



PENNSYLVANIA EMERGENCY
HEALTH SERVICES COUNCIL

Your Voice In EMS

RECOMMENDATION FOR CONSIDERATION

Board Meeting Date: June 14, 2017

Subject: Tactical EMS Program

VTR#: 0617-01

Committee/Task Force: Medical Advisory Committee

Recommended Goal

Recommended Policy Change

Other:

Recommendation:

The Pennsylvania Department of Health should accept the recommendations contained in the attached document related to implementing a tactical EMS program in Pennsylvania.

Rationale [Background]:

Pennsylvania's EMS system regulations, 28 Pa.C. §1027.41, defines special operations EMS services. The regulations authorize an EMS provider to have an expanded scope of practice *“that includes skills and equipment, in addition to those found in the provider's general scope of practice if the provider has received additional education by successfully completing a course approved for that type of special operations.”*

The special operations section is further expanded upon in 28 Pa.C. §1027.41(c), which specifically addresses a tactical EMS service. *“A tactical EMS service provides support to a law enforcement agency, using EMS providers [above the level of AEMT], to afford a rapid and safe EMS response if a person becomes ill or injured during a tactical law enforcement operation. A tactical EMS agency must be affiliated with a law enforcement agency or consortium of law enforcement agencies.”*

This document provides the Pennsylvania Department of Health with numerous recommendations related to the tactical EMS provider/agency including, but not limited to:

1. Educational objectives
2. Expanded scope of practice
3. Expanded medication list
4. Best practice recommendations in the areas of system integration and medical director requirements

Medical Review [Concerns]:

This VTR has been reviewed and is offered by the PEHSC Medical Advisory Committee

Fiscal Concerns:

As with any other service line expansion, EMS agencies who are exploring the feasibility of becoming a tactical EMS service should carefully consider the costs associated with this service and how those costs will be recovered. Expected costs include initial and recurrent training, personal protective equipment and additional medical equipment and supplies. Deployment and standby services are not compensable through normal reimbursement pathways and will likely need to be recovered through an agreement with the law enforcement agency(s).

Educational Concerns:

The educational objectives described are largely based on nationally accepted principles and include both “mission essential” and “mission optional” elements. As with previous Department accepted expanded scope initiatives, the agency’s medical director play the central role in granting expanded scope of practice privileges following successful completion of a department approved education program.

Plan of Implementation:

Following acceptance of these recommendations by the Department, the committee will begin the next phase of program development, which will focus on drafting statewide protocols for tactical EMS providers that support expanded scope of practice.

The PEHSC Committee/Task Force offers consultation to the Department in regard to the content of this Vote to Recommend (VTR) and its attached documents. The PEHSC Committee/Task Force specifically offers staff or member support to participate in Department deliberations regarding this recommendation in an effort to convey committee/task force discussions.

Board Meeting Comments/Concerns:

None.

Signed: _____ Date _____
President

For PEHSC Use Only – PA Department of Health Response

Accept:____ Table:____ Modify:____ Reject:____

Comments:

Date of Department Response:_____



**PENNSYLVANIA EMERGENCY
HEALTH SERVICES COUNCIL**

Your Voice In EMS

Tactical Paramedic

Proposed Standards for Expanded Scope of Practice, Medications and Education Objectives

**Developed by the PEHSC Medical Advisory Committee:
Special Operations Workgroup**

4/26/2017



This document is a work product of the Pennsylvania Emergency Health Services Council. It presents recommendations for the implementation of the expanded scope of practice tactical paramedic within Pennsylvania's EMS system.

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Executive Summary

This document describes standards recommended by the Pennsylvania Emergency Health Services Council to the Pennsylvania Department of Health to establish the Tactical Paramedic in the Commonwealth. The tactical paramedic represents another significant step in expanding the scope of practice for paramedics practicing in specialized settings.

Currently in some areas of Pennsylvania, there appears to be a level of disconnect between EMS and law enforcement due to a lack of pre-planning or training. Conversely, in other parts of the commonwealth, EMS has become an integral member of the tactical law enforcement team. This synergism has provided paramedics with additional education in tactical medicine including, but not limited to, team member responsibilities, tactics, incident command, personal protection techniques and when authorized, use of lethal and less-than-lethal weapons.

Before the late 1960's, few law enforcement agencies utilized SWAT units, often referred to as tactical response teams, for incidents involving high-risk conditions such as barricaded suspects, hostage situations and warrant service. A series of significant events led to an increased interest in and development of these specially trained units throughout the United States.



The law enforcement community became aware of the value and benefits of tactical emergency medical services. This specialized area of EMS practice builds upon traditional practice and provides the paramedic with additional knowledge and the expanded skill set needed to manage traumatic injuries in an austere environment. In addition to their primary role, the tactical paramedic provides limited primary medical care to tactical team members, which allows the police officer to remain engaged in the incident, and acts as a liaison with local EMS agencies to ensure the delivery of safe, coordinated emergency care. Depending on the structure of the tactical EMS program, paramedics may be civilians or sworn members of a law enforcement agency.

In addition to the proposed educational/clinical standards contained in the document, several “best practice” recommendations are offered, including support for the concept that all EMS providers should have some basic education on how to safely operate at an “active shooter” scene or high threat environment.

Sincerely,

PEHSC Medical Advisory Committee &
Special Operations Workgroup

Introduction

Tactical EMS is an emerging area of EMS practice that provides additional education and skills to experienced paramedics that enable these providers to work in concert with tactical response teams outside or within the threat perimeter. The tactical paramedic provides direct patient care, manages team care activities and may be tasked to act as a liaison with local EMS agencies.

Purpose

This project establishes educational standards and an expanded scope of practice that will allow these allied health professionals to effectively function as a member of a tactical response team.

Scope & Authority

Pennsylvania Department of Health (Department) possesses the statutory (Title 35, Health and Safety) and regulatory authority (Title 28, Health and Safety) to establish the Tactical Paramedic and authorize their practice.

28 Pa Code § 1027.41. Special Operations EMS Services:

(a) *Generally.* A special operations EMS service provides EMS in austere environments that require specialized knowledge, equipment or vehicles to access a patient or it addresses patient care situations that differ from the routine situations that can be handled by a QRS, ambulance service or squad service, or some combination thereof. Depending upon the type of special operations EMS service and the circumstances presented, a special operations EMS service may be able to meet the EMS needs of the patient by itself, or may need to work with other EMS services to meet the EMS needs of the patient.

(b) *Special provisions.* The following apply to special operations EMS services:

(1) When providing EMS through a special operations EMS service, an EMS provider's scope of practice is expanded to include EMS skills and the use of equipment in addition to those included in the EMS provider's general scope of practice if the EMS provider has received education to perform those skills and use that equipment by having successfully completed a course approved by the Department for that type of special operations EMS service. The EMS provider is required to be able to document having received that education and to demonstrate competency in the performance of those skills and use of that equipment to the EMS agency medical director. Performance of those skills and use of that equipment by that level of EMS provider will be authorized by the Department as published in a notice in the *Pennsylvania Bulletin*. An EMS provider shall perform these skills as directed by the Statewide EMS protocols applicable to that type of special operations EMS service or as otherwise directed by a medical command physician.

EMS System Integration

28 Pa Code § 1027.41(c)

Tactical EMS Service:

(1) Purpose. An EMS agency that provides a tactical EMS service provides EMS support to a law enforcement service to afford a rapid and safe EMS response if a person becomes ill or injured during a tactical law enforcement operation.

(2) Affiliation. To secure and maintain an EMS agency license that authorizes the EMS agency to operate a tactical EMS service, an EMS agency shall demonstrate that it is affiliated with a law enforcement service operated by a government law enforcement agency or a consortium of government law enforcement agencies.

(3) Staffing. An EMS agency that provides a tactical EMS service shall be staffed by at least six EMS providers who are above the AEMT level with a minimum of 2 years of experience as an EMS provider above the AEMT level, and who have completed an educational program approved by the Department on tactical EMS operations. The minimum staff when providing EMS support as a tactical EMS service is two EMS providers who meet these standards. All EMS providers who provide EMS for an EMS agency's tactical EMS service shall be 21 years of age or older.

(4) Weapons. Notwithstanding § 1027.3(j) (relating to licensure and general operating standards), when an EMS provider is responding to a tactical law enforcement operation as part of a tactical EMS service, the EMS provider may carry weapons and other tactical items as otherwise permitted by law and approved by the affiliated law enforcement agency.

(5) Reporting. The EMS agency shall provide a summary report of a tactical EMS operation response to the regional EMS council assigned to the region in which the tactical EMS service was provided, within 30 days of the tactical EMS operation, on a form or through an electronic process as prescribed by the Department.

Recommended Best Practices Recommendation:

All EMS Providers

Over the last 20 years, societal shifts have unfortunately resulted in the “active shooter” or other tactical scene to become all too familiar in emergency medical services. EMS providers are now faced with situations that require them to provide care to one or many victims of violence and operating in a manner that mitigates the chance of becoming a victim themselves.

In order for EMS providers to administer care in a safe manner, all EMS providers in Pennsylvania should be required to obtain basic active-shooter education (approx. 2 hours). This education is not intended to enable a provider to be a tactical operator, but would deliver information so the provider could administer care in a reasonably safe manner and effectively interact with law enforcement and tactical EMS operators.

Elements of a basic education program might include, but not be limited to:

- Preplanning
- Equipment considerations
- PPE
- Response
- Working in a warm vs. cold zone
- Principles of care in a hostile environment
- Triage principles and evacuation
- Interacting with tactical EMS operators

Following the didactic portion of the education, which could be delivered through distributive learning or live session, providers should participate in a practical session (approx. 2 hours) where they can assimilate previously learned theory with essential psychomotor skills. This practical session could be conducted at the regional or local level and could incorporate a simulated threat environment.

Individuals acting as lead or secondary instructors should, to the extent possible, have completed formal training in tactical EMS operations in addition to being an experienced EMS instructor.

EMS Agencies Currently Providing Tactical EMS Support

Currently, in several areas of the Commonwealth, there are EMS agencies that provide medical support to tactical law enforcement teams on a regular and/or pre-arranged basis. The depth and breadth of an agency's involvement ranges from simply providing a dedicated ambulance to deploy with a team, to a more formal arrangement where the agency's providers have completed some type of tactical EMS course, regularly train with law enforcement and may even be an integral part of an entry team.

In the future, when the Pennsylvania Department of Health begins to license the "Tactical EMS Agency" in accordance with 28 Pa.C. § 1027.41(c), some agencies currently providing dedicated support to law enforcement will take steps to obtain licensure, while others will be unable or unwilling to make the required financial and/or operational commitment. If an agency finds itself in this position, what are their options?

First, it's important to understand there is no requirement set forth in Pennsylvania statute or regulation that prevents a currently licensed BLS, IALS or ALS agency from continuing to provide tactical EMS support. The most significant functional difference between a licensed EMS agency and a licensed "tactical EMS agency" lies in the EMS providers' ability to operate with an expanded scope of practice, following completion of additional education and credentialing by the agency medical director.

An EMS agency that intends to continue to provide regular support to a tactical team, but not pursue tactical licensing, should ensure their EMS providers have been appropriately trained to operate in a safe manner, especially if providers are an integral part of a tactical entry team. Even though these providers would not have an expanded scope of practice, it is highly recommended they complete the Department approved training education proposed in this document. If the EMS agency should decide to pursue tactical licensing in the future, having their paramedics educated to the Department approved standard will make the transition more efficient.

National EMS Education Standards

In August, 1996, the *EMS Agenda for the Future* was published. This consensus document was developed by the National Association of EMS Physicians and the National Association of State EMS Directors with funding provided by the National Highway Traffic Safety Administration (NHTSA) and the Health Resources and Services Administration (HRSA).

Following the Agenda’s publication, a conference of national EMS education leaders was convened by NHSTA. The resultant work product from this conference was the *EMS Education Agenda for the Future: A Systems Approach*. Based on guidance from the EMS education agenda, the following companion documents were published:

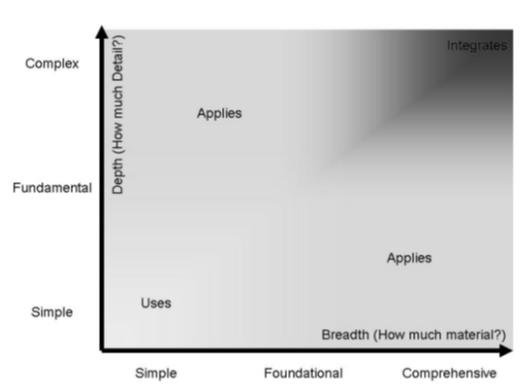
- *National EMS Core Content*
- *National EMS Scope of Practice*
- *National EMS Education Standards*

The *2009 National Education Standards* replaced the NHTSA National Standard Curricula at all levels. The standards define the competencies, clinical behaviors, and judgments that must be met by EMS personnel at all levels of practice. In developing standards for the tactical paramedic, the task force felt the integrity of the NHTSA document should be maintained, therefore the tactical paramedic standards are an extension of the federal document for Pennsylvania.

Education Standard Components

1. Competency – represents the minimum competency required for an entry-level provider at each level.
2. Knowledge Required to Achieve Competency– represents an elaboration of the knowledge within each competency (when appropriate) that entry-level providers would need to master in order to achieve competency.
3. Clinical Behaviors/Judgments – describes the clinical behaviors and judgments essential for entry-level providers at each level.

The standards also assume there is a progression in practice from Emergency Medical Responder through Paramedic, and now the Tactical Paramedic level. The descriptors used to illustrate the increasing complexity of knowledge and behaviors are expressed in terms of their “depth” and “breadth.”



The *depth* of knowledge is the amount of detail a student needs to know about a particular topic. The *breadth* of knowledge refers to the number of topics or issues a student needs to learn in a particular competency. For example: the Emergency Medical Responder (EMR) needs to have a thorough understanding (depth) about how to safely and effectively use the bag-valve-mask device; however, the EMR is taught a limited number of concepts (breadth) surrounding airway management.¹

¹ 2009 NHTSA National EMS Education Standards

To describe the intended depth of knowledge of a particular concept the terms *simple, fundamental, and complex* are used. This terminology better illustrates the progression of the depth of knowledge from one level to another. For example, the EMR's *depth* of knowledge for bleeding control is simple while the EMT's *depth* of knowledge for bleeding control is fundamental.

To describe the intended breadth of knowledge of a concept within a provider level, the terms *simple, foundational, and comprehensive* are used. This terminology also better illustrates the progression of the breadth of knowledge from one level to another. For example, the EMT's *breadth* of knowledge for cardiovascular disorders is foundational while the Paramedic's *breadth* of knowledge for cardiovascular disorders is comprehensive.

Course Design, Sponsorship and Approval Process



The design of the tactical paramedic course curriculum will be determined by the course sponsor and should be based on the student's intended practice environment.

A tactical EMS course sponsor should be accredited by the Pennsylvania Department of Health as an advanced life support education institution, licensed tactical EMS agency or a nationally recognized organization with expertise in tactical EMS to conduct a tactical paramedic course. The tactical EMS agency or nationally recognized organization with expertise in tactical EMS would be required to adhere to the

same policies as accredited educational institutions with regard to course administration.

An educational institution or agency may not conduct a tactical paramedic course without first obtaining the approval of the Pennsylvania Department of Health. As part of its approval process the Department may require the course sponsor to submit course objectives, content outline, instructional guidelines or other information as may be needed in order for the Department, or its designee, to determine if the proposed course meets the educational standards outlined in this document.

Clinical Practicum

A paramedic enrolled in a Department approved tactical paramedic course may benefit from engaging in a clinical practicum in order to gain real-life experience in both the clinical and operational aspects of tactical medicine.

Completion of a clinical practicum should be required for tactical paramedic endorsement by the Department. Students should demonstrate psychomotor skills competency in both the classroom/lab and simulated high threat environment for specific skills that may be used in such a setting. This experience should be provided as an integral part of a tactical paramedic course or, as an alternative, provided by the tactical EMS agency in consultation with the agency medical director.

Competency Evaluation

The process to evaluate a student's entry-level mastery of the information presented in the tactical paramedic course is the responsibility of the course sponsor. This can be accomplished through the use of

both cognitive and psychomotor examinations covering previously presented didactic and lab material. Course sponsors are permitted to incorporate the successful completion of a 3rd party exam, e.g. BCCTPC TP-C, as part of their course requirements, however the Department will not independently require such an exam following successful completion of an approved course as a prerequisite for expanded scope of practice.

The second level of competency evaluation, and arguably the most important, is that which is conducted by the tactical agency EMS medical director as part of the agency's credentialing process. The medical director has the sole discretion to grant, restrict or deny [expanded] practice privileges, in total or in part, pursuant to 29 Pa. Code §1023.01 (a)(1):

(vi) Making an initial assessment of each EMS provider at or above the AEMT level to determine whether the EMS provider has the knowledge and skills to competently perform the skills within the EMS provider's scope of practice, and a commitment to adequately perform other functions relevant to the EMS provider providing EMS at that level. This subparagraph does not apply if the EMS provider was working for the EMS agency at the same level prior to the physician becoming the medical director for the EMS agency and the EMS provider was credentialed at that EMS agency within the last 12 calendar months as being able to perform at the EMS provider's certification level.

(vii) Making an assessment, within 12 calendar months of the last assessment, of each EMS provider at or above the AEMT level to determine whether the EMS provider has demonstrated competency in the knowledge and skills to perform the skills within the EMS provider's scope of practice, and a commitment to adequately perform other functions relevant to the EMS provider providing EMS at that level.

When making an assessment, the medical director should, to the extent possible, evaluate the tactical paramedic in both a controlled and simulated high threat environment for specific skills that may be used in such a setting.

Expanded Scope of Practice Authority

The tactical paramedic will only be permitted to utilize the approved expanded scope of practice when providing care for a licensed tactical EMS agency, or in other patient settings authorized by the Department of Health.

The tactical paramedic's expanded practice authority will be based on:

1. Completion of a Department approved education course or equivalent process.
2. The agency medical director's initial and annual review.
3. Other requirements as may be determined by the Department and/or licensed tactical EMS agency.

Continuing Education Requirements

Continuing education requirements for providers with expanded scope of practice privileges will be determined by the EMS agency in consultation with the EMS agency medical director, who will determine the required number of continuing education hours and/or core content. Credits earned in tactical subjects may be applied towards the paramedic's biannual registration requirement.

Transition to Expanded Scope of Practice

A PA certified EMS provider, above the AEMT level, who desires to obtain expanded scope of practice privileges to provide care on behalf of a tactical EMS service, shall submit the following information to the EMS agency medical director for review:

- OPTION 1: Documentation of successful completion of a Department approved course in tactical paramedicine as posted on the Department’s website, or as an equivalent process;
- OPTION 2: Provide documented military training in one of the following military occupational specialties (MOS) as active duty/ reserve/national guard or be within 3 years of separation from military service:

U.S. Army	U.S. Navy	U.S. Air Force
18D: Special Forces Medic	HM-8403: Independent Duty Corpsman	1T2X1: Parajumper
	HM-8427: Fleet Marine Corpsman	4N0X1: Aerospace Medical Technician
Pass DOD Advanced Tactical Paramedic (ATP) exam following completion of appropriate SOCOM curriculum	HM-0000: Corpsman	4N0X1C: Independent Duty Medical Technician

Following approval by the EMS agency medical director, the agency will maintain a list of providers who have been granted expanded scope privileges. This list will be updated following the medical director’s annual provider review and shall be made available to the Department and/or regional EMS council upon request.

Reciprocity

Paramedics possessing valid certification from another state or territory seeking to practice as a tactical paramedic will be required to complete the following process:

1. Complete the process established by the Department to obtain reciprocity as a Pennsylvania paramedic.
2. Provide the EMS agency medical director with documentation of successful completion of a Department approved educational program in tactical paramedicine as posted on the Department’s website or an approved equivalent process.
3. If the paramedic has completed a tactical EMS course that does not appear on the Department’s approved list, the provider may submit a request to the Department for review of the course for equivalency. The Department will determine the documentation required for such a review.

Scope of Practice

<p style="text-align: center;">Current Scope of Practice</p>	<p>Skills currently authorized for Pennsylvania paramedics. Consistent with current ALS operations, these skills would be utilized during a tactical operation in both emergent/life threatening and non-emergent situations. An entry-level educational program will be required for the paramedic to translate their use in a tactical environment. All tactical paramedics in Pennsylvania will be required to demonstrate their ability to function safely and effectively in a tactical environment.</p>	<p>Refer to current scope of practice document published in the Pennsylvania Bulletin by the Pennsylvania Department of Health, Bureau of Emergency Medical Services for a list of these skills.</p>
<p style="text-align: center;">Expanded Scope of Practice</p>	<p>“Mission-essential” skills (Tier I). These skills would typically be used in an emergent or life threatening situation. Tactical paramedics in Pennsylvania will be required to demonstrate competency in these skills to the tactical EMS agency medical director.</p>	<ol style="list-style-type: none"> 1. Blood Products, Administration of 2. Anesthetic Infiltration/ Block, Admin of 3. Dart Removal, Electronic Discharge Weapon 4. Epistaxis Control 5. Intubation, Rapid Sequential Induction 6. Restraints Physical/Chemical, Use of 7. Wound Irrigation 8. Wound Closure, Adhesive, Tape and Staple 9. Wound Packing
	<p>“Mission-optional” skills (Tier II). These skills would be used both non-emergently to address the tactical team’s on-site healthcare needs and/or in an emergent or life threatening situation based on mission requirements. The tactical EMS agency medical director would select and credential the paramedic in skills that he/she deems appropriate.</p>	<ol style="list-style-type: none"> 1. Abscess, Incision & Drainage of 2. Blister Care 3. Corneal Abrasion, Evaluation of 4. Joint Dislocation, Reduction of 5. Joint Taping 6. Point of Care Testing 7. Ultrasound Imaging, Operation/Interpretation of 8. Canine Emergency Care² 9. Sternal IO Insertion

Emergency Care for Service Animals

The use of service animals, i.e. canines, is common during special operations for search/rescue, handler protection or other purposes. Occasionally, these service animals, many of which are sworn law enforcement officers, may become ill or injured while working at an incident scene. Ideally, the service animal should receive medical care from a licensed veterinarian or veterinary technician. However, there are times when emergency veterinary care may not be readily available due to the incident’s location or other extenuating circumstance.

In these situations, the Department should work with the State Board of Veterinary Medicine to determine if an appropriately trained EMS provider is permitted to administer lifesaving emergency care to an ill or injured service animal and what emergency procedures are permissible. The goal of this care is to stabilize the animal and facilitate transport to a veterinarian for definitive care.

² Contingent upon determination of permitted emergency care under the PA Veterinary Act (49 Pa. Code §31.31.)

Medication List

<p style="text-align: center;">Current Scope of Practice</p>	<p>Medications currently authorized for Pennsylvania paramedics. Consistent with current ALS operations, these medications would be utilized during a tactical operation in both emergent/life threatening and non-emergent situations. An entry-level educational program will be required for the paramedic to translate their use in a tactical environment. All tactical paramedics in Pennsylvania will be required to demonstrate their ability to function safely and effectively in a tactical environment.</p>	<p>Refer to the list currently approved medications for EMS providers published in the Pennsylvania Bulletin by the Pennsylvania Department of Health, Bureau of Emergency Medical Services for these medications.</p>
<p style="text-align: center;">Expanded Scope of Practice</p>	<p>“Mission essential” medications (Tier I)</p> <p>These medications would typically be used in an emergent or life threatening situation. Tactical paramedics in Pennsylvania will be required to demonstrate competency in the use of these medications to the tactical EMS agency medical director.</p>	<ol style="list-style-type: none"> 1. Antipsychotics Agents <i>Injectable: e.g. Droperidol, Haloperidol, Olanzapine, Ziprasidone</i> <i>Oral: e.g. Haloperidol, Olanzapine, Ziprasidone</i> 2. Hemorrhage Control Agents <i>Intravenous: e.g. Blood Products (all types), Tranexamic Acid</i> 3. Hypnotic/Dissociative/Sedative Agents <i>Injectable: e.g. Etomidate, Ketamine</i> 4. Paralytic Agents <i>e.g. Rocuronium, Succinylcholine, Vecuronium</i>
	<p>“Mission-optional” medications (Tier II)</p> <p>These medications would be used both non-emergently to address the tactical team’s on-site healthcare needs and/or in an emergent or life threatening situation based on mission requirements. The tactical EMS agency medical director would select and credential the paramedic in medications that he/she deems appropriate.</p>	<ol style="list-style-type: none"> 1. Alertness Aid Agents <i>Oral: e.g. Modafinil</i> 2. Analgesic Opioid Agents <i>Oral: e.g. Fentanyl, Hydrocodone, Morphine, Oxycodone</i> 3. Anesthetic Agents <i>Injectable: e.g. Lidocaine with or without Epinephrine, Marcaine</i> <i>Topical: e.g. Pramoxine</i> 4. Antiarrhythmic/Antihypertensive Agents <i>Injectable: e.g. Metoprolol</i> <i>Oral: e.g. Metoprolol</i> 5. Antiemetic Agents <i>Injectable: e.g. Metoclopramide, Prochlorperazine</i> <i>Oral: e.g. Meclizine, Metoclopramide, Prochlorperazine</i> 6. Antihistamine Agents <i>Oral: e.g. Cetirizine, Desloratadine, Fexofenadine, Levocetirizine, Loratadine</i>

		<p>7. Antimicrobial Agents <i>Injectable: e.g. Azithromycin, Cefotetan, Vancomycin</i> <i>Oral: e.g. Azithromycin, Cephalexin, Gatifloxacin</i> <i>Topical: e.g. Bacitracin, Ketoconazole, Mupirocin</i> <i>Ophthalmic: e.g. Gentamycin</i></p> <p>8. Decongestant Agents <i>Oral: e.g. Pseudoephedrine</i> <i>Nasal: e.g. Oxymetazoline</i></p> <p>9. Gastrointestinal Agents <i>Oral: e.g. Calcium Carbonate, Famotidine, Loperamide</i></p> <p>10. Hypnotic/Dissociative/Induction Agents <i>Injectable: e.g. Propofol</i></p> <p>11. Immunological Agents <i>Injectable: e.g. Influenza vaccine, Tdap vaccine, Tetanus vaccine</i></p> <p>12. Non-Steroidal Anti-Inflammatory Agents <i>Injectable: e.g. Ketorolac</i> <i>Oral: e.g. Ibuprofen, Meloxicam, Naproxen</i></p> <p>13. Ophthalmologic Agents <i>Ocular: e.g. Cyclopentolate, Fluorescein, Proparacaine, Tetracaine</i></p> <p>14. Steroidal Agents <i>Oral: e.g. Prednisone</i> <i>Topical: e.g. Fluocinoline, Hydrocortisone</i></p> <p>15. Toxicological Agents <i>Injectable: Hydroxocobalamin</i></p>
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Storage and Transportation of Equipment and Supplies

A licensed tactical EMS agency and the agency medical director as responsible to ensure all equipment and supplies used in a tactical EMS response are stored, transported and used in a manner that complies with 28 Pa.C. §10278.5(e)(2), related to medication storage, and applicable federal requirements. The specific manner in which tactical equipment and supplies are stored and transported may vary according to local needs.

For example, the agency may require all tactical personnel to report to a fixed deployment point and respond to the incident in a Department licensed emergency vehicles. In areas of the Commonwealth where the previously described deployment strategy would result in extended response times, the agency and its medical director may authorize certain equipment, supplies and medications to be stored upon and transported to an incident using an alternative transport method, such as a non-traditional vehicle. To ensure accountability, the EMS agency should develop policies for storage and transport of equipment, supplies and medications when using an alternative transport method.

Educational Objectives

The following educational objectives, consistent with the recommended expanded scope of practice and medication list are divided into Mission Essential (Tier I) and Mission Optional (Tier II). All tactical paramedic programs must provide instruction on Tier I educational objectives at the recommended depth/breadth. Tier II instruction may be provided with Tier I objectives, as a separate course, or delivered in a modular fashion based on each Tier II psychomotor skill. In all cases, the course(s) must be reviewed and approved by the Department.

	Paramedic	Tactical Paramedic
Preparatory	Integrates comprehensive knowledge of EMS systems, the safety/well-being of the paramedic, and medical/legal and ethical issues which is intended to improve the health of EMS personnel, patients, and the community.	Expands upon knowledge of EMS system to include comprehensive understanding of tactical paramedic's role in a tactical operation, techniques to best provide medical support to tactical operators, victims of crime and suspects. Develop understanding of operating in austere environments with a continued threat of violence to operators and tactical paramedics.
EMS Systems	AEMT Material PLUS: Fundamental depth, foundational breadth: <ul style="list-style-type: none"> History of EMS Complex depth, comprehensive breadth: <ul style="list-style-type: none"> EMS systems Roles/responsibilities/professionalism of EMS personnel Quality improvement Patient safety 	Paramedic Material PLUS: Tier I: Fundamental depth, foundational breath: <ul style="list-style-type: none"> Historical development of tactical medicine Complex depth, comprehensive breadth: <ul style="list-style-type: none"> Roles and responsibilities of the tactical medic Team Structure and function Problems facing tactical teams Operational Standards Legal considerations Accessibility and civilian EMS interface
Research	AEMT Material PLUS: Fundamental depth, foundational breadth: <ul style="list-style-type: none"> Research principles to interpret literature and advocate evidence-based practice 	Paramedic Material PLUS: Tier I : Fundamental depth, foundational breadth: <ul style="list-style-type: none"> Interpret literature related to the care guideline changes recommend through the committee on combat casualty care
Workforce Wellness & Safety	AEMT Material PLUS: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> Provider safety and wellbeing Standard safety precautions Personal protective equipment Stress management Dealing with death and dying Prevention of work related injuries Lifting and moving patients Disease transmission Wellness principles 	Paramedic Material PLUS: Fundamental depth, foundational breadth: <ul style="list-style-type: none"> Team Health Management and Combat Physiology Tier I: <ul style="list-style-type: none"> Demonstrate proficiency in the application and removal of Personal protective equipment –Ballistic protection, face/eye protection Describe the injury prevention benefits of maintaining individual and team Cardiovascular fitness Describe the components of maintaining proper nutrition in maximizing operational capacity Describe the Mental health issues unique to law enforcement operations Demonstrate proficiency in monitoring work/rest cycles Demonstrate understanding in health surveillance and rehabilitation techniques

	Paramedic	Tactical Paramedic
		<ul style="list-style-type: none"> • Demonstrate proficiency in preventive medicine and injury prevention Fundamental depth, foundational breadth: Tier II: <ul style="list-style-type: none"> • Describe the minor ambulatory complaints likely to be encountered in the tactical environment • Demonstrate proficiency in medical support for wellness programs and workforce hardening • Describe the red flag injury and illnesses that require immediate medical evaluation and exclusion from operations • Application of health surveillance and rehabilitation techniques
Documentation	AEMT Material PLUS: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> • Principles of medical documentation and report writing 	Paramedic Material PLUS: Fundamental depth, foundational breadth: Tier I: <ul style="list-style-type: none"> • Medical Threat Assessments • Combat Casualty Cards • Incident Command forms – Medical Plan, Unit Logs • Supplemental documentation for legal proceedings Fundamental depth, foundational depth: Tier II: <ul style="list-style-type: none"> • Minor Treatment Logs
EMS System Communications	AEMT Material PLUS: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> • EMS communication system and communication with other health care professionals • Team communication and dynamics 	Paramedic Material PLUS: Fundamental depth, foundational breadth: Tier I: <ul style="list-style-type: none"> • Tactical Communications • Organizational structure of tactical teams
Therapeutic Communications	AEMT Material PLUS: Complex depth, comprehensive breadth: Principles of communicating with patients in a manner that achieves a positive relationship: <ul style="list-style-type: none"> • Factors that affect communication • Interviewing techniques • Dealing with difficult patients • Adjusting communication strategies for age, stage of development, patients with special needs, and differing cultures 	Paramedic Material PLUS: Fundamental depth, foundational breadth: Tier I: <ul style="list-style-type: none"> • Effective Communication with law enforcement officers, family members, innocent bystanders, and suspects or prisoners
Medical-Legal Issues and Ethics	AEMT Material PLUS: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> • Consent/refusal of care • Confidentiality • Advanced directives • Tort and criminal actions • Statutory responsibilities • Mandatory reporting • Health care regulation • Patient rights/advocacy • End-of-life issues • Ethical principles/moral obligations • Ethical tests and decision making 	Paramedic Material PLUS: Fundamental depth, foundational breadth: Tier I: <ul style="list-style-type: none"> • Medical Clearance for Incarceration • Legal ramification of a lethal encounter • Conceal carry and weapons possession laws • Treatment and transportation of in-custody persons

	Paramedic	Tactical Paramedic
Anatomy and Physiology	Integrates a complex depth and comprehensive breadth of knowledge of the anatomy and physiology of all human systems	Review and expansion on material relevant to combat casualties and orthopedic injuries relevant to managing dislocations
Medical Terminology	Integrates comprehensive anatomical and medical terminology and abbreviations into the written and oral communication with colleagues and other healthcare professionals.	Same as Paramedic level
Pathophysiology	Integrates comprehensive knowledge of pathophysiology of major human systems.	Paramedic Material PLUS: Complex depth, comprehensive breadth: Tier I: <ul style="list-style-type: none"> • Wound ballistics • Temporary and permanent cavity • High velocity wounds/low velocity weapons • Non-fragmenting high velocity injuries • Wound Patterns • Scatter patterns • Shotgun injury patterns • Entrance vs exit wounds • Non-lethal force injury patterns • Conducted electrical weapons
Life Span Development	Integrates comprehensive knowledge of life span development.	Same as Paramedic level
Public Health	Applies fundamental knowledge of principles of public health and epidemiology including public health emergencies, health promotion, and illness and injury prevention.	Paramedic Material PLUS: Fundamental depth, foundational breadth: Tier I: <ul style="list-style-type: none"> • Demonstrate proficiency in monitoring work/rest cycles • Demonstrate proficiency in health surveillance and rehabilitation techniques • Demonstrate proficiency in preventive medicine and injury prevention
Pharmacology	Integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve overall health	Same as Paramedic level
Principles of Pharmacology	AEMT Material PLUS: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> • Medication safety • Medication legislation • Naming • Classifications • Schedules • Pharmacokinetics • Storage and security • Autonomic pharmacology • Metabolism and excretion • Mechanism of action • Phases of medication activity • Medication response relationships • Medication interactions • Toxicity 	Paramedic Material PLUS: Complex depth, comprehensive breadth: Tier II: <ul style="list-style-type: none"> • Overview of the indications for use; side effects; and the potential adverse effects in the tactical environment of commonly used OTC medications

	Paramedic	Tactical Paramedic
Medication Administration	<p>AEMT Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Routes of administration • Within the scope of practice of the paramedic, administer medications to a patient 	<p>Paramedic Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Tier II:</p> <ul style="list-style-type: none"> • Administer medications in the expanded scope of practice to a patient
Emergency Medications	<p>AEMT Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Within the scope of practice of the paramedic:</p> <ul style="list-style-type: none"> • Names • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications administered 	<p>Paramedic Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Understand the actions, indications, etc of medications listed in the Tier I Tactical Paramedic scope of practice <p>Complex depth, comprehensive breadth:</p> <p>Tier II:</p> <ul style="list-style-type: none"> • Understand the actions, indications, etc of medications listed in the Tier II Tactical Paramedic scope of practice
Airway Management, Respiration and Artificial Ventilation	<p>Integrates complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation, and respiration for patients of all ages.</p>	<p>Same as Paramedic level</p>
Airway Management	<p>AEMT Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Within the scope of practice of the paramedic:</p> <ul style="list-style-type: none"> • Airway anatomy • Airway assessment • Techniques of assuring a patent airway 	<p>Paramedic Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Complex understanding of difficulties of airway management in continued threat environment. • Reinforcement of strategies to stabilize airway with limited equipment • Drug facilitated airway control /intubation, including potential complications
Respiration	<p>AEMT Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Anatomy of the respiratory system • Physiology, and pathophysiology of respiration <ul style="list-style-type: none"> ➢ Pulmonary ventilation ➢ Oxygenation ➢ Respiration <ul style="list-style-type: none"> ○ External ○ Internal ○ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy 	<p>Same as Paramedic level</p>

Artificial Ventilation	AEMT Material PLUS: Complex depth, comprehensive breadth: Assessment and management of adequate and inadequate ventilation: <ul style="list-style-type: none"> • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output 	Same as Paramedic level
Assessment	Integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. This includes developing a list of differential diagnoses through clinical reasoning to modify the assessment and formulate a treatment plan.	Same as Paramedic level
Scene Size-Up	AEMT Material PLUS: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> • Scene management <ul style="list-style-type: none"> ➢ Impact of the environment on patient care ➢ Addressing hazards ➢ Violence ➢ Multiple patient situations 	Paramedic Material PLUS: Complex depth, comprehensive breadth: Tier I: <ul style="list-style-type: none"> • Demonstrate proficiency in medical planning and analysis of medical intelligence to develop a medical plan • Describe the key elements of the scene size-up associated with the tactical setting • Describe a medical threat assessment and list major medial threats in the tactical setting
Primary Assessment	AEMT Material PLUS: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> • Primary assessment for all patient situations <ul style="list-style-type: none"> ➢ Initial general impression ➢ Level of consciousness ➢ ABCs ➢ Identifying life threats ➢ Assessment of vital functions • Integration of treatment/procedures needed to preserve life 	Paramedic Material PLUS: Complex depth, comprehensive breadth: Tier I: <ul style="list-style-type: none"> • Demonstrate proficiency in assessment of life-threats utilizing limited visual cues • Demonstrate proficiency in assessment techniques to identify injuries using techniques in low light and loud noise situations. • Patient assessment under duress or threatening conditions
History Taking	AEMT Material PLUS: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> • Components of the patient history • Interviewing techniques • How to integrate therapeutic communication techniques and adapt the line of inquiry based on findings and presentation 	Same as Paramedic level
Secondary Assessment	AEMT Material PLUS: Complex depth, comprehensive breadth: Techniques of physical examination for all major <ul style="list-style-type: none"> • Body systems • Anatomical regions 	Same as Paramedic level

<p>Monitoring Devices</p>	<p>AEMT Material PLUS:</p> <p>Fundamental depth, foundational breadth:</p> <p>Within the scope of practice of the paramedic:</p> <ul style="list-style-type: none"> • Obtaining and using information from patient monitoring devices including (but not limited to): <ul style="list-style-type: none"> ➢ Continuous ECG monitoring ➢ 12 lead ECG interpretation ➢ Carbon dioxide monitoring ➢ Basic blood chemistry 	<p>Paramedic Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Describe the role of the ongoing assessment, oxygen therapy, continued intravenous fluid therapy and patient monitoring in casualty evacuation from austere environment <p>Tier II:</p> <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Describe the potential uses for ultrasound imaging in a prehospital setting • Describe the potential uses for point of care blood testing devices in a prehospital setting
<p>Reassessment</p>	<p>AEMT Material PLUS:</p> <p>Complex depth, comprehensive breadth</p> <ul style="list-style-type: none"> • How and when to perform a reassessment for all patient situations 	<p>Same as Paramedic level</p>
<p>Medicine</p>	<p>Integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with a medical complaint.</p>	<p>Same as Paramedic level</p>
<p>Medical Overview</p>	<p>AEMT Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Pathophysiology, assessment, and management of medical complaints to include:</p> <ul style="list-style-type: none"> • Transport & destination decisions 	<p>Same as Paramedic level</p>
<p>Neurology</p>	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of:</p> <p>Complex depth, comprehensive breadth</p> <ul style="list-style-type: none"> • Stroke/intracranial • hemorrhage/transient ischemic attack • Seizure • Status epilepticus • Headache <p>Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Dementia • Neoplasms • Demyelinating disorders • Parkinson’s disease • Cranial nerve disorders • Movement disorders • Neurologic inflammation/infection • Spinal cord compression • Hydrocephalus • Wernicke’s encephalopathy 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Effects of electronic discharge weapons and dart removal procedure

<p>Abdominal and Gastrointestinal Disorders</p>	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Acute and chronic gastrointestinal hemorrhage • Liver disorders • Peritonitis • Ulcerative diseases <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Irritable bowel syndrome • Inflammatory disorders • Pancreatitis • Bowel obstruction • Hernias • Infectious disorders • Gall bladder and biliary tract disorders <p>Simple depth, simple breadth:</p> <ul style="list-style-type: none"> • Rectal abscess • Rectal foreign body obstruction • Mesenteric ischemia 	<p>Same as Paramedic level</p>
<p>Immunology</p>	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major immune system disorders and/or emergencies:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Hypersensitivity • Anaphylactic reactions • Anaphylactoid reactions <p>Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Collagen vascular disease • Transplant related problems 	<p>Same as Paramedic level</p>
<p>Infectious Diseases</p>	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, reporting requirements, prognosis, and management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • HIV-related disease • Hepatitis • Pneumonia • Meningococcal meningitis • Fundamental depth, foundational breadth • Tuberculosis • Tetanus • Viral diseases • Sexually transmitted disease 	<p>Paramedic Material, PLUS:</p> <p>Fundamental depth, foundational breadth:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Understand infectious disease risks associated with delayed evacuation and remote care of trauma patients <p>Tier II:</p> <ul style="list-style-type: none"> • Application of understanding of infectious disease risks as it relates to the use of antimicrobial medications during tactical operations • Incision and drainage of abscess

	<ul style="list-style-type: none"> • Gastroenteritis • Fungal infections • Rabies • Scabies and lice • Lyme disease • Rocky Mountain Spotted Fever • Antibiotic resistant infections 	
Endocrine Disorders	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Acute diabetic emergencies • Diabetes <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Adrenal disease • Pituitary and thyroid disorders 	Same as Paramedic level
Psychiatric	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Acute psychosis • Agitated delirium <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Cognitive disorders • Thought disorders • Mood disorders • Neurotic disorders • Substance-related disorders /addictive behavior • Somatoform disorders • Factitious disorders • Personality disorders • Patterns of violence/abuse/neglect • Organic psychoses 	<p>Paramedic Material, PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Understanding the actions and indications for use of antipsychotic medications • Understanding the action and indications for use of chemical restraint
Cardiovascular	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Acute coronary syndrome <ul style="list-style-type: none"> ➢ Angina pectoris ➢ Myocardial infarction • Heart failure • Non-traumatic cardiac tamponade • Hypertensive emergencies • Cardiogenic shock • Vascular disorders <ul style="list-style-type: none"> ➢ Abdominal aortic aneurysm ➢ Arterial occlusion ➢ Venous thrombosis 	Same as Paramedic level

	<ul style="list-style-type: none"> • Aortic aneurysm/dissection, • Thromboembolism • Cardiac rhythm disturbances <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Infectious diseases of the heart <ul style="list-style-type: none"> ➢ Endocarditis ➢ Pericarditis • Congenital abnormalities 	
Toxicology	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of the following toxidromes and poisonings:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Cholinergics • Anticholinergics • Sympathomimetics • Sedative/hypnotics • Opiates • Alcohol intoxication and withdrawal • Over-the-counter and prescription medications • Carbon monoxide • Illegal drugs • Herbal preparations 	<p>Paramedic Material PLUS:</p> <p>Fundamental depth, foundational breadth:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Review of irritant gasses commonly used by police during riot control and barricade subjects events: <ul style="list-style-type: none"> ○ OC ○ CS <p>Complex depth, comprehensive breadth:</p> <p>Tier II:</p> <ul style="list-style-type: none"> • Understanding of actions and indications for use of hydroxycobalamin
Respiratory	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Acute upper airway infections • Spontaneous pneumothorax • Obstructive/restrictive lung diseases • Pulmonary infections <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Neoplasm • Pertussis • Cystic fibrosis 	<p>Same as Paramedic level</p>
Hematology	<p>AEMT Material PLUS:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major hematological diseases and/or emergencies:</p> <p>Complex depth, foundational breadth:</p> <ul style="list-style-type: none"> • Sickle cell disease <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Blood transfusion complications • Hemostatic disorders • Lymphomas • Red blood cell disorders • White blood cell disorders • Coagulopathies 	<p>Tier I:</p> <p>Complex depth, complex breadth:</p> <ul style="list-style-type: none"> • Blood transfusions: <ul style="list-style-type: none"> ○ Indications ○ Whole blood, blood components and substitutes ○ Typing and compatibility ○ Pre-transfusion, concurrent and post transfusion assessment ○ Administration techniques ○ Management of transfusion complications ○ Documentation • Use of TXA • Use of hemostatic agents for hemorrhage control

<p>Genitourinary/Renal</p>	<p>AEMT Material Plus:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Complications of <ul style="list-style-type: none"> ➢ Acute renal failure ➢ Chronic renal failure ➢ Dialysis ➢ Renal calculi <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Acid base disturbances • Fluid and electrolyte • Infection • Male genital tract conditions 	<p>Same as Paramedic level</p>
<p>Gynecology</p>	<p>AEMT Material Plus:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major gynecological diseases and/or emergencies:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Vaginal bleeding • Sexual assault <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Infections • Pelvic inflammatory disease • Ovarian cysts • Dysfunctional uterine bleeding • Vaginal foreign body 	<p>Same as Paramedic level</p>
<p>Non-Traumatic Musculoskeletal</p>	<p>AEMT Material Plus:</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major non-traumatic musculoskeletal disorders:</p> <p>Fundamental depth, foundation breadth:</p> <ul style="list-style-type: none"> • Disorders of the spine • Joint abnormalities • Muscle abnormalities • Overuse syndromes 	<p>Paramedic Material PLUS:</p> <p>Tier II:</p> <p>Complex depth, complex breadth:</p> <ul style="list-style-type: none"> • Overuse syndromes with joint stabilization taping • Joint abnormalities including minor dislocations of digits, patella and shoulder
<p>Diseases of the Eyes, Ears, Nose and Throat</p>	<p>AEMT Material Plus:</p> <p>Knowledge of anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis and management :</p> <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Common or major diseases of the eyes, ears, nose, and throat, including nose bleed 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Recognition and treatment of anterior nose bleeding <p>Tier II:</p> <p>Complex depth, complex breadth:</p> <ul style="list-style-type: none"> • Penetrating eye -injury management • Recognition of minor corneal trauma due to trauma and chemical injury

Shock and Resuscitation	Integrates comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and peri-arrest states. Integrates a comprehensive knowledge of the causes and pathophysiology into the management of shock, respiratory failure or arrest with an emphasis on early intervention to prevent arrest.	Paramedic Material PLUS: Tier I: <ul style="list-style-type: none"> Describe the importance of permissive hypotension in management of multi system trauma patient Tier II: <ul style="list-style-type: none"> Venous access using a sternal intraosseous site
Trauma	Integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression to implement a comprehensive treatment/disposition plan for an acutely injured patient.	Expands on paramedic level to enable the tactical provider to effectively and efficiently perform an assessment and provide treatment in an immediate threat and secure tactical environment.
Trauma Overview	AEMT Material Plus: Complex depth, comprehensive breadth: Pathophysiology, assessment and management of the trauma patient: <ul style="list-style-type: none"> Trauma scoring Transport and destination issues 	Paramedic Material PLUS: Tier I: <ul style="list-style-type: none"> Demonstrate proficiency in performing a remote assessment of a casualty Demonstrate proficiency in high threat extraction techniques during immediate action drills Demonstrate proficiency in performing assessment of illness/injury and providing treatment via surrogate without the use of one hand's or visual clues.
Bleeding	AEMT Material Plus: Complex depth, comprehensive breadth: Pathophysiology, assessment, and management of: <ul style="list-style-type: none"> Bleeding 	Paramedic Material PLUS: Tier I: <ul style="list-style-type: none"> Demonstrate proficiency in conventional hemorrhage control, including direct pressure, wound packing, wound dressing and pressure dressing under austere and unsafe conditions Demonstrate proficiency in the identification of life threatening hemorrhage Demonstrate proficiency in the application of a commercial tourniquet and an improvised tourniquet Demonstrate proficiency in the application of advanced hemostatic agents, including TXA
Chest Trauma	AEMT Material Plus: Pathophysiology, assessment, and management of: Complex depth, comprehensive breadth: <ul style="list-style-type: none"> Traumatic aortic disruption Pulmonary contusion Blunt cardiac injury Hemothorax Pneumothorax <ul style="list-style-type: none"> ➤ Open ➤ Simple ➤ Tension Cardiac tamponade Rib fractures Flail chest Comotio cordis Tracheobronchial disruption Diaphragmatic rupture Traumatic asphyxia 	Paramedic Material PLUS: Tier I: <ul style="list-style-type: none"> Describe the findings associated with open and tension pneumothoracies Demonstrate proficiency in placement of a commercial and an effective improvised chest seal Demonstrate proficiency in assessing the adequacy of a chest seal after placement Describe indications for performing a needle decompression Demonstrate proficiency in needle decompression for tension pneumothorax

<p>Abdominal and Genitourinary Trauma</p>	<p>AEMT Material Plus:</p> <p>Complex depth, comprehensive breadth:</p> <p>Pathophysiology, assessment, and management of:</p> <ul style="list-style-type: none"> • Vascular injury • Solid and hollow organ injuries • Blunt versus penetrating mechanisms • Evisceration • Retroperitoneal injuries • Injuries to the external genitalia 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Demonstrate proficiency in the recognition and treatment of illness and injury associated with less-lethal weapons • Describe injury patterns based on the ballistic characteristics (direct injury, cavitation, temporary cavity, permanent cavity and zone of injury) of various weapons • Demonstrate proficiency understanding the various blast injury types
<p>Orthopedic Trauma</p>	<p>AEMT Material Plus:</p> <p>Pathophysiology, assessment, and management of :</p> <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Pediatric fractures • Tendon laceration/transection/ rupture (Achilles and patellar) • Compartment syndrome <p>Complex depth, foundational breadth:</p> <ul style="list-style-type: none"> • Upper and lower extremity orthopedic trauma • Open fractures • Closed fractures • Dislocations 	<p>Paramedic Material PLUS:</p> <p>Tier II :</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Reduction of dislocations, with or without vascular compromise e.g. digits, patella and shoulder
<p>Soft Tissue Trauma</p>	<p>AEMT Material Plus:</p> <p>Complex depth, comprehensive breadth:</p> <p>Pathophysiology, assessment, and management of:</p> <ul style="list-style-type: none"> • Wounds <ul style="list-style-type: none"> ➢ Avulsions ➢ Bite wounds ➢ Lacerations ➢ Puncture wounds • Burns <ul style="list-style-type: none"> ➢ Electrical ➢ Chemical ➢ Thermal • High-pressure injection • Crush syndrome 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <p>Comprehensive depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Demonstrate competency in the closure of wounds with steri-strips, skin adhesives or staples after exploration and irrigation • Administration of local anesthetic to facilitate wound exploration, irrigation and temporary closure • Demonstrate proficiency in exploration of superficial wounds • Demonstrate wound irrigation for removal of foreign materials and reduce risk of infection <p>Tier II:</p> <ul style="list-style-type: none"> • Blister care, including incision and drainage
<p>Head, Facial, Neck and Spine Trauma</p>	<p>AEMT Material Plus:</p> <p>Pathophysiology, assessment, and management of :</p> <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Unstable facial fractures • Orbital fractures • Perforated tympanic membrane <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Skull fractures • Penetrating neck trauma • Laryngeotracheal injuries • Spine trauma <ul style="list-style-type: none"> ➢ Dislocations/subluxations ➢ Fractures ➢ Sprains/strains 	<p>Paramedic Material PLUS:</p> <p>Complex depth, comprehensive breadth:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Unstable facial fractures • Orbital fractures • Perforated tympanic membrane • Penetrating neck trauma • Laryngeotracheal injuries <p>Tier II:</p> <ul style="list-style-type: none"> • Dislocations/subluxations • Sprains/strains

<p>Nervous System Trauma</p>	<p>AEMT Material Plus:</p> <p>Pathophysiology, assessment, and management of:</p> <p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Cauda equina syndrome • Nerve root injury • Peripheral nerve injury <p>Complex depth, comprehensive breadth</p> <ul style="list-style-type: none"> • Traumatic brain injury • Spinal cord injury • Spinal shock 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Demonstrate proficiency in moving patients while maintaining spinal motion restriction in c-spine injured patient, when tactically appropriate
<p>Special Considerations In Trauma</p>	<p>AEMT Material Plus:</p> <p>Pathophysiology, assessment, and management of trauma in the:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient 	<p>Same as Paramedic level</p>
<p>Environmental Emergencies</p>	<p>AEMT Material Plus:</p> <p>Pathophysiology, assessment, and management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Near-drowning • Temperature-related illness • Bites and envenomations • Dysbarism <ul style="list-style-type: none"> ➢ High-altitude ➢ Diving injuries • Electrical injury • High altitude illness 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Review management of near-drowning including implications of body armor, selection of tactical uniform and use of a hypothermia wrap; lightening injuries, cold, heat, altitude, plants, and animal bite injuries.
<p>Multi-System Trauma</p>	<p>AEMT Material Plus:</p> <p>Pathophysiology, assessment, and management of:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Multi-system trauma • Blast injuries 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Demonstrate proficiency in the recognition and treatment of explosion/blast injuries
<p>Special Patient Populations</p>	<p>Integrates assessment findings with principles of pathophysiology and knowledge of psychosocial needs to formulate a field impression and implement a comprehensive treatment/disposition plan for patients with special needs</p>	<p>Same as Paramedic level</p>
<p>Obstetrics</p>	<p>AEMT Material Plus:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Anatomy and physiology of pregnancy • Pathophysiology of complications of pregnancy • Assessment of the pregnant patient 	<p>Same as Paramedic level</p>

	<p>Psychosocial impact, presentations, prognosis, and management of:</p> <ul style="list-style-type: none"> • Normal delivery • Abnormal delivery <ul style="list-style-type: none"> ➤ Nuchal cord ➤ Prolapsed cord ➤ Breech • Spontaneous abortion/miscarriage • Ectopic pregnancy • Eclampsia • Antepartum hemorrhage • Pregnancy induced hypertension • Third trimester bleeding <ul style="list-style-type: none"> ➤ Placenta previa ➤ Abruptio placenta • High risk pregnancy • Complications of labor <ul style="list-style-type: none"> ➤ Fetal distress ➤ Pre-term ➤ Premature ruptured membranes ➤ Rupture of uterus • Complication of delivery • Post partum complications <p>Foundational depth, foundational breadth:</p> <ul style="list-style-type: none"> • Hyperemesis gravidarum • Post partum depression 	
Neonatal Care	<p>AEMT Material Plus:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Anatomy and physiology of neonatal circulation • Assessment of the newborn <p>Presentation and management:</p> <ul style="list-style-type: none"> • Newborn • Neonatal resuscitation 	Same as Paramedic level
Pediatrics	<p>AEMT Material Plus:</p> <p>Age-related assessment findings, age-related anatomic and physiologic variations, age related and developmental stage related assessment and treatment modifications of the pediatric-specific major or common diseases and/or emergencies:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Foreign body (upper and lower) airway obstruction • Bacterial tracheitis • Asthma • Bronchiolitis • Respiratory Syncytial Virus (RSV) • Pneumonia • Croup • Epiglottitis • Respiratory distress/failure/arrest • Shock • Seizures • Sudden Infant Death Syndrome (SIDS) • Hyperglycemia • Hypoglycemia 	Same as Paramedic level

	<p>Fundamental depth, foundational breadth:</p> <ul style="list-style-type: none"> • Pertussis • Cystic fibrosis • Bronchopulmonary dysplasia • Congenital heart diseases • Hydrocephalus and ventricular shunts 	
Geriatrics	<p>AEMT Material Plus:</p> <p>Normal and abnormal changes associated with aging, pharmacokinetic changes, psychosocial and economic aspects of aging, polypharmacy, and age-related assessment and treatment modifications for the major or common geriatric diseases and/or emergencies:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> • Cardiovascular diseases • Respiratory diseases • Neurological diseases • Endocrine diseases • Alzheimer's • Dementia • Delirium <ul style="list-style-type: none"> • Acute confusional state <p>Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Herpes zoster • Inflammatory arthritis 	Same as Paramedic level
Patients with Special Challenges	<p>AEMT Material Plus:</p> <p>Complex depth, comprehensive breadth: Healthcare implications of:</p> <ul style="list-style-type: none"> • Abuse • Neglect • Poverty • Bariatric • Technology dependent • Hospice/ terminally ill • Tracheostomy care/dysfunction 	Same as Paramedic level
Canine Emergency Care*		<p>Paramedic Material, Plus:</p> <p>Tier II:</p> <ul style="list-style-type: none"> • Understanding of the paramedic's ability to administer emergency canine first aid under Pennsylvania law • Oxygen administration • Hemorrhage control • Shock and fluid resuscitation • Simple splinting • CPR <p>* Contingent upon determination of permitted emergency care under PA Veterinary Act (49 Pa.C. §31.31)</p>
EMS Operations	<p>Same as Previous Level (EMR)</p> <p>Knowledge of operational roles and responsibilities to ensure safe patient, public, and personnel safety</p>	Same as Paramedic level
Principles of Safely Operating a Ground Ambulance	<p>Same as Previous Level (EMR/EMT)</p> <p>Simple depth, simple breadth</p>	<p>Paramedic Material PLUS:</p> <p>Tier I:</p>

	<ul style="list-style-type: none"> Risks and responsibilities of emergency response <p>Simple depth, foundational breadth</p> <ul style="list-style-type: none"> Risks and responsibilities of transport 	<ul style="list-style-type: none"> Use of alternate transport methods for severely injured patients in austere environment
Incident Management	<p>AEMT Material Plus:</p> <p>Complex depth, comprehensive breadth</p> <ul style="list-style-type: none"> Establish and work within the incident management system 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> Describe the command structure of tactical command during tactical operations
Multiple Casualty Incidents	<p>Same as Previous Level (EMR/EMT)</p> <p>Simple depth, simple breadth:</p> <ul style="list-style-type: none"> Triage principles Resource management Triage Performing Re-Triage Destination decisions Post traumatic and cumulative stress 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> Describe the principles of triage and apply them to the tactical settings Demonstrate proficiency in treating mass casualties in tactical situation Demonstrate proficiency rapid life saving interventions during a response to a multiple casualty incident of violence
Air Medical	<p>AEMT Material Plus:</p> <p>Complex depth, comprehensive breadth:</p> <ul style="list-style-type: none"> Medical risks/needs/advantages 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> Describe the challenges of use of aeromedical resources for tactical operations Use of non-medical aircraft for evacuation
Vehicle Extrication	<p>Same as Previous Level (EMR/EMT)</p> <p>Simple depth, simple breadth:</p> <ul style="list-style-type: none"> Safe vehicle extrication Use of simple hand tools 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> Tactical Extraction: <ul style="list-style-type: none"> Demonstrate proficiency in creating patient moving devices utilizing tubular webbing Demonstrate proficiency in moving patients while maintaining spinal motion restriction in c-spine injured patient, when tactically appropriate
Hazardous Materials Awareness	<p>Same as Previous Level (EMR/EMT)</p> <p>Simple depth, simple breadth:</p> <ul style="list-style-type: none"> Risks and responsibilities of operating in a cold zone at a hazardous material or other special incident 	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> Describe the risk of hazardous materials exposure found in clandestine drug labs. Demonstrate proficiency in performing field expedient decontamination Demonstrate proficiency in performing all lifesaving medical procedures listed in the hemostasis, airway and breathing section while operating in a air purifying respirator
Mass Casualty Incident Due To Terrorism and Disaster	<p>Same as Previous Level (EMR/EMT)</p> <p>Simple depth, simple breadth:</p> <ul style="list-style-type: none"> Risks and responsibilities of operating on the scene of a natural or man-made disaster 	<p>Paramedic Material PLUS</p> <p>Tier I</p> <p>Complex depth, comprehensive breadth</p> <ul style="list-style-type: none"> Risks and responsibilities of operating on the scene of a natural or man-made disaster

Clinical Behavior/Judgment		
	PARAMEDIC	Tactical Paramedic
Assessment	Perform a comprehensive history and physical examination to identify factors affecting the health and health needs of a patient.	Same as Paramedic level
	Formulate a field impression based on an analysis of comprehensive assessment findings, anatomy, physiology, pathophysiology, and epidemiology.	Same as Paramedic level
	Relate assessment findings to underlying pathological and physiological changes in the patient's condition.	Same as Paramedic level
	Integrate and synthesize the multiple determinants of health and clinical care.	Same as Paramedic level
	Perform health screening and referrals.	Same as Paramedic level
Therapeutic Communication and Cultural Competency	Effectively communicate in a manner that is culturally sensitive and intended to improve the patient outcome.	Same as Paramedic level
Psychomotor Skills	<p>Safely and effectively perform all psychomotor skills within the National EMS Scope of Practice Model AND state Scope of Practice at this level.</p> <p>Airway and Breathing:</p> <ul style="list-style-type: none"> • Oral and nasal endotracheal intubation • FBAO – direct laryngoscopy • Percutaneous cricothyrotomy • Pleural decompression • BiPAP, CPAP, PEEP • Chest tube monitoring • ETCO₂ monitoring • NG/OG tube <p>Assessment:</p> <p>ECG interpretation:</p> <ul style="list-style-type: none"> • 12-lead interpretation • Blood chemistry analysis <p>Pharmacologic interventions:</p> <ul style="list-style-type: none"> • Intraosseous insertion • Enteral and parenteral administration of approved prescription medications • Access indwelling catheters and implanted central IV ports • Medications by IV infusion • Maintain infusion of blood or blood products • Blood sampling • Thrombolytic initiation 	<p>Paramedic level skills currently permitted by the PA Department of Health, PLUS:</p> <p>Tier I</p> <ul style="list-style-type: none"> • Anesthetic Infiltration/ Block, Admin of • Blood Products, Administration of • Dart Removal, Electronic Discharge Weapon • Epistaxis Control • Intubation, Rapid Sequential Induction • Restraints Physical/Chemical, Use of • Wound Irrigation to clear contaminates • Wound Packing for hemostasis • Wound Closure, Adhesive, Tape and Staple <p>Tier II</p> <ul style="list-style-type: none"> • Abscess, Incision & Drainage of • Blister Care • Corneal Abrasion, Evaluation of • Joint Dislocation, Reduction of • Joint Taping • Point of Care Testing • Ultrasound Imaging, Operation/Interpretation of • Canine Emergency Care³ • Sternal IO Insertion <p>Students should demonstrate psychomotor skills competency in both the classroom/lab and simulated high threat environment for specific skills that may be used in such a setting.</p>

³ Contingent upon determination of permitted emergency care under the PA Veterinary Act (49 Pa. Code §31.31.)

	<ul style="list-style-type: none"> Administer physician approved medications <p>Medical/Cardiac Care:</p> <ul style="list-style-type: none"> Cardioversion Manual defibrillation Transcutaneous pacing Carotid massage <p>Trauma care:</p> <ul style="list-style-type: none"> Morgan lens <p>Anticipate and prospectively intervene to improve patient outcome.</p>	
Professionalism	Is a role model of exemplary professional behavior including: but not limited to, integrity, empathy, self-motivation, appearance/personal hygiene, self-confidence, communications, time management, teamwork/ diplomacy, respect, patient advocacy, and careful delivery of service.	<p>Paramedic level, PLUS:</p> <ul style="list-style-type: none"> Describe the features and components of operational security
Decision Making	Performs basic and advanced interventions as part of a treatment plan intended to mitigate the emergency, provide symptom relief, and improve the overall health of the patient. Evaluates the effectiveness of interventions and modifies treatment plan accordingly.	Same as Paramedic level
Record Keeping	Report and document assessment findings and interventions. Collect and report data to be used for epidemiological and research purposes.	Same as Paramedic level
Patient Complaints	Perform a patient assessment, develop a treatment and disposition plan for patients with the following complains: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, anxiety, apnea, ascites, ataxia, back pain, behavioral emergency, bleeding, blood and body fluid exposure, cardiac arrest, cardiac rhythm disturbances, chest pain, congestion, constipation, cough/hiccough, cyanosis, dehydration, dental pain, diarrhea, dizziness/vertigo, dysmenorrhea, dysphasia, dyspnea, dysuria, ear pain, edema, eye pain, fatigue, feeding problems, fever, GI bleeding, headache, hearing disturbance, hematuria, hemoptysis, hypertension, hypotension, incontinence, jaundice, joint pain/swelling, malaise, multiple trauma, nausea/vomiting, pain, paralysis, pediatric crying/fussiness, poisoning, pruritus, rash, rectal pain, red/pink eye, shock, sore throat, stridor/drooling, syncope, tinnitus, tremor, urinary retention, visual disturbances, weakness, and wheezing.	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> Lacerations requiring temporary wound closure <p>Tier II:</p> <ul style="list-style-type: none"> Sore throat Ankle, knee or shoulder strains Trench foot Ear Pain Corneal Abrasion

<p>Scene Leadership</p>	<p>Function as the team leader of a routine, single patient advanced life support emergency call.</p>	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Describe the multi-dimensional tactical space and methods for extraction, infiltration and exfiltrations • Describe methodology in determining casualty evacuation triage
<p>Scene Safety</p>	<p>Ensure the safety of the rescuer and others during an emergency.</p>	<p>Paramedic Material PLUS:</p> <p>Tier I:</p> <ul style="list-style-type: none"> • Demonstrate proficiency in operating in austere tactical environment while ensuring cover and concealment to limit exposure to direct threat, • Demonstrate knowledge of tactics to limit exposure of patient and providers to direct threat

Medical Director Requirements

The medical director serves as the chief medical officer for an EMS Agency. In this role the physician performs a variety of tasks to ensure patient care is delivered in a timely, safe and competent manner. Although a medical director may delegate some of the more routine tasks to physician or non-physician subordinates, it is essential the physician be engaged as an integral part of the prehospital healthcare delivery system.

In tactical medicine, the physician medical director's role takes on added significance due to the complexity associated with providing advanced level care in an austere environment. The tactical paramedic represents the best of their profession, but can only provide optimal care when the agency medical director is prepared to guide and support their practice.

In Pennsylvania, the EMS Act (Act 37 of 2009) requires all licensed EMS agencies to have a medical director. The statute further provides requirements for physician qualifications and outlines their roles and responsibilities.

Recommended Best Practices Recommendation:

In addition to the requirements set forth in statute, the tactical EMS agency medical director should assume the following responsibilities.

- a. Roles and responsibilities:
 1. Review the statewide EMS and tactical protocols and Department-approved regional EMS protocols that are applicable to the tactical EMS agency and ensuring that its tactical medics and other relevant personnel are familiar with the protocols applicable to the tactical EMS agency.
 2. Perform medical audits of tactical EMS provided by the tactical EMS agency's tactical medics.
 3. Participate in and reviewing quality improvement and peer reviews of tactical EMS provided by the tactical EMS agency.
 4. Review regional mass casualty and disaster plans and providing guidance to the tactical EMS agency regarding its provision of tactical EMS under those plans.
 5. Provide guidance to the tactical EMS agency, when applicable, with respect to the ordering, stocking and replacement of medications and devices, and compliance with laws and regulations impacting upon the tactical EMS agency's acquisition, storage and use of those medications.
 6. Make an initial assessment of each tactical Medic above the AEMT level to determine whether the tactical medic has the knowledge and skills to competently perform the skills within the tactical medic's scope of practice, and a commitment to adequately perform other functions relevant to the tactical medic providing Tactical EMS at that level. This subparagraph does not apply if the tactical medic was working for the tactical EMS agency at the same level prior to the physician becoming the tactical medical director for the tactical EMS agency and the tactical medic was credentialed at that tactical EMS agency within the last 12 calendar months as being able to perform at the tactical medic's certification level.

7. Make an assessment, within 12 calendar months of the last assessment, of each tactical Medic above the AEMT level to determine whether the tactical medic has demonstrated competency in the knowledge and skills to perform the skills within the tactical medic's scope of practice, and a commitment to adequately perform other functions relevant to the tactical medic providing tactical EMS at that level.
 8. Recommend to the tactical EMS agency that a tactical Medic not be permitted to provide tactical EMS at the tactical medic's certification level if the tactical EMS medical director determines that the tactical medic has not demonstrated competency in the knowledge and skills to perform the skills within the tactical medic's scope of practice, or a commitment to adequately perform other functions relevant to the tactical medic providing tactical EMS at that level, and recommending restrictions on the tactical medic's practice for the tactical EMS agency, if appropriate, to ensure patient safety.
 9. Provide medical direction and availability for tactical medical command for the tactical medic or tactical EMS agency dispatch center if the tactical EMS agency operates at tactical EMS agency dispatch center.
 10. Participate in the regional and Statewide quality improvement programs, participate in affiliated law enforcement agencies training and quality improvement programs and cooperate with regional, State and federal agencies as needed. Maintain a liaison with the regional EMS medical director.
 11. Recommend to the relevant regional EMS council, when appropriate, tactical EMS protocols for inclusion in the Statewide and regional tactical EMS protocols.
 12. Recommend to the Department the supervision, revocation or restriction of a tactical medic's certification.
- b. Minimum qualifications:
1. Be a physician with an unrestricted license to practice medicine in Pennsylvania.
 2. Have successfully completed an emergency medicine residency accredited by a residency program crediting body recognized by the State Board of Medicine or the State Board of Osteopathic Medicine and/or be board certified or board eligible in emergency medicine by an emergency medicine certifying board recognized by the State Board of Medicine or the State Board of Osteopathic Medicine. The physician should also have successfully completed or taught the ACLS course within the preceding 2 years and have completed the ATLS course and PALS course or APLS course, or other programs determined by the Department to meet or exceed the standards of these programs and maintain the certifications or;
 3. Have successfully completed a residency program in surgery, internal medicine, family medicine, pediatrics or anesthesiology, accredited by a residency accrediting body recognized by the State Board of Medicine or the State Board of Osteopathic Medicine. The physician should also have successfully completed or taught the ACLS course within the preceding 2 years and have completed the ATLS course and PALS course or APLS course, or other programs determined by the Department to meet or exceed the standards of these programs and maintain the certifications. The physician should be able to meet the same educational competencies as the prehospital providers they supervise regarding medical care, mission planning and support.
 4. Have successfully completed and maintain certification as a Pre-Hospital Physician as recognized by the Department.

5. Be an active medical command physician and has successfully completed the medical command course as recognized by the Department and serves or served as an ALS agency medical director having completed an EMS agency medical director course as recognized by the Department or has served as an ALS medical director under the Emergency Medical Services Act [35 P.S. &&6921-6938] [repealed by the act of August 18, 2009 [P.L.308, No. 37]] prior to February 16, 2010.
6. Have a valid Drug Enforcement Agency number.
7. Have completed an EMS agency medical director course, an EMS fellowship, or other EMS training program determined by the Department to be equivalent. This training will ensure that the EMS agency medical director has knowledge of:
 - i. The scope of practice of the EMS providers.
 - ii. The provision of the EMS under the Statewide EMS protocols.
 - iii. The interface between EMS providers and medical command physicians.
 - iv. Quality improvement and peer review principles.
 - v. Emergency medical dispatch principles and EMS agency communication capabilities.
 - vi. EMS system design and operation
 - vii. Federal and State laws and regulations regarding EMS.
 - viii. Regional and State mass casualty and disaster plans.
 - ix. Patient and EMS provider safety principles.

Medical Command

The licensed tactical EMS agency should establish, by agreement, a relationship with a PA DOH accredited medical command facility(s) to provide primary online medical direction to its tactical paramedics. Such an agreement(s) will ensure that physicians providing online medical direction are familiar with the expanded scope of practice capabilities of a tactical paramedic. This does not preclude the tactical paramedic from establishing contact with a local medical command facility if contact cannot be made with the primary medical command facility(s).

Statewide Tactical Paramedicine Protocols

The workgroup envisions the development of statewide tactical care protocols to follow a similar path to that of the current statewide ALS protocols. These protocols should, to the extent possible, be evidence based and developed with stakeholder input and in consultation with the PEHSC Medical Advisory Committee.

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