



National Association of State EMS Officials

THE COLLECTIVE VOICE OF THE NATION'S EMS SYSTEMS

Advanced Emergency Medical Technician

Student Minimum Competency Model Guideline



THIS PAGE INTENTIONALLY LEFT BLANK



Department of Health

Division of Emergency Preparedness,

Response & Injury Prevention

Emergency Medical Services & Injury Prevention

108 Cherry Street – PO Box 70

Burlington, VT 05402-0070

<http://www.vermontems.org>

[phone] 802-863-7310

[fax] 802-863-7577

[toll free] 800-244-0911

[email] vtems@vermont.gov

Agency of Human Services

November 12, 2023

EMS Education Program Directors,

The Department of Health is adopting the Advanced Emergency Medical Technician (AEMT) Student Minimum Competency Model Guideline, developed by the National Association of State EMS Officials (NASEMSO), as the minimum standard for the verification of AEMT student minimum competencies, with a limited number of exceptions. Exceptions to the original document are limited to:

- Table 1, Ages- Students must have a minimum of twenty (20) live patient exposures in the prehospital emergency care setting.
- Table 2, Pathology/Complaints (Conditions)- The minimum of each specific age and pathology may be met through simulation once the minimum of the twenty (20) patient exposures in the pre-hospital emergency care setting has been met. Simulation vs live patient exposures are based upon pathology or complaint. Simulation is permissible in specific situations based on competency determination by the Program Director and course Medical Advisor.
- Table 3, Minimum Skills Competency-Documents the minimum number of successful psychomotor skills assessed during the laboratory, clinical, or pre-hospital field experience.
- Table 4, Pre-Hospital Emergency Field Experience- Documents the formative and summative assessment requirements during the pre-hospital emergency field experience intended to build student proficiency and confidence as an Advanced Emergency Medical Technician (AEMT) in the field.

More than a year ago, the National Registry of Emergency Medical Technicians (NREMT) announced that psychomotor testing for Advanced Emergency Medical Technician (AEMT) certification would be coming to an end. A new AEMT Certification Examination would be replacing the current cognitive exam. This exam measures cognitive and psychomotor entry-level competency of the candidate in a single examination. In the absence of a psychomotor exam, the verification and documentation of AEMT student motor skills will occur during the AEMT course.

This guideline is intended to maximize efficiency, consistency of instructional quality, and student competence. Staff from the Office of Emergency Medical Services have worked collaboratively with EMS educators, the EMS Education Council, and the EMS Advisory Committee, to inform and refine this guideline. The guideline is schedule for review and updating in 2025.

Sincerely,

Bambi L. Dame

Bambi Dame, NRP

State EMS Chief



Table of Contents

<i>Disclaimer</i>	4
<i>Preface</i>	5
<i>Acknowledgments</i>	7
<i>Introduction</i>	8
<i>Principles of Design</i>	9
<i>Ages</i>	11
<i>Pathology/Complaint (Conditions)</i>	12
<i>Skills</i>	15
<i>Field Experience/Capstone Field Internship</i>	19
<i>EMT Skills</i>	19

Disclaimer

The National Association of State Emergency Medical Services Officials (NASEMSO) is the association of the state EMS offices within all 50 states, the five territories, and the District of Columbia.

NASEMSO affirms the authority and sovereignty of the states regarding the establishment of law and administrative rules governing the regulation and practice of emergency medical services (EMS). This includes requirements related to initial EMS education that in part prepares individuals for state licensure.

As the 501(c)3 association formed by these state offices, NASEMSO collaborates with other Federal and national EMS stakeholders and subject matter experts to develop guidance documents to aid state EMS offices in interpreting and implementing new practices and policies within the states. These documents should not be interpreted as directives nor as superseding the authority properly delegated to a state EMS office. Rather, these guidance documents are provided for the use of the state EMS regulating authorities and may be modified or adopted in part or whole as those authorities deem appropriate.

EMS agencies, personnel, and educational institutions seeking clarification on EMS issues should contact their state's regulatory body, a list of which may be found at: <https://nasemsso.org/about/state-agencies/>.

NASEMSO reserves the right to amend, revise, or retract this document based on expert and/or member consensus.

This document is available in Microsoft Word to state EMS officials for adaptation into a state-specific document.

Suggested Citation:

National Association of State EMS Officials. *Advanced Emergency Medical Technician Student Minimum Competency Model Guideline*. 2023.

Preface

This document is a model guidance document that provides recommendations to state, the District of Columbia, Puerto Rico, and territory (hereinafter “states”) Emergency Medical Services (EMS) offices and Advanced Emergency Medical Technician (AEMT) Program Directors for verification of student minimum competencies (SMC). It is important to note that state EMS offices are responsible for the approval and standards for initial AEMT programs. As such, the state EMS office is the approving organization, and state EMS office requirements supersede any recommendations in this document. Please consult your state EMS office for specific requirements in your jurisdiction.

To the extent possible, this document was created to provide recommendations for the verification of AEMT student minimum competencies in a manner that is consistent with the Paramedic Student Minimum Competencies as established by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). EMS programmatic accreditation is overseen by its Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP).

This approach was selected to align the tracking of student minimum competencies so that skills and competency tracking can use similar software tools and recognizing that many AEMT training programs are integrated with paramedic educational programs. Consistent templates and data for SMC tracking may also assist advanced placement opportunities for AEMTs to continue preparation for paramedic certification to reduce redundancy in skills verification.

Additionally, this document was designed to build upon and harmonize with the 2019 National EMS Scope of Practice Model that was produced by the National Association of State EMS Officials (NASEMSO), with support from the U.S. Department of Transportation, National Highway Traffic Safety Administration, Office of EMS, and with additional supplemental funding from the Health Resources and Services Administration’s Emergency Medical Services for Children Program.

This model guideline endeavors to maximize efficiency, consistency of instructional quality, and student competence. Further, it supports a system of EMS personnel licensure that is consistent with other healthcare occupations and is a guide for states when developing legislation, rules, and regulations related to AEMT student minimum competencies. The Scope of Practice Model has been used as a model by states to increase regulatory uniformity in the profession.

Beginning July 1, 2024, the National Registry will require verification by the AEMT Program Director that student minimum competency has been verified in compliance with state EMS office requirements and in a manner consistent with this document. The National Registry

anticipates updating this document on a regular cycle to ensure consistency with upcoming EMS Scope of Practice revisions, ALS Practice Analysis, and Paramedic SMC documents.

This model guideline is intended to describe a recommended minimum standard that is accessible for AEMT educational programs, while acknowledging variation between state EMS office requirements. Recognizing existing variation between states, absolute compliance with these recommendations is not anticipated during the initial implementation. The National Registry recommends that the state EMS office reviews existing requirements and considers the appropriate ways to address variations in ways that meet local implementation challenges with the goal of substantial consistency with these recommendations.

State EMS offices and AEMT programs should not interpret this document as a ceiling for experiences, but as a recommended consistent minimum standard.

It may be helpful to refer to the implementation guidance for the CoAEMSP Paramedic Student Minimum Competency document for comparison and background information. It is important to note that state EMS offices are responsible for the approval and standards for initial AEMT programs. The National Registry does not require submission of information to the National Registry. Please refer to your state EMS office for specific requirements, including any reporting requirements. Paramedic Student Minimum Competency Resource documents include:

- [CoAEMSP Student Minimum Competency Recommendations Frequently Asked Questions \(FAQ\)](#)
- [CoAEMSP and NREMT Simulation Guidelines and Recommendations](#)

Acknowledgments

The National Association of State Emergency Medical Services Officials would like to acknowledge and thank the experts who contributed their time and effort to the project. Extensive dialogue, as well as the sharing of knowledge and experience, brought about compromise, convergence, and consensus of ideas. The contributing members are listed below.

COMMITTEE ON ACCREDITATION OF
EDUCATIONAL PROGRAMS FOR THE EMS
PROFESSIONS

Mike Miller, EdD, RN, NRP (Nebraska)

NATIONAL ASSOCIATION OF STATE EMS
OFFICIALS

Deb Akers, NRP (Virginia)
Dawn Felt, MPA, NRP (Washington)
Ryan Greenberg, MBA, NRP (New York)
Wendy Snodgrass, NRP (Nebraska)
Brian Webb, NRP (Alaska)

NATIONAL ASSOCIATION OF EMS EDUCATORS

Gary Bonewald, MEd, LP (Texas)
Ron Lawler, BUS, NRP (North Dakota)

NATIONAL REGISTRY OF EMTs

Alan Arguello, MBA, PMP, NRP (Ohio)
Bill Lehman, BA (Oregon)
Gail Fitzpatrick (North Carolina)
Paul Rosenberger, EdD, NRP (Texas)
Mark Terry, MPA, NRP (Retired) (Ohio)
Stephen Wilson, BS, NRP (Alabama)

Introduction

The goal of this document is to describe minimum expectations for student formative experiences and minimum expectations by which the program ensures entry-level competency. Formative experience is defined as an activity in which the student's performance is assessed to provide feedback during the educational experience and to expose the student to the variety of patients and conditions seen by a practicing AEMT. Reasonable evidence of competency is defined as the performance expectation by which the educational program can attest that the student has amassed a portfolio of demonstrated performance of skills and abilities necessary for safe and effective care. The standards for reasonable evidence of competency are built on the concept that competent performance must be demonstrated over time in a variety of conditions.

A single evaluation of skills performance by the educational institution cannot provide sufficient evidence of competency. As Kane noted, "One may have high confidence in an assumption that is supported by several independent sources of evidence even though each source of evidence is questionable ... In practical arguments, redundancy can be a virtue."¹ The use of portfolios is an established tool that contributes to the valid and reliable evaluation of competency.^{2,3,4,5}

The expectations for minimum formative experiences were built from a panel of state officials and educational subject matter experts. The group was convened by the National Registry of EMTs with guidance from and collaboration with the National Association of State EMS Officials, CoAEMSP, and the National Association of EMS Educators (NAEMSE). This process was informed by the 2019 National Registry of Emergency Medical Technicians Advanced Life Support (ALS) Practice Analysis,⁶ which provided valuable insight on necessary skills and abilities of a competent AEMT, as well as the variety of patient types and conditions seen.

The task force used available educational literature, experiences of state EMS officials, experiences of AEMT educational Program Directors, and professional judgment to determine the recommended minimum expectations. The principles used by the panel

¹ Kane MT. An argument-based approach to validity. *Psych Bull.* 1992;112(3):527-535. doi: 10.1037/0033-2909.112.3.527.

² Wilson M, Hallam PJ, Pecheone RL, Moss PA. Evaluating the Validity of Portfolio Assessments for Licensure Decisions. *Educ Policy Anal Arch.* 2014;22(6). doi: 10.14507/epaa.v22n6.2014.

³ Driessen EW, van Tartwijk J, Dornan T. Educating the self-critical doctor. Using a portfolio to stimulate and assess medical students' reflection. *BMJ* 2008;336:827. doi: 10.1136/bmj.39503.608032.AD.

⁴ McMullan M, Endacott R, Gray MA, et al. Portfolios and assessment of competence: a review of the literature. *J Adv Nurs.* 2003 Feb;41(3):283-94. doi: 10.1046/j.1365-2648.2003.02528.x.

⁵ Tochel C, Haig A, Hesketh A, et al. The effectiveness of portfolios for post-graduate assessment and education: BEME Guide No 12. *Med Teach.* 2009 Apr;31(4):299-318. doi: 10.1080/01421590902883056.

include educationally appropriate processes and practical capacity for AEMT educational programs in keeping with United States National Highway Traffic Safety Administration's National EMS Education Standards⁷ and Scope of Practice Model.⁸ The education standards development group was led by expert educators belonging to NAEMSE and the scope of practice development group was led by a Technical Expert Panel led by NASEMSO.

Subject matter experts (SMEs) from NASEMSO, CoAEMSP, and NAEMSE worked with the National Registry to develop the recommendations in this document. This document encompasses the entirety of the National Registry portfolio requirements for documentation of ALS skills competency. The National Registry evaluation processes for National Registry AEMT (NRAEMT) certification are designed in combination with evaluations done by the AEMT educational program. Public trust in the competency of AEMTs depends upon consistent evaluation and documentation of skills competency using these minimum expectations.

The tracking system for demonstration of skills and experiences during training should track each of the four (4) dimensions for the educational activity that assesses skills and abilities:

- Description of the assessed skill or ability
- Age or developmental category of the patient
- Pathophysiology or type of patient presentation
- Environment of the evaluation: laboratory setting, simulated patient encounter, or live patient encounter

Each experience can then be compared to the tables that follow later for expected minimums.

Principles of Design

The principles behind this document are to communicate minimum expectations in a manner that enables consistency of application and verification of competency. The panel used the following principles to guide the discussion and development of the document:

1-Simplicity

- The document should be easily summarized and understood. It should provide a consistent standard for data storage and data communication that is scalable and open. AEMT educational programs range in size and structure, and the expectations should provide a common baseline that can be implemented and tracked.
- The document should focus on the “what” rather than the “how.” This principle is particularly important as medical science and educational practices evolve. New evidence-based guidelines (EBGs) can be easily incorporated. The document does not specify how a skill should be performed but rather focuses that the skill should

be performed according to the current standard of care. Educators may find a collection of EMS-related EBGs at the Prehospital Guidelines Consortium a useful source for up-to-date standards on how to manage particular conditions.⁶

2–Modularity

- This document aims to provide a modular format that adapts to evolving standards. Updates to a particular skill do not require reconsideration of the entire table. Continued research and evaluation will result in updates and revisions based on evidence-based guidelines.
- This document aims to provide a framework and model that can be used for all levels of EMS personnel. A modular framework can be easily adapted to other levels of education and training regulated by different organizations.
- State EMS offices have the authority and responsibility to establish training standards and program approval for AEMT educational programs. As state EMS office approval is the prerequisite for NRAEMT certification, the state EMS office standards supersede the recommendations in this document.

3–Clarity

- The document aims to identify which tasks are essential for the verification of competency, including skills. The aim is clear identification and communication of minimum expectations that constitute reasonable evidence that the student can perform the task on demand. The document also aims to identify standards for areas that require exposure and experience with live patients versus the ability to simulate experiences, recognizing the limitations of current simulation capabilities.

⁶ *Evidence-Based Guidelines*. <https://prehospitalguidelines.org/new-ebgs/>. Accessed August 4, 2023.

Ages

Patients of different ages present with distinct anatomies, physiologies, and disease processes. Students must have exposure to patients of various ages to build both competence and confidence. As a result of these differences and learner needs, the model guideline includes distinctive age considerations for assessment and management. The educational institution must assess student ability to provide safe and effective care for a variety of ages of patients.

Because of the distinct anatomies, physiologies, developmental milestones, and disease processes for different age groups, there is educational value in exposure to live patients among different age groups. The full presentation of the assessment for patients with or without injury or disease is difficult to fully simulate. This difficulty is particularly pronounced for students that have had limited previous exposure to patients in different age groups. Recognizing this difficulty, exposure to live patients—even those without disease or injury—is better than simulated experiences and must be a strong goal.

Alternative areas to provide exposure, such as primary care healthcare settings, childcare environments, and long-term care, can provide important context that is valuable while learning to differentiate abnormal presentations from normal ones. SMEs identified that exposure to different age groups may present challenges for AEMT educational programs. Alternative methods, such as telehealth and simulation, may effectively augment experiences with live patients but may not be able to fully replicate the educational value of direct patient experience.

The pediatric community has also recommended consideration that developmental differences among pediatric patients present difficulties. Recognizing challenges in accessibility to a wide variety of ages for AEMT educational programs, recommendations for subgroups of pediatric patients based on development have not been provided. If accessible, the AEMT educational program may want to consider tracking exposure in the following developmental categories:

- Neonate (birth to 30 days)
- Infant (1 month to 12 months)
- Toddler (1 to 2 years)
- Preschool (3 to 5 years)
- School aged/Pre-adolescent (6 to 12 years)
- Adolescent (13 to 18 years)

Each patient encounter or simulation should only have one age designation. If a simulation involves multiple patients, the competency should be assessed for each patient.

TABLE 1: AGES

STUDENT MINIMUM COMPETENCY	PATIENT EXPOSURES IN LABORATORY, CLINICAL AND PRE-HOSPITAL FIELD EXPERIENCES
Total simulated and live patient exposures during the laboratory, clinical/hospital, and field phase of the AEMT course	Minimum of 50 exposures (a minimum of 20 patient exposures must be in the pre-hospital emergency care setting)
Pediatric patients with pathologies or complaints (<i>birth to 18 years of age</i>)	Minimum of 10 exposures
Adult (<i>19 to 65 years of age</i>)	Minimum of 10 exposures
Geriatric (<i>older than 65 years of age</i>)	Minimum of 10 exposures
SUM OF THE THREE AGE GROUPS	100% (50 EXPOSURES)

Pathology/Complaint (Conditions)

Competent assessment and management of an emergency requires distinct approaches depending on the patient condition. The educational institution must assess student ability to provide safe and effective care for a variety of patient conditions. Student evaluation mixes formative and summative evaluations to ultimately ensure competency.⁷

Each patient encounter or simulation could include more than one condition or impression per patient.

Prior to assessing student performance of management of emergency conditions, the student should have received education and have clear expectations for performance on the following:

- General patient assessment
- General history taking
- Family and patient communications
- Crew Resource Management (CRM) and team performance expectations
- Assessment and actions to ensure provider safety (including standard and personal protective equipment (PPE))

⁷ Elder A. Clinical Skills Assessment in the Twenty-First Century. *Med Clin North Am.* 2018 May;102(3):545-558. doi: 10.1016/j.mcna.2017.12.014.

This section addresses the evaluation of student performance integrating a mixture of declarative and procedural knowledge, psychomotor skills, and related abilities. Topics such as “patient assessment” are sometimes described as “skills” but are combinations of declarative and procedural knowledge with psychomotor elements.

Progression of learning is essential. AEMT educational programs should progress from formative exposures that provide the opportunity to learn and build competency with an emphasis on feedback that supports learning to summative verifications that focus on verification that the student can demonstrate effective performance with minimal to no coaching or guidance. The distinction between formative exposure and summative verification may not be clear—professional judgment of AEMT educators is essential to design and implement a curriculum that progresses from introduction, to learning, and then concludes with verification of competency.

A single performance is rarely, if ever, a valid assessment of competency. AEMT educational programs should ideally verify competency as reliable performance in multiple situations over time as a valid assessment of competency rather than a single skills examination. The need for verification in multiple situations over time must be balanced by concerns for opportunities for performance and time constraints of the educational program. State EMS Offices are encouraged to explore the appropriate requirements while keeping this balance in mind for local conditions.

- Formative exposure in laboratory, hospital/clinical, or field experiences can be used to assist in the development of curriculum as well as clinical and simulation sequences. Peer evaluation may augment, but should not replace evaluation by a supervisor, preceptor, examiner, or instructor. Actual sequencing and the selected percentages (between 5% – 15%) are a matter of professional judgment at the program level by Program Director, Medical Director, and Advisory Committees (when utilized) in consultation with State EMS Officials.
- Competency Evaluation in Hospital/Clinical or Field Experience or Capstone Field Internship and Simulation in Designated Cases are the recommended minimum acceptable requirements for program evaluation of student minimum competency. Simulations have proven to be valid and reliable evaluations that may augment supervised patient encounters in field and clinical settings.⁸ The expert panel recognized that simulation may be required to satisfy some of the pathologies and complaints. In an ideal setting, live exposures would be preferred over simulation.

The allowance for simulation is indicated in the table that follows for pathologies and complaints that are infrequently experienced in the clinical/hospital, or Field Experience/ Capstone Field Internship phases of an AEMT course. The program must document that the

⁸ Boulet JR, Murray D, Kras J, Woodhouse J, McAllister J, Ziv A. Reliability and validity of a simulation-based acute care skills assessment for medical students and residents. *Anesthesiology*. 2003 Dec;99(6):1270-80. doi: 10.1097/00000542-200312000-000.

student met the standards for program completion for each patient’s age, condition, and intervention. The required minimums must be approved by the State EMS Office. Approval by the AEMT educational program’s Medical Director and endorsement by the program Advisory Committee (when utilized) on an annual basis is recommended. State EMS Officials are encouraged to consider processes that recognize that variances may be necessary due to local conditions with the appropriate review and oversight.

TABLE 2: PATHOLOGY/COMPLAINT (CONDITIONS)

STUDENT MINIMUM COMPETENCY BY PATHOLOGY OR COMPLAINT	LIVE EXPOSURE VS. SIMULATION	EXPOSURE IN LABORATORY, CLINICAL/HOSPITAL, OR FIELD EXPERIENCE
Trauma*	3 must be live patient exposure	5-8 exposures
Psychiatric/behavioral*	Simulation permissible, based on competency determined by the Program Director and course Medical Advisor	5-8 exposures
Uncomplicated and complicated Obstetric delivery**	Simulation permissible, based on competency determined by the Program Director and course Medical Advisor	Minimum of 3 exposures
Distressed neonate*	Simulation permissible, based on competency determined by the Program Director and course Medical Advisor	Minimum of 3 exposures
Cardiac pathologies or complaints* <i>(For example, acute coronary syndrome, cardiac chest pain)</i>	3 must be live patient exposures	5-8 exposures
Cardiac arrest	Simulation permissible, based on competency determined by the Program Director course Medical Advisor	5-8 exposures
Medical neurological pathologies or complaints <i>*(for example, transient ischemic attack, stroke, syncope, or altered mental status presentation)</i>	3 must be live patient exposures	5-8 exposures
Respiratory pathologies or complaints*	3 must be live patient exposures	5-8 exposures

AEMT Student Minimum Competency Model Guideline

(for example, respiratory distress, respiratory failure, respiratory arrest, acute asthma episode, lower respiratory infection)		
Other medical conditions or complaints***	3 must be live patient exposures	5-8 exposures
Sum of the Pathologies/Complaints	N/A	100% (50 EXPOSURES)

* Conducts a patient assessment and develops a management plan for evaluation on each patient with minimal to no assistance. Percentages are based on the 50 minimum exposures (live and simulated).

** Should include normal and complicated obstetric deliveries such as breech, prolapsed cord, shoulder dystocia, precipitous delivery, multiple births, meconium staining, premature birth, abnormal presentation, postpartum hemorrhage

*** For example, gastrointestinal, genitourinary, gynecologic, reproductive pathologies, or abdominal pain complaints, infectious disease, endocrine disorders or complaints (hypoglycemia, DKA, HHNS, thyrotoxic crisis, myxedema, Addison, Cushing), overdose or substance abuse, toxicology, hematologic disorders, non-traumatic musculoskeletal disorders, diseases of the eyes, ears, nose, and throat

Skills

Skills listed in the National EMS Scope of Practice Model must be assessed. The educational institution must assess student ability to provide safe and effective performance of skills. Ultimately, the student should successfully be able to consistently perform a listed skill for a variety of conditions and patient ages.

It is important to note that this table only includes simple (isolated) and discrete motor skills—not complex integrated (or combined skills used to run an entire EMS event) judgment and performance. Motor skills are tracked separately because valid evaluation of pure motor skills requires a log of skills performed over time in various conditions—not single point-in-time evaluations such as a summative examination.⁹ This list of motor skills

⁹ Hill T. The portfolio as a summative assessment for the nursing student. *Teach Learn Nurs.* 2012;7:140–145. doi: 10.1016/j.teln.2012.06.005.

was derived from the NREMT 2019 ALS Practice Analysis¹⁰ and 2019 National EMS Scope of Practice Model, Section VI., Interpretive Guidelines¹¹. Each patient encounter or simulation may contain several skills, but each skill is assessed individually.

A single performance is rarely, if ever, a valid assessment of competency. AEMT educational programs should ideally verify competency as reliable performance in multiple situations over time as a valid assessment of competency rather than a single skills examination. The need for verification in multiple situations over time must be balanced by concerns for opportunities for performance and time constraints of the educational program. State EMS Offices are encouraged to explore the appropriate requirements while keeping this balance in mind for local conditions.

Formative skill instruction experiences should be conducted in the AEMT educational program to learn motor skills prior to clinical or field experiences. Development of curriculum, hospital/clinical, and simulation sequences should support the progression of learning from introduction to simulation as a learning experience, to verification of competency. Peer evaluation may augment, but should not replace evaluation by a supervisor, preceptor, examiner, or instructor. Actual sequencing and minimum numbers are a matter of professional judgment at the program level by the Program Director, Medical Director, and Advisory Committees (when utilized), in consultation with State EMS Officials.

The minimum successful individual motor skills evaluated in real or simulated patient exposure is the minimum acceptable recommendations for exposure in the laboratory, hospital/clinical encounters, or field events. Simulation is permitted when a skill is extremely difficult to obtain.

Limited availability of skill performance may dictate that competency be verified in a relatively small number of simulated or live patient encounters. Peer student evaluation may be useful for formative evaluation but should not be used for summative competency verification. Variances less than the recommended numbers must be approved by the State EMS Office and documented.

Past indicators of student minimum competency measured the number of successful performance attempts but did not prescribe a success rate. Consistent successful performance is a critical part of competency. To address this historical weakness, some skills require cumulative success pass rate calculations and reporting. Sufficient

¹⁰ Panchal AR, Rivard MK, Cash RE, et al. Methods and Implementation of the 2019 EMS Practice Analysis. *Prehosp Emerg Care*. 2022 Mar-Apr;26(2):212-222. doi: 10.1080/10903127.2020.1856985.

¹¹ National Association of State EMS Officials. *National EMS Scope of Practice Model 2019* (Report No. DOT HS 812-666). Washington, DC: National Highway Traffic Safety Administration.

documentation of skill acquisition and competency over time is desired. Programs may track success rates over time through several mechanisms, including the use of Eureka graphs.¹²

Unsuccessful performance must be documented for these skills to compute the percentage of successful performance. Peer evaluation may augment, but should not replace evaluation by a supervisor, preceptor, examiner, or instructor. Because of the lack of baseline data, a minimum success rate is not defined. Programs must report the success rate for each listed skill. Programs may want to explore reasonable program minimum standards for success rate using their professional judgment.

In setting a minimum acceptable standard, Program Directors should consult with Medical Directors and SMEs to develop: (1) a minimum number of total skill performances that would constitute sufficient exposure for a valid assessment of consistent performance, (2) a minimum acceptable success rate after the skill has been acquired in laboratory and initial practice, and (3) means of identifying non-standard patient presentations that are unreasonably difficult for an entry-level practitioner.

Chest compressions, while an EMT skill, have been shown to degrade quickly without repeated practice and meaningful assessment. Rapid degradation of chest compression skills over time has been noted by multiple studies.¹³ The 2020 American Heart Association Guidelines included a Class 1 recommendation to “implement booster sessions when utilizing a massed learning approach to resuscitation training.” The 2020 American Heart Association Guidelines also included a Class 2a recommendation to “use a spaced learning approach for resuscitation training.”¹⁵ Based on the clear evidence demonstrating the need for frequent reassessment of chest compressions, a key foundational component of successful resuscitations, additional confirmation of this EMT level skill, is recommended for AEMT educational programs.

Medication safety and medication dosing errors have been noted in the literature. The use of robust hands-on practice, requiring medical math calculations and medication administration safety checklists, should be employed throughout the curriculum. Course planning and implementation should include these tasks and tools in the laboratory, hospital/clinical, and field phases of the AEMT course.

TABLE 3: MINIMUM SKILLS PROFICIENCY

REQUIRED PSYCHOMOTOR SKILLS	MINIMUM SUCCESSFUL MOTOR SKILLS ASSESSED ON PATIENTS DURING THE LABORATORY, CLINICAL, OR PREHOSPITAL FIELD EXPERIENCE
Establishing intravenous access	20 Successfully placed IVs on live people (minimum of 10 must be on live patients. It is recommended that 5 successful IVs are established in the prehospital setting.)
Administering IV bolus medication	10 (Minimum of 3 live patients in the clinical or prehospital emergency setting- Prehospital setting preferred.)
Administering IM injection	4 (A minimum of 1 on a live patient in the clinical or pre-hospital setting)
Intranasal medication	2*
SL medication	2 (A minimum of 1 administration in the prehospital emergency setting)
Establishing intraosseous access	4*
Intraosseous medication	2*
Performing PPV with BVM	10*
Performing endotracheal suctioning	2*
Inserting supraglottic airway	10*
Automated external defibrillator (AED)	2*
Resuscitation -team based CPR (RA)	2*
End-tidal CO ₂ monitoring and interpretation of waveform capnography	10 (A minimum of 5 on patients in the prehospital emergency setting)
Venous blood sampling	4*

*Competency can be verified by means of any combination of simulation, clinical, and pre-hospital experiences.

¹² Wilson ME. Assessing intravenous cannulation and tracheal intubation training. *Anaesthesia*. 1991 Jul;46(7):578-9. doi: 10.1111/j.1365-2044.1991.tb09662.x.

¹³ Cheng A, Magjd DJ, Auerbach M. Part 6: Resuscitation Education Science: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation*. 2020 Oct 20;142(16_suppl_2):S551-S579. doi: 10.1161/CIR.0000000000000903.

TABLE 3: MINIMUM SKILLS PROFICIENCY

Skill competency requirements are preferred to be completed in the pre-hospital emergency setting. For skills that are infrequent in the field setting as noted with a with an asterisk may be met through simulation.

Pre-Hospital Emergency Field Experience

TABLE 4: PREHOSPITAL FIELD EXPERIENCE

FORMATIVE ASSESSMENT	SUMMATIVE ASSESSMENT
Conducts competent assessment and management of prehospital patients with assistance while TEAM LEADER or TEAM MEMBER	Successfully manages the scene, performs patient assessments, and directs medical care and transport as TEAM LEADER with minimal to no assistance
10% - 20% (5 - 10 exposures) *	10% - 20% (5 - 10 exposures) *

* Percentages are based on the 50 minimum exposures.

EMT Skills

The following skills are psychomotor skills for which prior EMT certification provides reasonable evidence of competency. Programs that combine EMT and AEMT education must present an alternative plan for ensuring competency in these skills. Programs are encouraged, but not required, to verify competency for these skills due to quick degradation or incomplete acquisition of the skills.

TABLE 5: EMT SKILLS

EMT OR PREREQUISITE SKILL COMPETENCY
Inserting nasopharyngeal airway
Inserting oropharyngeal airway
Foreign body airway obstruction- Adult
Foreign body airway obstruction - Pediatric
Performing oral suctioning
Administering oxygen by nasal cannula
Administering oxygen by face masks
Ventilating an adult patient with a bag-valve-mask
Ventilating a pediatric patient with a bag-valve-mask
Ventilating a neonate patient with a bag-valve-mask
Applying continuous positive airway pressure
Applying a tourniquet/ hemorrhage control
CPAP
Applying an occlusive dressing to an open wound to the thorax
Mechanical patient restraint

Lifting and transferring a patient to the stretcher
Splinting a suspected long bone injury
Splinting joint injury
Stabilizing an impaled object
Dressing and bandaging a soft tissue injury
Applying a cervical collar
Performing spinal motion restriction
Eye irrigation
12-lead ECG acquisition and transmission / Telemetric monitoring devices and transmission of clinical data, including video data (IA)
Performing cardiopulmonary resuscitation- Adult
Performing cardiopulmonary resuscitation-Pediatric
Performing cardiopulmonary resuscitation- Neonate
Performing a comprehensive physical assessment: <ul style="list-style-type: none">- Vital signs- Pulse oximetry- Blood glucose monitoring
Medication administration <ul style="list-style-type: none">- Aerosolized/nebulized- Inhaled- Intramuscular/auto-injector- Intranasal- Sublingual- Oral

