care settings.

For many communities, Advanced Emergency Medical Technicians provide an option to provide high benefit, lower risk advanced skills for systems that cannot support or justify Paramedic level care. This is frequently the case in rural and volunteer systems. In some jurisdictions, Advanced Emergency Medical Technicians are the highest level of out-of-hospital care. In communities which utilize emergency medical dispatch systems, Advanced Emergency Medical Technicians may function as part of a tiered response system. In all cases, Advanced Emergency Medical Technicians work alongside other EMS and health care professionals as an integral part of the emergency care team.

The Advanced Emergency Medical Technician's scope of practice includes basic, limited advanced and pharmacological interventions to reduce the morbidity and mortality associated with acute out-of-hospital medical and traumatic emergencies. Emergency care is based on assessment findings. Additionally, Advanced Emergency Medical Technicians provide care to minimize secondary injury and provide comfort to the patient and family while transporting the patient to an emergency care facility.

The Advanced Emergency Medical Technician's knowledge, skills, and abilities are acquired through formal education and training. The Advanced Emergency Medical Technician has the knowledge associated with, and is expected to be competent in, all of the skills of the EMR and EMT. The major difference between the Advanced Emergency Medical Technician and the Emergency Medical Technician is the ability to perform limited advanced skills and provide pharmacological interventions to emergency patients.

The Advanced Emergency Medical Technician is the minimum licensure level for patients requiring limited advanced care at the scene or during transportation. The scope of practice model is limited to lower risk, high benefit advanced skills that are effective and can be performed safely in an out-of-hospital setting with medical oversight and limited training.

Advanced Emergency Medical Technicians transport all emergency patients to appropriate medical facilities. The Advanced Emergency Medical Technician is not prepared to independently make decisions regarding the disposition of patients. The

Advanced Emergency Medical Technician serves as part of an EMS response system assuring a progressive increase in the level of assessment and care. The Advanced Emergency Medical Technician may make destination decisions in collaboration with medical oversight. The principal disposition of the patient encounter will result in the direct delivery of the patient to an acute care facility.

In addition to emergency response, Advanced Emergency Medical Technicians often perform medical transport services of patients requiring care within their scope of practice.

## **Psychomotor Skills**

The following are the minimum psychomotor skills of the AEMT:

- Airway and Breathing
  - Insertion of airways that are NOT intended to be placed into the trachea
  - Tracheobronchial suctioning of an already intubated patient
- Assessment
- Pharmacological Interventions
  - Establish and maintain peripheral intravenous access
  - Establish and maintain intraosseous access in a pediatric patient
  - Administer (nonmedicated) intravenous fluid therapy
  - Administer sublingual nitroglycerine to a patient experiencing chest pain of suspected ischemic origin
  - Administer subcutaneous or intramuscular epinephrine to a patient in anaphylaxis
  - Administer glucagon to a hypoglycemic patient
  - Administer intravenous D50 to a hypoglycemic patient
  - Administer inhaled beta agonists to a patient experiencing difficulty breathing and wheezing
  - Administer nitrous oxide for pain relief

## ***Paramedic***

### **Description of the Profession**

The Paramedic's scope of practice includes basic and advanced skills focused on the acute management and transportation of the broad range of patients who access the emergency medical system. This may occur at an emergency scene until transportation resources arrive, from an emergency scene to a health care facility, between health care facilities, or in other health care settings.

In some communities, Paramedics provide a large portion of the out-of-hospital care and represent the highest level of out-of-hospital care. In communities that use emergency medical dispatch systems, Paramedics may be part of a tiered response system. In all cases, Paramedics work alongside other EMS and health care professionals as an integral part of the emergency care team.

The Paramedic's scope of practice includes invasive and pharmacological interventions to reduce the morbidity and mortality associated with acute out-of-hospital medical and traumatic emergencies. Emergency care is based on an advanced assessment and the formulation of a field impression. The Paramedic provides care designed to minimize secondary injury and provide comfort to the patient and family while transporting the patient to an appropriate health care facility.

The Paramedic has knowledge, skills, and abilities developed by appropriate formal education and training. The Paramedic has the knowledge associated with, and is expected to be competent in, all of the skills of the EMR, EMT, and AEMT. The major difference between the Paramedic and the Advanced Emergency Medical Technician is the ability to perform a broader range of advanced skills. These skills carry a greater risk for the patient if improperly or inappropriately performed, are more difficult to attain and maintain competency in, and require significant background knowledge in basic and applied sciences.

The Paramedic is the minimum licensure level for patients requiring the full range of advanced out-of-hospital care. The scope of practice is limited to advanced skills that are effective and can be performed safely in an out-of-hospital setting with medical oversight.

The Paramedic transports all emergency patients to an appropriate medical facility. The Paramedic serves as part of an EMS response system, ensuring a progressive increase in the level of assessment and care. The Paramedic may make destination decisions in collaboration with medical oversight. The principal disposition of the patient encounter will result in the direct delivery of the patient to an acute care facility.

In addition to emergency response, Paramedics often perform medical transport services of patients requiring care within their scope of practice.

## **Psychomotor Skills**

The following are the minimum psychomotor skills of the Paramedic:

- Airway and Breathing
  - Perform endotracheal intubation
  - Perform percutaneous cricothyrotomy<sup>1</sup>
  - Decompress the pleural space
  - Perform gastric decompression
- Pharmacological Interventions
  - Insert an intraosseous cannula
  - Enteral and parenteral administration of approved prescription medications
  - Access indwelling catheters and implanted central IV ports for fluid and medication administration

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<sup>1</sup> Percutaneous means access via needle-puncture (or other approved puncture device) and DOES NOT include "surgical" access using a scalpel.

- Administer medications by IV infusion
- Maintain an infusion of blood or blood products
- Medical/Cardiac Care
  - Perform cardioversion, manual defibrillation, and transcutaneous pacing

## Knowledge

Typically, scope of practice refers to the tasks and roles that licensed personnel are legally authorized to perform. In general, it does not describe the requisite knowledge necessary to perform those tasks and roles competently. As outlined in the *EMS Education Agenda for the Future*, the responsibility for determining the knowledge necessary to safely perform skills, tasks, and roles falls to the EMS educators. The authors of the *National EMS Scope of Practice Model* offer the following schema to provide guidance to the presumed depth and breadth of cognitive material envisioned for each level of EMS licensure.

|                     | <b>Emergency Medical Responder</b> | <b>EMT and AEMT</b> | <b>Paramedic</b> |
|---------------------|------------------------------------|---------------------|------------------|
| <b>Critical</b>     | Simple                             | Fundamental         | Complex          |
| <b>Emergent</b>     |                                    | Simple              | Fundamental      |
| <b>Lower Acuity</b> |                                    |                     | Simple           |

Simple, fundamental, and complex refer to a progressive increase in the depth of knowledge in each respective topic area. Critical, emergent, and lower acuity refer to the acuity levels assigned to “Conditions and Components” in Appendix 2 of the *National EMS Core Content*. Applying this matrix, the Emergency Medical Technician would possess fundamental knowledge of all the patient complaints, presenting signs and symptoms, and disorders denoted as critical and would possess simple knowledge of all the patient complaints, presenting signs and symptoms, and disorders denoted as emergent.

It is recognized that the terms used above are inherently subjective. Clearly, two equally qualified experts will have different interpretations as to exactly what is “fundamental,” what is “complex,” and what are the differences. Obviously, the judgment of experts will be needed to come to consensus as the *National EMS Education Standards* are developed.

## Appendix A: Interpretive Guidelines

The interpretive guidelines are used to help guide the users of this document by providing additional insight into the discussions and deliberations that revolved around the decisions of the Scope of Practice Task Force. These interpretive guidelines represent the collective opinions of the Scope of Practice team in June 2005.

The interpretive guidelines are included to allow future users to apply similar methodology in deciding the appropriateness of new interventions at each provider level. *They are illustrative, and NOT all-inclusive.*

The interpretive guidelines are intended to guide the development of National EMS Education Standards, National EMS Certification, and National EMS Education Program Accreditation. The interpretive guidelines will also assist State regulatory agencies in developing and further refining their legislation and administrative rules/regulations. *These guidelines are not intended to appear in practice acts.*

### ***Airway and Breathing Minimum Psychomotor Skill Set***

| <b>Emergency Medical Responder</b>  | <b>Emergency Medical Technician</b>   | <b>Advanced EMT</b>                     | <b>Paramedic</b>  |
|---|---|---|---|
| Oral airway<br>BVM<br>Sellick's Maneuver<br>Head-tilt chin lift<br>Jaw thrust<br>Modified chin lift<br>Obstruction–manual<br>Oxygen therapy<br>Nasal cannula<br>Non-rebreather face mask<br>Upper airway suctioning | Humidifiers<br>Partial rebreathers<br>Venturi mask<br>Manually Triggered Ventilator (MTV)<br>Automatic Transport Ventilator (ATV)<br>Oral and Nasal airways | Esophageal-Tracheal Multi-Lumen Airways | BiPAP/CPAP<br>Needle chest decompression<br>Chest tube monitoring<br>Percutaneous cricothyrotomy <sup>2</sup><br>ET/CO <sub>2</sub> /Capnography<br>NG/OG tube<br>Nasal and oral Endotracheal intubation<br>Airway obstruction removal by direct laryngoscopy<br>PEEP |

<sup>2</sup> Percutaneous means access via needle-puncture (or other approved puncture device) and DOES NOT include “surgical” access using a scalpel.

### ***Assessment Minimum Psychomotor Skill Set***

| <b>Emergency Medical Responder</b> | <b>Emergency Medical Technician</b>  | <b>Advanced EMT</b>   | <b>Paramedic</b>   |
|------------------------------------|--------------------------------------|-----------------------|--|
| Manual BP                          | Pulse oximetry<br>Manual and auto BP | Blood glucose monitor | EKG interpretation<br>Interpretive 12 Lead<br>Blood chemistry analysis |

### ***Pharmacological Intervention Minimum Psychomotor Skill Set***

| <b>Emergency Medical Responder</b>  | <b>Emergency Medical Technician</b>  | <b>Advanced EMT</b>  | <b>Paramedic</b>   |
|---|--|--|--|
| <u>Tech of Med Administration</u><br>-Unit dose auto-injectors for self or peer care (MARK I) | <u>Assisted Medications</u><br>-Assisting a patient in administering his/her own prescribed medications, including auto-injection            | Peripheral IV insertion<br>IV fluid infusion<br>Pediatric IO   | Central line monitoring<br>IO insertion<br>Venous blood sampling   |
| -Unit-dose, premeasured, intranasal or autoinjector (updated November 2017)                   | <u>Tech of Med Administration</u><br>-Buccal<br>-Oral  | <u>Tech of Med Administration</u><br>-Aerosolized<br>-Subcutaneous<br>-Intramuscular<br>-Nebulized<br>-Sublingual<br>-Intranasal<br>-IV push of D50 and narcotic antagonist only   | <u>Tech of Med Administration</u><br>-Endotracheal<br>-IV (push and infusion)<br>-NG<br>-Rectal<br>-IO<br>-Topical<br>-Accessing implanted central IV port |
| <u>Administered Meds</u><br>-Narcotic antagonist (updated November 2017)                      | <u>Administered Meds</u><br>-PHYSICIAN-approved over-the-counter medications (oral glucose, ASA for chest pain of suspected ischemic origin) | <u>Administered Meds</u><br>-SL Nitroglycerine for chest pain of suspected ischemic origin<br>-SQ or IM epinephrine for anaphylaxis<br>-glucagon and IV D50 for hypoglycemia<br>-Inhaled beta agonist for dyspnea and wheezing<br><br>-Nitrous oxide for pain relief | <u>Administered Meds</u><br>-Physician-approved medications<br>-Maintenance of blood administration<br>-Thrombolytics initiation                           |

### ***Emergency Trauma Care Minimum Psychomotor Skill Set***

| <b>Emergency Medical Responder</b>  | <b>Emergency Medical Technician</b>   | <b>Advanced EMT</b> | <b>Paramedic</b> |
|---|---|---------------------|------------------|
| Manual cervical stabilization<br>Manual extremity stabilization<br>Eye irrigation<br>Direct pressure<br>Hemorrhage control<br>Emergency moves for endangered patients | Spinal immobilization<br>Seated spinal immobilization<br>Long board<br>Extremity splinting<br>Traction splinting<br>Mechanical pt restraint |                     | Morgan lens      |
| Tourniquet and wound packing (updated November 2017)  | MAST/PASG<br>Cervical collar<br>Rapid extrication   |                     |                  |

**Medical/Cardiac Care Minimum Psychomotor Skill Set**

| <b>Emergency Medical Responder</b>     | <b>Emergency Medical Technician</b>             | <b>Advanced EMT</b> | <b>Paramedic</b>   |
|--|---|---------------------|--|
| CPR<br>AED<br>Assisted normal delivery | Mechanical CPR<br>Assisted complicated delivery |                     | Cardioversion<br>Carotid massage<br>Manual defibrillation<br>TC pacing |



## Definitions

**Academic**—Based on formal education; scholarly; conventional.

**Academic institution**—A body or establishment instituted for an educational purpose and providing college credits or awarding degrees.

**Accreditation**—The granting of approval by an official review board after specific requirements have been met. The review board is non-governmental and the review is collegial and based on self-assessment, peer assessment, and judgment. The purpose of accreditation is public accountability.

**Advanced Level Care**—Care that has greater potential benefit to the patient, but also greater potential risk to the patient if improperly or inappropriately performed, is more difficult to attain and maintain competency in, and requires significant background knowledge in basic and applied sciences. These include invasive and pharmacological interventions.

**Administered medication**—The act of giving a medication to a patient that has been stocked and carried by EMS personnel. The patient may not have previously been determined by a physician to be an appropriate recipient of the medication.

**Assisted medication**--provide aid to a patient in taking a medication supplied by the patient and for which the patient has a prescription.

**Certification**—The issuing of certificates by a private agency based upon standards adopted by that agency that are usually based upon minimum competence.

**Continuing education**—The continual process of life-long learning.

**Competence**—The application of knowledge and the interpersonal, decision-making and psychomotor skills expected for the practice role, within the context of public health, safety and welfare. (National Council of State Boards of Nursing 1996)

**Core content**—The central elements of a professional field of study. The core content does not specify the course of study.

**Credentialing agency**—An organization that certifies an institution's or individual's authority or claim of competence for a course of study or completion of objectives.

**Curriculum**—A particular course of study, often in a special field. For EMS education it has traditionally included detailed lesson plans.

**Educational affiliation**—An association with a learning institution (academic), the extent to which can vary greatly from recognition to integration.

**Entry-level Competence**—The level of competence expected of an individual who is about to begin a career. Entry-level competence is sometimes defined as the minimum competence necessary to practice safely and effectively.

**EMS System**—Any specific arrangement of emergency medical personnel, equipment, and supplies designed to function in a coordinated fashion. May be local, regional, State, or national.

**Licensure**—The act of a State granting an entity permission to do something that the entity could not legally do without such permission. Licensing is generally viewed by legislative bodies as a regulatory effort to protect the public from potential harm. In the health care delivery system, an individual who is licensed tends to enjoy a certain amount of autonomy in delivering health care services. Conversely, the licensed individual must satisfy ongoing requirements that ensure certain minimum levels of expertise. A license is generally considered a privilege and not a right.

**National EMS Core Content**—The document that defines the domain of out-of-hospital care.

**National EMS Education Program Accreditation**—The accreditation process for institutions that sponsor EMS educational programs.

**National EMS Education Standards**—The document that defines the terminal objectives for each Nationally defined EMS licensure level.

**National EMS Scope of Practice Model**—The document that defines scope of practice for each Nationally defined EMS licensure level.

**Outcome**—The short-, intermediate-, or long-term consequence or visible result of treatment, particularly as it pertains to a patient's return to societal function.

**Practice analysis**—A study conducted to determine the frequency and criticality of the tasks performed in practice.

**Registration**—A listing of individuals who have met the requirements of the registration service.

**Registration agency**—Agency traditionally responsible for the delivery of a product used to evaluate a chosen area. States may voluntarily adopt this product as part of their licensing process. The registration agency is also responsible for gathering and housing data to support the validity and reliability of their product.

**Regulation**—Either a rule or a statute that prescribes the management, governance, or operating parameters for a given group; tends to be a function of administrative agencies to which a legislative body has delegated authority to promulgate rules/regulations to

"regulate a given industry or profession." Most regulations are intended to protect the public health, safety, and welfare.

**Scope of practice**—Defined parameters of various duties or services that may be provided by an individual with specific credentials. Whether regulated by rule, statute, or court decision, it represents the limits of services an individual may legally perform.

**Testing agency**—Agency traditionally responsible for delivering a contracted examination. The responsibility of interpreting the results and defending the validity of those judgments is placed on the contractor.

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