

Professional Development Committee
OEMS Office – 1041 Technology Park Dr, Glen Allen, Virginia
April 7, 2010
10:30 am

Members Present:	Members Absent:	Staff:	Others:
Larry Oliver – Chair Holly Frost Donna Hurst Tom Jarman Nick Klimenko Stephen Rea Jeffrey Reynolds	Dr. Charles Lane-excused Dave Cullen-excused Kathy Eubank-excused	Greg Neiman Thomas Nevetral	Marcia Pescitani Debbie Akers
		Dr. George Lindbeck-excused	

Topic/Subject	Discussion	Recommendations, Action/Follow-up; Responsible Person
I. Welcome	The meeting was called to order at 10:44 am	
II. Introductions	Introductions were not necessary.	
III. Approval of Agenda	The Committee reviewed the Agenda for today’s meeting (Attached)	The Agenda was accepted with no changes by Unanimous Consent
IV. Approval of Minutes	The Committee reviewed the minutes of the January 6, 2010 meeting (ATTACHMENT: A)	The Minutes were accepted with no changes by Unanimous Consent
V. Reports of Committee Members	<ul style="list-style-type: none"> a. Officer Reports – <ul style="list-style-type: none"> i. Larry Oliver - <ul style="list-style-type: none"> a. The EMS Advisory Board met in February. The Bylaw committee presented a plan. It is being reviewed and will be presented in the May meeting and should be approved for implementation after January 2011. Not sure if there are any changes to this committee, but will wait until we see the latest draft, but don’t expect anything major. b. PT Care Guidelines and Formulary workgroups are moving forward. Advisory Board stepped in and made them standing committees. 	

Topic/Subject	Discussion	Recommendations, Action/Follow-up; Responsible Person
	<ul style="list-style-type: none"> b. Reports of Committee Members <ul style="list-style-type: none"> i. Medical Direction Committee (MDC) – Tom Nevetral for Dr. Lane <ul style="list-style-type: none"> a. Their next meeting is scheduled for tomorrow April 8, 2010 b. Biggest item on the agenda will be documents PDC is discussing today. c. Office of EMS <ul style="list-style-type: none"> i. Division of Educational Development-Tom Nevetral for Warren Short. <ul style="list-style-type: none"> a. DED put together these documents for your review b. There is more of a gap between I and P in these documents, but when reviewing these documents, consider if anything else needs to be stricken to widen this gap. ii. ALS Training Specialist – Tom Nevetral <ul style="list-style-type: none"> a. Test Writing for new levels is the final piece of the puzzle. Will be recruiting Subject Matter Experts (SME's) in this process soon. iii. BLS Training Specialist – Greg Neiman <ul style="list-style-type: none"> a. New Practical Exam – On track. Will only bring up if problems are identified. b. Resumption of EMT-Instructor Written Pretest – The Office resumed testing February 15, 2010 and have had around 15 people take the exam. People planning to take the exam should study the National EMS Education Standards, the Gap Analysis and the Atlantic EMS Council Practice Analysis. All of these documents are posted to our website. c. Instructor Practical- The next Instructor Practical is scheduled for May here in the Richmond area. Invitations will be going out to eligible candidates this week. d. Instructor Institute- The next Institute is scheduled for June in conjunction with the VAVRS Rescue College at Virginia Tech. Actual location will depend on budget constraints. e. EMS Instructor Updates – <ul style="list-style-type: none"> 1. We held Online Instructor Updates in February, March and last evening and had around 15 participants at each. Instructors/ALS-C who attend the online Update must complete a quiz in order to ensure they actually participate in the online component. We have had a higher than expected fail rate on the quiz. Participants should download and refer to documents referenced in the Update to be successful. The quiz is considered an “open-book” quiz. 2. The next in-person Update is scheduled for Saturday, June 12, 2010. Location TBA but we are hoping for Blacksburg at VAVRS Rescue College. If not, it will be here at 1041 Technology Park Dr. 	

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	<p>3. The schedule of Updates has been released for 2010 and can be found on the OEMS website here: http://www.vdh.virginia.gov/OEMS/Training/EMS_InstructorSchedule.htm</p> <p>f. Scanning</p> <ol style="list-style-type: none"> 1. #1 most important take away message – The Office remains up-to-date on scanning. We scan every day the Office is open and we are not and have not been behind. Every scan document is scanned within 24-48 hours of being received on business days (the delay may come in the time it is received.) 2. With Ernestine Sutton’s retirement in November 2009 and the denial to rehire, her duties have been distributed to the remaining staff. 3. As a result, the number of CE errors in the system has steadily increased to over 12,000 as we no longer have 1 person dedicated to fixing them. 4. In addition, we continue to see significant errors in OMD Waivers, Tests and Enrollments. 5. The Office is doing the best that it can to stay on top of these issues, however, it is time for providers, instructors and agencies to step up and take ownership of this problem. Care should be taken to ensure scan cards are complete and accurate, prior to being sent to the Office. Doing so will ensure accurate reflection on your CE and timely recertification. <p>iv. Funding and Accreditation – Tom Nevetral for Chad Blosser</p> <ol style="list-style-type: none"> 1. EMSTF – <ol style="list-style-type: none"> a) Still waiting to determine the status of funds for FY 2011. 2. Accreditation Update- <ol style="list-style-type: none"> a) Accreditation documents for AEMT and Optional EMT are available on our website now. Programs who wish to go through this process after implementation of the new Regulations can begin working on them now. b) Accreditation Issues – if you become aware of programs that are not following the process please contact the Office for investigation and follow-up. <p>v. Other OEMS Information</p> <ol style="list-style-type: none"> 1. Regulations <ol style="list-style-type: none"> a) Public comment period has ended and Mike is reviewing everything gleaned from those hearings. Still hoping to implement them by September 1, 2010. 	

Topic/Subject	Discussion	Recommendations, Action/Follow-up; Responsible Person
VI. Previous Business	None	
VII. New Business	<p>a) Appoint a replacement to the Patient Care Guidelines Workgroup</p> <ol style="list-style-type: none"> i. Nick Klimenko has expressed an interest and is approved by unanimous consent ii. Next meeting is April 21, 2010 here in Richmond <p>b) Accreditation Concerns-This issue was discussed earlier in the meeting</p> <p>c) Field Internship Issues – Concerns regarding the ability of EMT students to complete 10 patients. Discussed issues related to ensuring EMT students have the opportunities to ride to meet the new requirement of 10 patient contacts contained in the new Virginia EMS Education Standards.</p> <p>d) DED Proposals for implementation of the Virginia EMS Education Standards (ATTACHMENT: B)</p> <p>e) DED Proposal regarding move to Education Coordinator (ATTACHMENT: C)</p>	<p>Nick Klimenko will replace Billy Altman on the Patient Care Guidelines Workgroup approved by unanimous consent.</p> <p>Motion by Stephen Rea To: Approve the document as presented. Seconded by: Nick Klimenko Unanimously Approved</p> <p>Motion by Jeffrey Reynolds To: Approve the document as presented. Seconded by Tom Jarman Unanimously Approved</p> <p>Motion by: Jeffrey Reynolds To: Recommend to the OEMS that no additional ALS Coordinator seminars be held after the one scheduled in July 2010. Seconded by: Nick Klimenko Unanimously Approved</p>

Topic/Subject	Discussion	Recommendations, Action/Follow-up; Responsible Person
	<p>f) Proposal to PDC Regarding Upgrade of EMT Instructor Certified at the EMT-B or Enhanced (ATTACHMENT: D)</p> <p>g) DED Proposal Regarding Identifying the Gap between NSC and VEMSES (ATTACHMENT: E)</p> <p>Reference Document - DRAFT Timeline for Implementation of Virginia Education Standards, End of NSC testing and Mandatory AEMT Accreditation. (ATTACHMENT: F)</p>	<p>Motion by Nick Klimenko To: Table this proposal until the next meeting Second by: Stephen Rea Unanimously Approved</p> <p>Committee deferred addressing this item to next meeting</p>
VIII. Public Comment	None	
IX. Dates for 2009 Meetings	Next Special Call meeting set for May 19, 2010 10:30am at 1041 Technology Park Dr	
X. Adjourn	Meeting adjourned at 16:22.	



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Professional Development Committee

Wednesday, April 7, 2010

OEMS Office – 1041 Technology Park Dr, Glen Allen, VA 23059

10:30 AM

Agenda

- I. **Welcome**
- II. **Introductions**
- III. **Approval of Agenda**
- IV. **Approval of Minutes from January 6, 2010**
- V. **Reports of Committee Members**
 - a. Officer Reports
 - b. Reports of Committee Members
 - i. Medical Direction Committee - Dr. Charles Lane
 - ii. Others
 - c. Office of EMS
 - i. Division of Educational Development (DED)-Warren Short, OEMS
 - ii. ALS Training Specialist- Tom Nevetral, OEMS
 - iii. BLS Training Specialist-Greg Neiman, OEMS
 - iv. Funding and Accreditation-Chad Blosser, OEMS
 - v. Other OEMS Information
- VI. **Previous Business-none**
- VII. **New Business**
 - a. Appoint a replacement to the Patient Care Workgroup
 - b. Accreditation Concerns
 - c. Field Internship Issues
 - d. DED Proposals for implementation of the Virginia EMS Education Standards
 - e. DED Proposal regarding move to Education Coordinator
 - f. DED Proposal Regarding Identifying the Gap between NSC and VEMSES (Phoenix Document)
- VIII. **Public Comment**
- IX. **Dates for 2010 Meetings**
- X. **Adjourn**

**Attachment: A to the
April 7, 2010 PDC Minutes**

**Approved
January 6, 2010
Minutes of the PDC**

**Attachment: B to the
April 7, 2010 PDC Minutes**

**DED Proposal for the
Implementation of the Virginia
EMS Education Standards**

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
1 Preparatory	Uses simple knowledge of the EMS system, safety/well-being of the EMR, medical/legal issues at the scene of an emergency while awaiting a higher level of care.	Applies fundamental knowledge of the EMS system, safety/well-being of the EMT, medical/legal and ethical issues to the provision of emergency care.	Applies fundamental knowledge of the EMS system, safety/well-being of the AEMT, medical/legal and ethical issues to the provision of emergency care.	Same as previous level	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.
1A EMS Systems	Simple depth, simple breadth <ul style="list-style-type: none"> • EMS systems • Roles/ responsibilities/ professionalism of EMS personnel • Quality improvement 	EMR Material PLUS: <ul style="list-style-type: none"> Simple depth, foundational breadth • EMS systems • History of EMS • Roles/ responsibilities/ professionalism of EMS personnel • Quality improvement • Patient safety 	EMT Material PLUS: <ul style="list-style-type: none"> Fundamental depth, foundational breadth • Quality improvement • Patient safety 	Same as previous level	AEMT Material PLUS: <ul style="list-style-type: none"> Fundamental depth, foundational breadth • History of EMS Complex depth, comprehensive breadth • EMS systems • Roles/ responsibilities/ professionalism of EMS personnel • Quality improvement • Patient safety
1B Research	Simple depth, simple breadth <ul style="list-style-type: none"> • Impact of research on EMR care • Data collection 	EMR Material PLUS: <ul style="list-style-type: none"> Simple depth, simple breadth • Evidence-based decision making 	Same as Previous Level	Same as previous level	AEMT Material PLUS: <ul style="list-style-type: none"> Fundamental depth, foundational breadth • Research principles to interpret literature and advocate evidence-based practice
1C Workforce Safety and Wellness	Simple depth, simple breadth <ul style="list-style-type: none"> • Standard safety precautions • Personal protective equipment • Stress management <ul style="list-style-type: none"> o Dealing with death and dying • Prevention of response related injuries • Lifting and moving patients 	EMR Material PLUS: <ul style="list-style-type: none"> Fundamental depth, foundational breadth • Standard safety precautions • Personal protective equipment <ul style="list-style-type: none"> o Dealing with death and dying • Stress management <ul style="list-style-type: none"> o Dealing with death and dying • Prevention of work related injuries • Lifting and moving patients • Disease transmission • Wellness principles 	Same as Previous Level	Same as previous level	AEMT Material PLUS: <ul style="list-style-type: none"> Complex depth, comprehensive breadth • Provider safety and wellbeing • Standard safety precautions • Personal protective equipment <ul style="list-style-type: none"> o Dealing with death and dying • Stress management <ul style="list-style-type: none"> o Dealing with death and dying • Prevention of work related injuries • Lifting and moving patients • Disease transmission • Wellness principles
1D Documentation	Simple depth, simple breadth <ul style="list-style-type: none"> • Recording patient findings 	EMR Material PLUS: <ul style="list-style-type: none"> Fundamental depth, foundational breadth • Principles of medical documentation and report writing 	EMT Material PLUS: <ul style="list-style-type: none"> Complex depth, foundational breadth • Principles of medical documentation and report writing 	Same as previous level	AEMT Material PLUS: <ul style="list-style-type: none"> Complex depth, comprehensive breadth • Principles of medical documentation and report writing

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1E	EMS System Communication	Simple depth, simple breadth Communication needed to • Call for Resources • Transfer care of the patient • Interact within the team structure	EMR Material PLUS: Simple depth, simple breadth • EMS communication system • Communication with other health care professionals • Team communication and dynamics	EMT Material PLUS: Fundamental depth, foundational breadth • EMS communication system • Communication with other health care professionals • Team communication and dynamics	Same as previous level	AEMT Material PLUS: Complex depth, comprehensive breadth • EMS communication system • Communication with other health care professionals • Team communication and dynamics
1F	Therapeutic Communication	Simple depth, simple breadth Principles of communicating with patients in a manner that achieves a positive relationship • Interviewing techniques	EMR Material PLUS: Simple depth, simple breadth Principles of communicating with patients in a manner that achieves a positive relationship • Adjusting communication strategies for age, stage of development, patients with special needs, and differing cultures Fundamental depth, foundational breadth • Interviewing techniques • Verbal defusing strategies • Family presence issues	EMT Material PLUS: Simple depth, simple breadth Principles of communicating with patients in a manner that achieves a positive relationship • Dealing with difficult patients	Same as previous level	AEMT Material PLUS: Complex depth, comprehensive breadth Principles of communicating with patients in a manner that achieves a positive relationship • 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
1G	Medical/Legal and Ethics	Simple depth, simple breadth • Consent/refusal of care • Confidentiality • Advanced directives • Tort and criminal actions • Evidence preservation • Statutory responsibilities • Mandatory reporting • Ethical principles/moral obligations • End-of-life issues	EMR Material PLUS: Fundamental depth, foundational breadth • Consent/refusal of care • Confidentiality • Advanced directives • Tort and criminal actions • Evidence preservation • Statutory responsibilities • Mandatory reporting • Ethical principles/moral obligations	Same as Previous Level	AEMT Material PLUS: Complex depth, comprehensive breadth • 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	AEMT Material PLUS: Complex depth, comprehensive breadth • 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
2	Anatomy and Physiology	Uses simple knowledge of the anatomy and function of the upper airway, heart, vessels, blood, lungs, skin, muscles, and bones as the foundation of emergency care.	Applies fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.	Integrates complex knowledge of the anatomy and physiology of the airway, respiratory and circulatory systems to the practice of EMS.	Integrates complex knowledge of the anatomy and physiology of the airway, respiratory, circulatory, muscular skeletal, nervous, integumentary, endocrine, and digestive systems as well as a fundamental appreciation of the immune system to the practice of EMS.	Integrates a complex depth and comprehensive breadth of knowledge of the anatomy and physiology of all human systems

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3	Medical Terminology	Uses simple medical and anatomical terms.	Uses foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health care professionals.	Same as Previous Level	Uses foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health care professionals consistent with the systems described in A&P.	Integrates comprehensive anatomical and medical terminology and abbreviations into the written and oral communication with colleagues and other health care professionals.
4	Pathophysiology	Uses simple knowledge of shock and respiratory compromise to respond to life threats.	Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.	Applies comprehensive knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.	Applies comprehensive knowledge of the pathophysiology of respiration and perfusion to patient assessment. This includes management as well as a foundational appreciation for the other body systems included for this level.	Integrates comprehensive knowledge of pathophysiology of major human systems.
5	Life Span Development	Uses simple knowledge of age related differences to assess and care for patients.	Applies fundamental knowledge of life span development to patient assessment and management.	Same as Previous Level	Same as Previous Level	Integrates comprehensive knowledge of life span development.
6	Public Health	Have an awareness of local public health resources and the role EMS personnel play in public health emergencies.	Uses simple knowledge of the principles of illness and injury prevention in emergency care.	Uses simple knowledge of the principles of the role of EMS during public health emergencies.	Same as Previous Level	Applies fundamental knowledge of principles of public health and epidemiology including public health emergencies, health promotion, and illness and injury prevention.
7	Pharmacology	Uses simple knowledge of the medications that the EMR may self-administer or administer to a peer in an emergency.	Applies fundamental knowledge of the medications that the EMT may assist/administer to a patient during an emergency.	Applies to patient assessment and management fundamental knowledge of the medications carried by AEMTs that may be administered to a patient during an emergency.	Applies comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient.	Integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient.

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
7A Principles of Pharmacology	No knowledge related to this competency is applicable at this level.	Simple depth, simple breadth <ul style="list-style-type: none"> • Medication safety • Kinds of medications used during an emergency 	EMT Material PLUS: Fundamental depth, foundation breadth <ul style="list-style-type: none"> • Medication safety • Medication legislation • Naming • Classifications • Storage and security • Autonomic pharmacology • Metabolism and excretion • Mechanism of action • Medication response relationships • Medication interactions • Toxicity 	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 	Intermediate 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
7B Medication Administration	Simple depth, simple breadth Within the scope of practice of the EMR, how to <ul style="list-style-type: none"> • Self-administer medication • Peer-administer medication 	EMR Material PLUS: Fundamental depth, foundational breadth Within the scope of practice of the EMT how to <ul style="list-style-type: none"> • Assist/administer medications to a patient 	EMT Material PLUS: Fundamental depth, foundational breadth <ul style="list-style-type: none"> • Routes of administration • Within the scope of practice of the AEMT, administer medications to a patient 	AEMT Material PLUS: Complex depth, comprehensive breadth <ul style="list-style-type: none"> • Routes of administration • Within the scope of practice of the paramedic-intermediate, administer medications to a patient 	Intermediate Material PLUS: Complex depth, comprehensive breadth <ul style="list-style-type: none"> • Routes of administration • Within the scope of practice of the paramedic, administer medications to a patient
7C Emergency Medications	Simple depth, simple breadth Within the scope of practice of the EMR <ul style="list-style-type: none"> • Names • Effects • Indications • Routes of administration • Dosages for the medications administered 	EMR Material PLUS: Fundamental depth, simple breadth within the scope of practice of the EMT <ul style="list-style-type: none"> • Names • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications administered 	EMT Material PLUS: Fundamental depth, foundational breadth within the scope of practice of the AEMT <ul style="list-style-type: none"> • Names • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications administered 	Same as Previous Level	Intermediate Material PLUS: Complex depth, comprehensive breadth within the scope of practice of the paramedic <ul style="list-style-type: none"> • Names • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications administered

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8 Airway Management, Respiration and Artificial Ventilation	Applies knowledge (fundamental depth, foundational breadth) of general anatomy and physiology to assure a patent airway, adequate mechanical ventilation, and respiration while awaiting additional EMS response for patients of all ages.	Applies knowledge (fundamental depth, foundational breadth) of general anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation, and respiration for patients of all ages.	Applies knowledge (fundamental depth, foundational breadth) of additional upper airway anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation, and respiration for patients of all ages.	Integrates Applies 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.	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.
8A Airway Management	Fundamental depth, simple breadth Within the scope of practice of the EMR • Airway anatomy • Airway assessment • Techniques of assuring a patent airway	EMR Material PLUS: Fundamental depth, foundational breadth Within the scope of practice of the EMT • Airway anatomy • Airway assessment • Techniques of assuring a patent airway	EMT Material PLUS: Fundamental depth, foundational breadth Within the scope of practice of the AEMT • Airway anatomy • Airway assessment • Techniques of assuring a patent airway	AEMT Material PLUS: Complex depth, comprehensive breadth Within the scope of practice of the paramedic-intermediate • Airway anatomy • Airway assessment • Techniques of assuring a patent airway	AEMT Material PLUS: Complex depth, comprehensive breadth Within the scope of practice of the paramedic • Airway anatomy • Airway assessment • Techniques of assuring a patent airway
8B Respiration	Fundamental depth, simple breadth • Anatomy of the respiratory system • Physiology and pathophysiology of respiration o Pulmonary ventilation o Oxygenation o Respiration □ External □ Internal □ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy	EMR Material PLUS: Fundamental depth, foundational breadth • Anatomy of the respiratory system • Physiology and pathophysiology of respiration o Pulmonary ventilation o Oxygenation o Respiration □ External □ Internal □ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy	EMT Material PLUS: Complex depth, foundational breadth • Anatomy of the respiratory system Fundamental depth, comprehensive breadth • Physiology and pathophysiology of respiration o Pulmonary ventilation o Oxygenation o Respiration □ External □ Internal □ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy	AEMT Material PLUS: (SAP) Complex depth, comprehensive breadth • Anatomy of the respiratory system • Physiology, and pathophysiology of respiration o Pulmonary ventilation o Oxygenation o Respiration □ External □ Internal □ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy	AEMT Material PLUS: Complex depth, comprehensive breadth • Anatomy of the respiratory system • Physiology, and pathophysiology of respiration o Pulmonary ventilation o Oxygenation o Respiration □ External □ Internal □ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
8C Artificial Ventilation	Fundamental depth, simple breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output	EMR Material PLUS: Fundamental depth, foundational breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output	EMT Material PLUS: Complex depth, foundational breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output	AEMT Material PLUS: Complex depth, comprehensive breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output	AEMT Material PLUS: Complex depth, comprehensive breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output
9 Assessment	Use scene information and simple patient assessment findings to identify and manage immediate life threats and injuries within the scope of practice of the EMR.	Applies scene information and patient assessment findings (scene size up, primary and secondary assessment, patient history, and reassessment) to guide emergency management.	Same as Previous Level	Integrate Applies 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.	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.
9A Scene Size-Up	Complex depth, comprehensive breadth • Scene safety Fundamental depth, foundational breadth • Scene management o Impact of the environment on patient care o Addressing hazards o Violence o Need for additional or specialized resources o Standard precautions	EMR Material PLUS: Fundamental depth, foundational breadth • Scene management o Multiple patient situations	Same as Previous Level	AEMT Material PLUS: Complex depth, comprehensive breadth • Scene management o Impact of the environment on patient care o Addressing hazards o Violence o Multiple patient situations	AEMT Material PLUS: Complex depth, comprehensive breadth • Scene management o Impact of the environment on patient care o Addressing hazards o Violence o Multiple patient situations
9B Primary Assessment	Simple depth, simple breadth • Primary assessment for all patient situations o Level of consciousness o ABCs o Identifying life threats o Assessment of vital functions • Begin interventions needed to preserve life	EMR Material PLUS: Fundamental depth, simple breadth • Primary assessment for all patient situations o Initial general impression o Level of consciousness o ABCs o Identifying life threats o Assessment of vital functions • Integration of treatment/ procedures needed to preserve life	EMT Material PLUS: Fundamental depth, foundational breadth • Primary assessment for all patient situations o Initial general impression o Level of consciousness o ABCs o Identifying life threats o Assessment of vital functions • Integration of treatment/ procedures needed to preserve life	Same as Previous Level	AEMT Material PLUS: Complex depth, comprehensive breadth • Primary assessment for all patient situations o Initial general impression o Level of consciousness o ABCs o Identifying life threats o Assessment of vital functions • Integration of treatment/ procedures needed to preserve life

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
9C History Taking	Simple depth, simple breadth • Determining the chief complaint • Mechanism of injury/nature of illness • Associated signs and symptoms	EMR Material PLUS: Fundamental depth, foundational breadth • Investigation of the chief complaint • Mechanism of injury/nature of illness • Past medical history • Associated signs and symptoms • Pertinent negatives	Same as Previous Level	AEMT Material PLUS:(SAP) Complex depth, comprehensive breadth • Components of the patient history • Interviewing techniques • How to integrate therapeutic communication techniques and adapt the line of inquiry based on findings and presentation	AEMT Material PLUS: Complex depth, comprehensive breadth • Components of the patient history • Interviewing techniques • How to integrate therapeutic communication techniques and adapt the line of inquiry based on findings and presentation
9D Secondary Assessment	Simple depth, simple breadth • Performing a rapid full body scan • Focused assessment of pain • Assessment of vital signs	EMR Material PLUS: Fundamental depth, foundational breadth Techniques of physical examination • Respiratory system o Presence of breath sounds • Cardiovascular system • Neurological system • Musculoskeletal system • All anatomical regions	EMT Material PLUS: Complex depth, foundational breadth Assessment of • Lung sounds	AEMT Material PLUS: (SAP) Complex depth, comprehensive breadth Techniques of physical examination for all major • Body systems • Anatomical regions	AEMT Material PLUS: Complex depth, comprehensive breadth Techniques of physical examination for all major • Body systems • Anatomical regions
9E Monitoring Devices	No knowledge related to this competency is applicable at this level.	Simple depth, simple breadth Within the scope of practice of the EMT • Obtaining and using information from patient monitoring devices including (but not limited to) o Pulse oximetry o Non-invasive blood pressure	EMT Material PLUS: Within the scope of practice of the AEMT Simple depth, simple breadth • Obtaining and using information from patient monitoring devices including (but not limited to) o Blood glucose determination	AEMT Material PLUS: Fundamental depth, foundational breadth Within the scope of practice of the Intermediate • Obtaining and using information from patient monitoring devices including (but not limited to): o Continuous ECG monitoring o 12 lead ECG interpretation o Carbon dioxide monitoring o Basic blood chemistry	AEMT Material PLUS: Fundamental depth, foundational breadth Within the scope of practice of the paramedic • Obtaining and using information from patient monitoring devices including (but not limited to): o Continuous ECG monitoring o 12 lead ECG interpretation o Carbon dioxide monitoring o Basic blood chemistry
9F Reassessment	Simple depth, simple breadth • How and when to reassess patients	EMR Material PLUS: Fundamental depth, foundational breadth • how and when to perform a reassessment for all patient situations	Same as Previous Levels	AEMT Material PLUS: Complex depth, comprehensive breadth • How and when to perform a reassessment for all patient situations	AEMT Material PLUS: Complex depth, comprehensive breadth • How and when to perform a reassessment for all patient situations

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
10 Medicine	Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.	Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.	Applies fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely ill patient.	integrates Applies 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.	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.
10A Medical Overview	Simple depth, simple breadth Assessment and management of a • Medical complaint	EMR Material PLUS: Simple depth, foundational breadth Pathophysiology, assessment, and management of a medical complaints to include • Transport mode • Destination decisions	EMT Material PLUS: Fundamental depth, foundational breadth Pathophysiology, assessment, and management of a medical complaints to include • Transport mode • Destination decisions	Same as Previous Level	AEMT Material PLUS: Complex depth, comprehensive breadth Pathophysiology, assessment, and management of medical complaints to include • Transport mode • Destination decisions
10B Neurology	Simple depth, simple breadth Anatomy, presentations, and management of • Decreased level of responsiveness • Seizure • Stroke	EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Stroke/ transient ischemic attack • Seizure • Status epilepticus • Headache	EMT Material PLUS: Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Seizure	AEMT Material PLUS: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex Fundamental depth, comprehensive breadth • Stroke/intracranial hemorrhage/transient ischemic attack • Seizure • Status epilepticus • Headache Fundamental depth, foundational breadth • Dementia • Neoplasms • Demyelinating disorders • Parkinson's disease • Cranial nerve disorders • Movement disorders • Neurologic inflammation/ infection • Spinal cord compression • Hydrocephalus • Wernicke's encephalopathy	AEMT Material PLUS: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex depth, comprehensive breadth • Stroke/intracranial hemorrhage/transient ischemic attack • Seizure • Status epilepticus • Headache Fundamental depth, foundational breadth • Dementia • Neoplasms • Demyelinating disorders • Parkinson's disease • Cranial nerve disorders • Movement disorders • Neurologic inflammation/ infection • Spinal cord compression • Hydrocephalus • Wernicke's encephalopathy

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
10C Abdominal and Gastrointestinal Disorders	Simple depth, simple breadth Anatomy, presentations and management of shock associated with abdominal emergencies • Gastrointestinal bleeding	EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of • Acute and chronic gastrointestinal hemorrhage Simple depth, simple breadth • Peritonitis • Ulcerative diseases	Same as Previous Level	Same as Previous Level	AEMT Material PLUS: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex depth, comprehensive breadth • Acute and chronic gastrointestinal hemorrhage • Liver disorders • Peritonitis • Ulcerative diseases Fundamental depth, foundational breadth • Irritable bowel syndrome • Inflammatory disorders • Pancreatitis • Bowel obstruction • Hernias • Infectious disorders • Gall bladder and biliary tract disorders Simple depth, simple breadth • Rectal abscess • Rectal foreign body obstruction • Mesenteric ischemia
10D Immunology	Simple depth, simple breadth Recognition and management of shock and difficulty breathing related to • Anaphylactic reactions	EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of hypersensitivity disorders and/or emergencies • Anaphylactic reactions	EMT Material PLUS: Complex depth, comprehensive breadth Anatomy, physiology, pathophysiology, assessment, and management of hypersensitivity disorders and/or emergencies • Allergic and anaphylactic reactions	Same as Previous Level	AEMT Material PLUS: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major immune system disorders and/or emergencies Complex depth, comprehensive breadth • Hypersensitivity • Allergic and anaphylactic reactions • Anaphylactoid reactions Fundamental depth, foundational breadth • Collagen vascular disease • Transplant related problems

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
10E Infectious Diseases	<p>Simple depth, simple breadth Awareness of</p> <ul style="list-style-type: none"> • A patient who may have an infectious disease • How to decontaminate equipment after treating a patient 	<p>EMR Material PLUS: Simple depth, simple breadth Assessment and management of</p> <ul style="list-style-type: none"> • A patient who may have an infectious disease • How to decontaminate the ambulance and equipment after treating a patient 	<p>AEMT Material PLUS: Fundamental depth, foundational breadth Assessment and management of</p> <ul style="list-style-type: none"> • A patient who may be infected with a bloodborne pathogen <ul style="list-style-type: none"> o HIV o Hepatitis B • Antibiotic resistant infections • Current infectious diseases prevalent in the community 	<p>Same as Previous Level</p>	<p>AEMT Material PLUS: 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 <p>Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Tuberculosis • Tetanus • Viral diseases • Sexually transmitted disease • Gastroenteritis • Fungal infections • Rabies • Scabies and lice • Lyme disease • Rocky Mountain Spotted Fever • Antibiotic resistant infections
10F Endocrine Disorders	<p>Simple depth, simple breadth Awareness that</p> <ul style="list-style-type: none"> • Diabetic emergencies cause altered mental status 	<p>EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of</p> <ul style="list-style-type: none"> • Acute diabetic emergencies 	<p>EMT Material PLUS: Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of</p> <ul style="list-style-type: none"> • Acute diabetic emergencies 	<p>AEMT Material PLUS: 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 	<p>AEMT Material PLUS: 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

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
10G Psychiatric	<p>Simple depth, simple breadth Recognition of</p> <ul style="list-style-type: none"> Behaviors that pose a risk to the EMR, patient or others 	<p>EMR Material PLUS: Simple depth, simple breadth</p> <ul style="list-style-type: none"> Basic principles of the mental health system <p>Fundamental depth, foundational breadth Assessment and management of</p> <ul style="list-style-type: none"> Acute psychosis Suicidal/risk Agitated delirium 	<p>Same as Previous Level</p>	<p>EMR Material PLUS: Simple Fundamental depth, simple Foundational breadth</p> <ul style="list-style-type: none"> Basic principles of the mental health system <p>Fundamental depth, foundational breadth Assessment and management of</p> <ul style="list-style-type: none"> Acute psychosis Suicidal/risk Agitated delirium <p>Commonly prescribed psychiatric medications</p>	<p>AEMT Material PLUS: 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

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
10H Cardiovascular	<p>Simple depth, simple breadth Anatomy, signs, symptoms and management</p> <ul style="list-style-type: none"> • Chest pain • Cardiac arrest 	<p>EMR Material PLUS: Anatomy, physiology, pathophysiology, assessment, and management of</p> <p>Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Acute coronary syndrome <ul style="list-style-type: none"> o Angina pectoris o Myocardial infarction • Aortic aneurysm/dissection • Thromboembolism <p>Simple depth, simple breadth</p> <ul style="list-style-type: none"> • Heart failure • Hypertensive emergencies 	<p>EMT Material PLUS: Anatomy, physiology, pathophysiology, assessment, and management of</p> <p>Complex depth, foundational breadth</p> <ul style="list-style-type: none"> • Acute coronary syndrome <ul style="list-style-type: none"> o Angina pectoris o Myocardial infarction <p>Fundamental depth, simple breadth</p> <ul style="list-style-type: none"> • Heart failure • Hypertensive emergencies 	<p>AEMT Material PLUS: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of</p> <p>Complex foundational-depth, comprehensive breadth</p> <ul style="list-style-type: none"> • Acute coronary syndrome <ul style="list-style-type: none"> o Angina pectoris o Myocardial infarction • Heart failure • Non-traumatic cardiac tamponade • Hypertensive emergencies • Cardiogenic shock • Vascular disorders <ul style="list-style-type: none"> o Abdominal aortic aneurysm o Arterial occlusion o Venous thrombosis • Aortic aneurysm/dissection, Thromboembolism • Cardiac rhythm disturbances <p>Fundamental Simple depth, foundational Simple breadth</p> <ul style="list-style-type: none"> • Infectious diseases of the heart <ul style="list-style-type: none"> o Endocarditis o Pericarditis • Congenital abnormalities 	<p>AEMT Material PLUS: 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"> o Angina pectoris o Myocardial infarction • Heart failure • Non-traumatic cardiac tamponade • Hypertensive emergencies • Cardiogenic shock • Vascular disorders <ul style="list-style-type: none"> o Abdominal aortic aneurysm o Arterial occlusion o Venous thrombosis • 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"> o Endocarditis o Pericarditis • Congenital abnormalities

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
10I Toxicology	<p>Simple depth, simple breadth</p> <ul style="list-style-type: none"> • Recognition and management of <ul style="list-style-type: none"> o Carbon monoxide poisoning o Nerve agent poisoning • How and when to contact a poison control center 	<p>EMR Material PLUS: Fundamental depth, foundational breadth</p> <p>Anatomy, physiology, pathophysiology, assessment, and management of</p> <ul style="list-style-type: none"> • Inhaled poisons • Ingested poisons • Injected poisons • Absorbed poisons • Alcohol intoxication and withdrawal 	<p>EMT Material PLUS: Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Opiate toxidrome 	<p>AEMT Material PLUS: Complex Fundamental depth, comprehensive breadth</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of the following toxidromes and poisonings:</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>AEMT Material PLUS: Complex depth, comprehensive breadth</p> <p>Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of the following toxidromes and poisonings:</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
10J Respiratory	<p>Simple depth, simple breadth</p> <p>Anatomy, signs, symptoms and management of respiratory emergencies including those that affect the</p> <ul style="list-style-type: none"> • Upper airway • Lower airway 	<p>EMR Material PLUS: Anatomy, physiology, pathophysiology, assessment, and management of</p> <p>Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Epiglottitis • Spontaneous pneumothorax • Pulmonary edema • Asthma • Chronic obstructive pulmonary disease • Environmental/industrial exposure • Toxic gas <p>Simple depth, simple breadth</p> <ul style="list-style-type: none"> • Pertussis • Cystic fibrosis • Pulmonary embolism • Pneumonia • Viral respiratory infections 	<p>EMT Material PLUS: Complex depth, foundational breadth</p> <p>Anatomy, physiology, pathophysiology, assessment, and management of</p> <ul style="list-style-type: none"> • Asthma • Obstructive/restrictive disease • Pneumonia 	<p>AEMT Material PLUS: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, management of</p> <p>Complex Fundamental depth, comprehensive breadth</p> <ul style="list-style-type: none"> • Acute upper airway infections • Spontaneous pneumothorax • Obstructive/restrictive lung diseases • Pulmonary infections <p>Fundamental Simple depth, foundational breadth</p> <ul style="list-style-type: none"> • Neoplasm • Pertussis • Cystic fibrosis 	<p>AEMT Material PLUS: 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

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
10K Hematology	No knowledge related to this competency is applicable at this level.	Simple depth, simple breadth Anatomy, physiology, pathophysiology, assessment, and management of • Sickle cell crisis • Clotting disorders	EMT Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Sickle cell crisis	AEMT Material PLUS: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major hematological diseases and/or emergencies Simple depth, foundational breadth • Sickle cell disease Fundamental depth, foundational breadth • Blood transfusion complications • Hemostatic disorders • Lymphomas • Red blood cell disorders • White blood cell disorders • Coagulopathies	AEMT Material PLUS: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major hematological diseases and/or emergencies Complex depth, foundational breadth • Sickle cell disease Fundamental depth, foundational breadth • Blood transfusion complications • Hemostatic disorders • Lymphomas • Red blood cell disorders • White blood cell disorders • Coagulopathies
10L Genitourinary/Renal	Simple depth, simple breadth • Blood pressure assessment in hemodialysis patients	EMR Material PLUS: Simple depth, simple breadth Anatomy, physiology, pathophysiology, assessment, and management of • Complications related to o Renal dialysis o Urinary catheter management (not insertion) • Kidney stones	EMT Material PLUS: Fundamental depth, simple breadth Anatomy, physiology, pathophysiology, assessment, and management of • Complications related to renal dialysis • Kidney stones	Same as Previous Level	AEMT Material Plus: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex depth, comprehensive breadth • Complications of o Acute renal failure o Chronic renal failure o Dialysis • Renal calculi Fundamental depth, foundational breadth • Acid base disturbances • Fluid and electrolyte • Infection • Male genital tract conditions

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
10M Gynecology	Simple depth, simple breadth Recognition and management of shock associated with • Vaginal bleeding	EMR Material Plus: Anatomy, physiology, assessment findings, and management of Fundamental depth, foundational breadth • Vaginal bleeding • Sexual assault (to include appropriate emotional support) Simple depth, simple breadth • Infections	Same as Previous Level	AEMT Material Plus: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major gynecological diseases and/or emergencies Complex Fundamental depth, comprehensive Foundational breadth • Vaginal bleeding • Sexual assault Fundamental depth, foundational breadth • Infections • Pelvic Inflammatory Disease • Ovarian cysts • Dysfunctional uterine bleeding • Vaginal foreign body	AEMT Material Plus: Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major gynecological diseases and/or emergencies Complex depth, comprehensive breadth • Vaginal bleeding • Sexual assault Fundamental depth, foundational breadth • Infections • Pelvic Inflammatory Disease • Ovarian cysts • Dysfunctional uterine bleeding • Vaginal foreign body
10N Non-Traumatic Musculoskeletal Disorders	No knowledge related to this competency is applicable at this level.	Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Non-traumatic fractures	Same as Previous Level	Same as Previous Level	AEMT Material Plus: Fundamental depth, foundation breadth Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major non-traumatic musculoskeletal disorders • Disorders of the spine • Joint abnormalities • Muscle abnormalities • Overuse syndromes
10O Diseases of the Eyes, Ears, Nose, and Throat	Simple depth, simple breadth Recognition and management of • Nose bleed	Same as Previous Level	Same as Previous Level	AEMT Material Plus: Fundamental Simple depth, foundational breadth Knowledge of anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, management of • Common or major diseases of the eyes, ears, nose, and throat, including nose bleed	AEMT Material Plus: Fundamental depth, foundational breadth Knowledge of anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, management of • Common or major diseases of the eyes, ears, nose, and throat, including nose bleed

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC	
11	Shock and Resuscitation	Uses assessment information to recognize shock, respiratory failure or arrest, and cardiac arrest based on assessment findings and manages the emergency while awaiting additional emergency response.	Applies fundamental knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post resuscitation management.	Applies fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for a patient in shock, respiratory failure or arrest, cardiac failure or arrest, and post resuscitation management.	Applies fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for a patient in shock, respiratory failure or arrest, cardiac failure or arrest, and post resuscitation management.	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.
12	Trauma	Uses simple knowledge to recognize and manage life threats based on assessment findings for an acutely injured patient while awaiting additional emergency medical response.	Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.	Applies fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely injured patient.	Integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression to implement a comprehensive Foundational treatment/disposition plan for an acutely injured patient.	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.
12A	Trauma Overview	No knowledge related to this competency is applicable at this level.	Fundamental depth, foundational breadth Pathophysiology, assessment, and management of the trauma patient • Trauma scoring • Rapid transport and destination issues • Transport mode	Same as Previous Level	Same as Previous Level	AEMT Material Plus: Complex depth, comprehensive breadth Pathophysiology, assessment and management of the trauma patient • Trauma scoring • Transport and destination issues
12B	Bleeding	Simple depth, simple breadth Recognition and management of • Bleeding	EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Bleeding	EMT Material Plus: Complex depth, comprehensive breadth • Fluid resuscitation	Same as Previous Level	AEMT Material Plus: Complex depth, comprehensive breadth Pathophysiology, assessment, and management of • Bleeding

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
12C Chest Trauma	<p>Simple depth, simple breadth Recognition and management of</p> <ul style="list-style-type: none"> • Blunt versus penetrating mechanisms • Open chest wound • Impaled object 	<p>EMR Material Plus: Fundamental depth, simple breadth Pathophysiology, assessment and management</p> <ul style="list-style-type: none"> • Blunt versus penetrating mechanisms • Hemothorax • Pneumothorax <ul style="list-style-type: none"> o Open o Simple o Tension • Cardiac tamponade • Rib fractures • Flail chest • Commotio cordis 	<p>EMT Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment and management of</p> <ul style="list-style-type: none"> • Traumatic aortic disruption • Pulmonary contusion • Blunt cardiac injury • Hemothorax • Pneumothorax <ul style="list-style-type: none"> o Open o Simple o Tension • Cardiac tamponade • Rib fractures • Flail chest • Commotio cordis • Traumatic asphyxia 	Same as Previous Level	<p>AEMT Material Plus: Complex depth, comprehensive breadth Pathophysiology, assessment, and management of</p> <ul style="list-style-type: none"> • Traumatic aortic disruption • Pulmonary contusion • Blunt cardiac injury • Hemothorax • Pneumothorax <ul style="list-style-type: none"> o Open o Simple o Tension • Cardiac tamponade • Rib fractures • Flail chest • Commotio cordis • Tracheobronchial disruption • Diaphragmatic rupture • Traumatic asphyxia
12D Abdominal and Genitourinary Trauma	<p>Simple depth, simple breadth Recognition and management of</p> <ul style="list-style-type: none"> • Blunt versus penetrating mechanisms • Evisceration • Impaled object 	<p>EMR Material Plus: Fundamental depth, simple breadth Pathophysiology, assessment and management of</p> <ul style="list-style-type: none"> • Solid and hollow organ injuries • Blunt versus penetrating mechanisms • Evisceration • Injuries to the external genitalia • Vaginal bleeding due to trauma • Sexual assault 	<p>EMT Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and management of</p> <ul style="list-style-type: none"> • Vascular injury • Solid and hollow organs injuries • Blunt versus penetrating mechanisms • Evisceration • Retroperitoneal injuries • Injuries to the external genitalia • Vaginal bleeding due to trauma • Sexual assault 	Same as Previous Level	<p>AEMT Material Plus: Complex depth, comprehensive breadth 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

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
12E Orthopedic Trauma	<p>Simple depth, simple breadth Recognition and management of</p> <ul style="list-style-type: none"> • Open fractures • Closed fractures • Dislocations • Amputations 	<p>EMR Material Plus: Pathophysiology, assessment, and management of Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Upper and lower extremity orthopedic trauma • Open fractures • Closed fractures • Dislocations • Sprains/strains • Pelvic fractures • Amputations/replantation 	<p>EMT Material Plus: Pathophysiology, assessment, and management of Simple depth, simple breadth Complex depth, foundational breadth</p> <ul style="list-style-type: none"> • Compartment syndrome • Pelvic fractures • Amputations/replantation 	<p>AEMT Material Plus: Pathophysiology, assessment, and management of Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Pediatric fractures • Tendon laceration/ transection/ rupture (Achilles and patellar) • Compartment syndrome Complex depth, foundational breadth • Upper and lower extremity orthopedic trauma • Open fractures • Closed fractures • Dislocations 	<p>AEMT Material Plus: Pathophysiology, assessment, and management of Fundamental depth, foundational breadth</p> <ul style="list-style-type: none"> • Pediatric fractures • Tendon laceration/ transection/ rupture (Achilles and patellar) • Compartment syndrome Complex depth, foundational breadth • Upper and lower extremity orthopedic trauma • Open fractures • Closed fractures • Dislocations
12F Soft Tissue Trauma	<p>Simple depth, simple breadth Recognition and management of</p> <ul style="list-style-type: none"> • Wounds • Burns <ul style="list-style-type: none"> o Electrical o Chemical o Thermal • Chemicals in the eye and on the skin 	<p>EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and management</p> <ul style="list-style-type: none"> • Wounds <ul style="list-style-type: none"> o Avulsions o Bite wounds o Lacerations o Puncture wounds o Incisions • Burns <ul style="list-style-type: none"> o Electrical o Chemical o Thermal o Radiation <p>Simple depth, simple breadth</p> <ul style="list-style-type: none"> • Crush syndrome 	<p>EMT Material Plus: Fundamental depth, simple breadth</p> <ul style="list-style-type: none"> □ Crush syndrome 	<p>AEMT Material Plus: Complex Fundamental depth, comprehensive breadth Pathophysiology, assessment, and management of</p> <ul style="list-style-type: none"> • Wounds <ul style="list-style-type: none"> o Avulsions o Bite wounds o Lacerations o Puncture wounds • Burns <ul style="list-style-type: none"> o Electrical o Chemical o Thermal • High-pressure injection • Crush syndrome 	<p>AEMT Material Plus: Complex depth, comprehensive breadth Pathophysiology, assessment, and management of</p> <ul style="list-style-type: none"> • Wounds <ul style="list-style-type: none"> o Avulsions o Bite wounds o Lacerations o Puncture wounds • Burns <ul style="list-style-type: none"> o Electrical o Chemical o Thermal • High-pressure injection • Crush syndrome

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
12G Head, Facial, Neck, and Spine trauma	Simple depth, simple breadth Recognition and management of • Life threats • Spine trauma	EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Penetrating neck trauma • Laryngeotracheal injuries • Spine trauma Simple depth, simple breadth • Facial fractures • Skull fractures • Foreign bodies in the eyes • Dental trauma	EMT Material Plus: Complex depth, foundational breadth Pathophysiology, assessment, and management of • Facial fractures • Laryngeotracheal injuries	AEMT Material Plus: Pathophysiology, assessment, and management of Fundamental depth, foundational breadth • Unstable facial fractures • Orbital fractures • Perforated tympanic membrane Complex Fundamental depth, Foundational comprehensive breadth • Skull fractures • Penetrating neck trauma • Laryngeotracheal injuries • Spine trauma o Dislocations/subluxations o Fractures o Sprains/strains • Mandibular fractures	AEMT Material Plus: Pathophysiology, assessment, and management of Fundamental depth, foundational breadth • Unstable facial fractures • Orbital fractures • Perforated tympanic membrane Complex depth, comprehensive breadth • Skull fractures • Penetrating neck trauma • Laryngeotracheal injuries • Spine trauma o Dislocations/subluxations o Fractures o Sprains/strains • Mandibular fractures
12H Nervous System Trauma	No knowledge related to this competency is applicable at this level.	Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Traumatic brain injury • Spinal cord injury	EMT Material Plus: Complex depth, foundational breadth Pathophysiology, assessment, and management of • Traumatic brain injury	Same as Previous Level	AEMT Material Plus: Pathophysiology, assessment, and management of Fundamental depth, foundational breadth • Cauda equina syndrome • Nerve root injury • Peripheral nerve injury Complex depth, comprehensive breadth • Traumatic brain injury • Spinal cord injury • Spinal shock
12I Special Considerations in Trauma	Simple depth, simple breadth Recognition and management of trauma in • Pregnant patient • Pediatric patient • Geriatric patient	EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and management of trauma in the • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient	EMT Material Plus: Complex depth, foundational breadth Pathophysiology, assessment, and management of trauma in the • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient	Same as Previous Level	AEMT Material Plus: Complex depth, comprehensive breadth Pathophysiology, assessment, and management of trauma in the • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC	
12J	Environmental Emergencies	Simple depth, simple breadth Recognition and management of • Submersion incidents • Temperature-related illness	EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Near drowning • Temperature-related illness • Bites and envenomations • Dysbarism o High-altitude o Diving injuries • Electrical injury • Radiation exposure	Same as Previous Level	Same as Previous Level	AEMT Material Plus: Complex depth, comprehensive breadth Pathophysiology, assessment, and management of • Near-drowning • Temperature-related illness • Bites and envenomations • Dysbarism o High-altitude o Diving injuries • Electrical injury • High altitude illness
12K	Multi-System Trauma	Simple depth, simple breadth Recognition and management of • Multi-system trauma	EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Multi-system trauma • Blast injuries	EMT Material Plus: Complex depth, foundational breadth Pathophysiology, assessment and management of • Multi-system trauma	AEMT Material Plus: Complex Fundamental depth, comprehensive breadth Pathophysiology, assessment, and management of • Multi-system trauma • Blast injuries	AEMT Material Plus: Complex depth, comprehensive breadth Pathophysiology, assessment, and management of • Multi-system trauma • Blast injuries
13	Special Patient Populations	Recognizes and manages life threats based on simple assessment findings for a patient with special needs while awaiting additional emergency response.	Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.	Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic and selected advanced emergency care and transportation for a patient with special needs.	Integrates Applies 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.	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.

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
13A Obstetrics	Simple depth, simple breadth Recognition and management of • Normal delivery • Vaginal bleeding in the pregnant patient	EMR Material Plus: Fundamental depth, foundational breadth • Anatomy and physiology of normal pregnancy • Pathophysiology of complications of pregnancy • Assessment of the pregnant patient • Management of o Normal delivery o Abnormal delivery □ Nuchal cord □ Prolapsed cord □ Breech delivery o Third trimester bleeding □ Placenta previa □ Abruptio placenta o Spontaneous abortion/miscarriage o Ectopic pregnancy o Preeclampsia/Eclampsia	Same as Previous Level	AEMT Material Plus: Complex Fundamental depth, comprehensive breadth • Anatomy and physiology of pregnancy • Pathophysiology of complications of pregnancy • Assessment of the pregnant patient Psychosocial impact, presentations, prognosis, and management of • Normal delivery • Abnormal delivery o Nuchal cord o Prolapsed cord o Breech • Spontaneous abortion/miscarriage • Ectopic pregnancy • Eclampsia • Antepartum hemorrhage • Pregnancy induced hypertension	AEMT Material Plus: Complex depth, comprehensive breadth • Anatomy and physiology of pregnancy • Pathophysiology of complications of pregnancy • Assessment of the pregnant patient Psychosocial impact, presentations, prognosis, and management of • Normal delivery • Abnormal delivery o Nuchal cord o Prolapsed cord o Breech • Spontaneous abortion/miscarriage • Ectopic pregnancy • Eclampsia • Antepartum hemorrhage • Pregnancy induced hypertension
13B				Third trimester bleeding o Placenta previa o Abruptio placenta • High risk pregnancy • Complications of labor o Fetal distress o Pre-term o Premature rupture of membranes o Rupture of uterus • Complication of delivery • Post partum complications Foundational depth, foundational breadth • Hyperemesis gravidarum • Post partum depression	Third trimester bleeding o Placenta previa o Abruptio placenta • High risk pregnancy • Complications of labor o Fetal distress o Pre-term o Premature rupture of membranes o Rupture of uterus • Complication of delivery • Post partum complications Foundational depth, foundational breadth • Hyperemesis gravidarum • Post partum depression
13C Neonatal care	Simple depth, simple breadth • Newborn care • Neonatal resuscitation	EMR Material Plus: Fundamental depth, foundational breadth Assessment and management • Newborn • Neonatal resuscitation	Same as Previous Level	Same as Previous level	AEMT Material Plus: Complex depth, comprehensive breadth • Anatomy and physiology of neonatal circulation • Assessment of the newborn Presentation and management • Newborn • Neonatal resuscitation

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
13D Pediatrics	Simple depth, simple breadth Age-related assessment findings, and age-related assessment and treatment modifications for pediatric specific major diseases and/or emergencies • Upper airway obstruction • Lower airway reactive disease • Respiratory distress/failure/arrest • Shock • Seizures • Sudden Infant Death Syndrome	EMR Material Plus: Fundamental depth, foundational breadth Age-related assessment findings, age-related, and developmental stage related assessment and treatment modifications for pediatric specific major diseases and/or emergencies • Upper airway obstruction • Lower airway reactive disease • Respiratory distress/failure/arrest • Shock • Seizures • Sudden Infant Death Syndrome • Gastrointestinal disease	Same as Previous Level	AEMT Material Plus: 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: Complex Fundamental depth, comprehensive breadth • 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	AEMT Material Plus: 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: Complex depth, comprehensive breadth • 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
				• Hypoglycemia Fundamental depth, foundational breadth • Pertussis • Cystic fibrosis • Bronchopulmonary dysplasia • Congenital heart diseases • Hydrocephalus and ventricular shunts	Fundamental depth, foundational breadth • Pertussis • Cystic fibrosis • Bronchopulmonary dysplasia • Congenital heart diseases • Hydrocephalus and ventricular shunts

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
13E Geriatrics	Simple depth, simple breadth • impact of age-related changes on assessment and care	EMR Material Plus: Fundamental depth, foundational breadth Changes associated with aging, psychosocial aspects of aging and age-related assessment and treatment modifications for the major or common geriatric diseases and/or emergencies • Cardiovascular diseases • Respiratory diseases • Neurological diseases • Endocrine diseases • Alzheimer's • Dementia	EMT Material Plus: Complex depth, foundational breadth • Fluid resuscitation in the elderly	AEMT Material Plus: 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. Complex Fundamental depth, comprehensive breadth • Cardiovascular diseases • Respiratory diseases • Neurological diseases • Endocrine diseases • Alzheimer's • Dementia • Delirium o Acute confusional state Fundamental depth, foundational breadth • Herpes zoster • Inflammatory arthritis	AEMT Material Plus: 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 Complex depth, comprehensive breadth • Cardiovascular diseases • Respiratory diseases • Neurological diseases • Endocrine diseases • Alzheimer's • Dementia • Delirium o Acute confusional state Fundamental depth, foundational breadth • Herpes zoster • Inflammatory arthritis
13F Patients with Special Challenges	Simple depth, simple breadth • Recognizing and reporting abuse and neglect	EMR Material Plus: Simple depth, simple breadth Healthcare implications of • Abuse • Neglect • Homelessness • Poverty • Bariatrics • Technology dependent • Hospice/ terminally ill • Tracheostomy care/dysfunction • Homecare • Sensory deficit/loss • Developmental disability	EMT Material Plus: Fundamental depth, foundational breadth Healthcare implications of • Abuse • Neglect • Homelessness • Poverty • Bariatrics • Technology dependent • Hospice/ terminally ill • Tracheostomy care/dysfunction • Homecare • Sensory deficit/loss • Developmental disability	Same as Previous level	AEMT Material Plus: Complex depth, comprehensive breadth Healthcare implications of • Abuse • Neglect • Poverty • Bariatrics • Technology dependent • Hospice/ terminally ill • Tracheostomy care/dysfunction
14 EMS Operations	Knowledge of operational roles and responsibilities to ensure safe patient, public, and personnel safety	Same as Previous Level	Same as Previous Level	Same as Previous Level	Same as Previous Level
14A Principles of Safely Operating a Ground Ambulance	Simple depth, simple breadth • Risks and responsibilities of emergency response	EMR Material Plus: Simple depth, foundational breadth • Risks and responsibilities of transport	Same as Previous Level	Same as Previous Level	Same as Previous Level

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
14B	Incident Management Simple depth, simple breadth • Establish and work within the incident management system	EMR Material Plus: Fundamental depth, foundational breadth • Establish and work within the incident management system	Same as Previous Level	Same as Previous Level	AEMT Material Plus: Complex depth, comprehensive breadth • Establish and work within the incident management system
14C	Multiple Casualty Incidents Simple depth, simple breadth • Triage principles • Resource management	EMR Material Plus: Simple depth, foundational breadth • Triage • Performing • Re-Triage • Destination Decisions • Post Traumatic and Cumulative Stress	Same as Previous Level	Same as Previous Level	Same as Previous Level
14D	Air Medical Simple depth, simple breadth • Safe air medical operations • Criteria for utilizing air medical response	Same as Previous Level	Same as Previous Level	AEMT Material Plus: Complex fundamental depth, comprehensive foundational breadth • Medical risks/needs/advantages	AEMT Material Plus: Complex depth, comprehensive breadth • Medical risks/needs/advantages
14E	Vehicle Extrication Simple depth, simple breadth • Safe vehicle extrication • Use of simple hand tools	Same as Previous Level	Same as Previous Level	Same as Previous Level	Same as Previous Level
14F	Hazardous Materials Awareness Simple depth, simple breadth • Risks and responsibilities of operating in a cold zone at a hazardous material or other special incident	Same as Previous Level	Same as Previous Level	Same as Previous Level	Same as Previous Level
14G	Mass Casualty Incidents due to Terrorism and Disaster (this section subject to ongoing collective and cooperative review and input from all stakeholders including the Department of Transportation, Department of Homeland Security and the Department of Health and Human Services) Simple depth, simple breadth • Risks and responsibilities of operating on the scene of a natural or man made disaster	Same as Previous Level	Same as Previous Level	Same as Previous Level	Same as Previous Level
	Clinical Behavior/Judgment				

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
C1 Assessment	Perform a simple assessment to identify life threats, identify injuries requiring immobilization and conditions requiring treatment within the scope of practice of the EMR: including foreign substance in the eyes and nerve agent poisoning.	Perform a basic history and physical examination to identify acute complaints and monitor changes. Identify the actual and potential complaints of emergency patients.	Perform a basic history and physical examination to identify acute complaints and monitor changes. Identify the actual and potential complaints of emergency patients.	Perform a comprehensive history and physical examination to identify factors affecting the health and health needs of a patient. Formulate a field impression based on an analysis of comprehensive assessment findings, anatomy, physiology, pathophysiology, and epidemiology. Relate assessment findings to underlying pathological and physiological changes in the patient's condition. Integrate and synthesize Apply the multiple determinants of health and clinical care. Perform health screening and referrals.	Perform a comprehensive history and physical examination to identify factors affecting the health and health needs of a patient. Formulate a field impression based on an analysis of comprehensive assessment findings, anatomy, physiology, pathophysiology, and epidemiology. Relate assessment findings to underlying pathological and physiological changes in the patient's condition. Integrate and synthesize the multiple determinants of health and clinical care. Perform health screening and referrals.
C2 Therapeutic communication and cultural competency	Communicates to obtain and clearly transmit information with an awareness of cultural differences.	Communicate in a culturally sensitive manner.	Communicate in a culturally sensitive manner.	Same as Previous Level	Effectively communicate in a manner that is culturally sensitive and intended to improve the patient outcome.

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
C3	<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"> • Basic Airway Maneuvers • Head-tilt, chin-lift • Jaw thrust • Modified chin lift • FBAO relief - manual • Oropharyngeal airway • Sellick's maneuver • Positive pressure ventilation devices such as BVM • Suction of the upper airway • Supplemental oxygen therapy • Nasal cannula • Non-rebreather mask <p>Assessment</p> <ul style="list-style-type: none"> • Manual B/P <p>Pharmacologic interventions</p> <ul style="list-style-type: none"> • Unit-dose autoinjectors (lifesaving medications intended for self or peer rescue in hazardous materials situation, nerve agent antidote kit) 	<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"> • Nasopharyngeal airway • Positive pressure ventilation • Manually-triggered ventilators • Automatic transport ventilators • Supplemental oxygen therapy • Humidifiers • Partial-rebreather mask • Venturi mask <p>Assessment</p> <ul style="list-style-type: none"> • Pulse oximetry • Automatic B/P <p>Pharmacologic interventions</p> <ul style="list-style-type: none"> • Assist patients in taking their own prescribed medications • Administration of OTC medications with medical oversight • Oral glucose for hypoglycemia • Aspirin for chest pain 	<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"> • Airways not intended for insertion into the trachea • Esophageal-tracheal • Multi-lumen airway • Tracheal-bronchial suctioning of an already intubated patient <p>Assessment</p> <ul style="list-style-type: none"> • Blood glucose monitor <p>Pharmacologic interventions</p> <ul style="list-style-type: none"> • Establish and maintain peripheral intravenous access • Establish and maintain intraosseous access in pediatric patient • Administer (nonmedicated) intravenous fluid therapy • Sublingual nitroglycerin (chest pain) • Subcutaneous or intramuscular epinephrine (anaphylaxis) • Glucagon (hypoglycemia) 	<p>Safely and effectively perform all psychomotor skills within the National EMS Scope of Practice Model AND Virginia Scope of Practice (VaSoP) 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> <ul style="list-style-type: none"> • ECG interpretation • 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 	<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> <ul style="list-style-type: none"> • ECG interpretation • 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
C4	<p>Medical/Cardiac care</p> <ul style="list-style-type: none"> • Manual CPR • AED • Assisted normal delivery <p>Trauma care</p> <ul style="list-style-type: none"> • Manual stabilization • C-spine injuries • Extremity fractures • Bleeding control • Emergency moves • Eye irrigation 	<p>Medical/Cardiac care</p> <ul style="list-style-type: none"> • Mechanical CPR • Assisted complicated delivery <p>Trauma care</p> <ul style="list-style-type: none"> • Spinal immobilization • Cervical collars • Seated • Longboard • Rapid extrication • Splinting • Extremity • Traction • PASG • Mechanical patient restraint • Tourniquet 	<ul style="list-style-type: none"> • Intravenous 50% dextrose (hypoglycemia) • Inhaled beta agonists (wheezing) • Intravenous narcotic antagonist (narcotic overdose) • Nitrous oxide (pain) 	<ul style="list-style-type: none"> • Maintain infusion of blood or blood products • Blood sampling • Thrombolytic initiation • 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 	<ul style="list-style-type: none"> • Maintain infusion of blood or blood products • Blood sampling • Thrombolytic initiation • 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

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC	
C5	Professionalism	Demonstrate 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	Demonstrate 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.	Demonstrate 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.	Same as Previous Level	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.
C6	Decision Making	Initiates simple interventions based on assessment findings	Initiates basic interventions based on assessment findings intended to mitigate the emergency and provide limited symptom relief while providing access to definitive care	Initiates basic and selected advanced interventions based on assessment findings intended to mitigate the emergency and provide limited symptom relief while providing access to definitive care	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.	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.
C7	Record Keeping	Record simple assessment findings and interventions	Report and document assessment data and interventions.	Report and document assessment findings and interventions.	Report and document assessment findings and interventions. Collect and report data to be used for epidemiological and research purposes.	Report and document assessment findings and interventions. Collect and report data to be used for epidemiological and research purposes.

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
C8 Patient Complaints	Perform a patient assessment and provide prehospital emergency care for patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, apnea, back pain, behavioral emergency, bleeding, cardiac arrest, chest pain, cyanosis, dyspnea, eye pain, GI bleeding, hypotension, multiple trauma, pain, paralysis, poisoning, shock, and stridor/drooling.	Perform a patient assessment and provide prehospital emergency care and transportation for patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, anxiety, apnea, ataxia, back pain, behavioral emergency, bleeding, cardiac arrest, cardiac rhythm disturbances, chest pain, constipation, cyanosis, dehydration, diarrhea, dizziness/vertigo, dysphasia, dyspnea, edema, eye pain, fatigue, fever, GI bleeding, headache, hematuria, hemoptysis, hypertension, hypotension, joint pain/swelling, multiple trauma, nausea/vomiting, pain, paralysis, pediatric crying/fussiness, poisoning, rash, rectal pain, shock, sore throat, stridor/drooling, syncope, urinary retention, visual disturbances, weakness, and wheezing.	Perform a patient assessment and provide prehospital emergency care and transportation for patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, anxiety, apnea, ataxia, back pain, behavioral emergency, bleeding, cardiac arrest, cardiac rhythm disturbances, chest pain, constipation, cyanosis, dehydration, diarrhea, dizziness/vertigo, dysphasia, dyspnea, edema, eye pain, fatigue, fever, GI bleeding, headache, hematuria, hemoptysis, hypertension, hypotension, joint pain/swelling, multiple trauma, nausea/vomiting, pain, paralysis, pediatric crying/fussiness, poisoning, rash, rectal pain, shock, sore throat, stridor/drooling, syncope, urinary retention, visual disturbances, weakness, and wheezing.	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, poisoning, pruritus, rash, rectal pain, red/pink eye, shock, sore throat, stridor/drooling, syncope, tinnitus, tremor, urinary retention, visual disturbances, weakness, and wheezing.	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, poisoning, pruritus, rash, rectal pain, red/pink eye, shock, sore throat, stridor/drooling, syncope, tinnitus, tremor, urinary retention, visual disturbances, weakness, and wheezing.
C9 Scene Leadership	Manage the scene until care is transferred to an EMS team member licensed at a higher level arrives.	Entry-level EMTs serve as an EMS team member on an emergency call with more experienced personnel in the lead role. EMTs may serve as a team leader following additional training and/or experience.	Serve as an EMS team leader of an emergency call.	Function as the team leader of a routine, single patient advanced life support emergency call.	Function as the team leader of a routine, single patient advanced life support emergency call.
C10 Scene Safety	Ensure the safety of the rescuer and others during an emergency.	Ensure the safety of the rescuer and others during an emergency.	Ensure the safety of the rescuer and others during an emergency.	Ensure the safety of the rescuer and others during an emergency.	Ensure the safety of the rescuer and others during an emergency.
Educational Infrastructure					

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC	
E1	Educational Facilities	• Facility sponsored or approved by sponsoring agency • ADA compliant facility • Sufficient space for class size • Controlled environment	Same as Previous Level	Same as Previous Level	Same as Previous Level	• Reference Committee on Accreditation for EMS Professions (CoAEMSP) Standards and Guidelines (www.coaemsp.org)
E2	Student Space	• Provide space sufficient for students to attend classroom sessions, take notes and participate in classroom activities • Provide space for students to participate in kinematic learning and practice activities	Same as Previous Level	Same as Previous Level	Same as Previous Level	
E3	Instructional Resources	• Provide basic instructional support material • Provide audio, visual, and kinematic aids to support and supplement didactic instruction	Same as Previous Level	Same as Previous Level	Same as Previous Level	
E4	Instructor Preparation Resources	• Provide space for instructor preparation • Provide support equipment for instructor preparation	Same as Previous Level	Same as Previous Level	Same as Previous Level	
E5	Storage Space	• Provide adequate and secure storage space for instructional materials	Same as Previous Level	Same as Previous Level	Same as Previous Level	
E6	Sponsorship	• Sponsoring organizations shall be one of the following: • Accredited educational institution, or • Public safety organization, or • Accredited hospital, clinic, or medical center, or • Other State approved institution or organization	Same as Previous Level	Same as Previous Level	Same as Previous Level	
E7	Programmatic Approval	• Sponsoring organization shall have programmatic approval by authority having jurisdiction for program approval (State)	Same as Previous Level	Same as Previous Level	Same as Previous Level	

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
E8	Faculty	Same as Previous Level	Same as Previous Level	Same as Previous Level	
E9	Medical Director Oversight	Same as Previous Level	Same as Previous Level	Same as Previous Level	
E10	Hospital/Clinical Experience	<ul style="list-style-type: none"> • None required at this level 	<ul style="list-style-type: none"> • Students should observe emergency department operations for a period of time sufficient to gain an appreciation for the continuum of care. Students must perform <u>ten</u> patient assessments. These can be performed in an emergency department, ambulance, clinic, nursing home, doctor's office, etc. or on standardized patients if clinical settings are not available. 	<ul style="list-style-type: none"> <input type="checkbox"/> The student must demonstrate the ability to safely administer medications (the student should safely, and while performing all steps of each procedure, properly administer medications at least 15 times to live patient). <input type="checkbox"/> The student must demonstrate the ability to safely gain vascular access (the student should safely, and while performing all steps of each procedure, successfully access the venous circulation at least 25 times on live patients of various age groups). <input type="checkbox"/> The student <u>should</u> demonstrate the ability to effectively ventilate unintubated patients of all age groups (the student should effectively, and while performing all steps of each procedure, ventilate at least 20 live patients of various age groups). <p>See State Requirements</p>	See State Requirements

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC
E11			<p>The student must demonstrate the ability to perform an adequate assessment and formulate and implement a treatment plan for patients with chest pain.</p> <ul style="list-style-type: none"> • The student must demonstrate the ability to perform an adequate assessment and formulate and implement a treatment plan for patients with respiratory distress. • The student must demonstrate the ability to perform an adequate assessment and formulate and implement a treatment plan for patients with altered mental status. • The student must demonstrate the ability to perform an adequate assessment on pediatric, adult and geriatric patients. 		
E12	Field Experience	<ul style="list-style-type: none"> • None required at this level 	<ul style="list-style-type: none"> • The student must participate in and document patient contacts in a field experience approved by the medical director and program director. 	<ul style="list-style-type: none"> • The student must participate in and document team leadership in a field experience approved by the medical director and program director. 	<i>See State Requirements</i>
E13	Course Length	<ul style="list-style-type: none"> • Course length is based on competency, not hours • Course material can be delivered in multiple formats including but not limited to: <ul style="list-style-type: none"> • Independent student preparation • Synchronous/Asynchronous distributive education • Face-to-face instruction • Pre- or co-requisites • Course length is estimated to take approximately 48-60 didactic and laboratory clock hours 	<ul style="list-style-type: none"> • Course length is based on competency, not hours • Course material can be delivered in multiple formats including but not limited to: <ul style="list-style-type: none"> • Independent student preparation • Synchronous/Asynchronous distributive education • Face-to-face instruction • Pre- or co-requisites • Course length is estimated to take approximately 150-190 clock hours including the four integrated phases of education (didactic, laboratory, clinical and field) to cover material 	<ul style="list-style-type: none"> • Course length is based on competency, not hours • Course material can be delivered in multiple formats including but not limited to: <ul style="list-style-type: none"> • Independent student preparation • Synchronous/Asynchronous distributive education • Face-to-face instruction • Pre- or co-requisites • Course length is estimated to take approximately 150-250 clock hours beyond EMT requirements including the four integrated phases of education (didactic, laboratory, clinical and field) to cover material 	<i>See State Requirements</i>

	EMR	EMT	AEMT	INTERMEDIATE	PARAMEDIC	
E14	Course Design	<ul style="list-style-type: none"> • Provide the following components of instruction: • Didactic instruction • Skills laboratories 	<ul style="list-style-type: none"> • Provide the following components of instruction: • Didactic instruction • Skills laboratories • Hospital/Clinical experience • Field experience 	Same as Previous Level	Same as Previous Level	
E15	Student Assessment	<ul style="list-style-type: none"> • Perform knowledge, skill, and professional behavior evaluation based on educational standards and program objectives • Provide several methods of assessing achievement • Provide assessment that measures, as a minimum, entry level competency in all domains 	Same as Previous Level	Same as Previous Level	Same as Previous Level	
E16	Program Evaluation	<ul style="list-style-type: none"> • Provide evaluation of program instructional effectiveness • Provide evaluation of organizational and administrative effectiveness of program 	Same as Previous Level	Same as Previous Level	Same as Previous Level	

**Attachment: C to the
April 7, 2010 PDC Minutes**

**DED Proposal for the
Implementation of the
Education Coordinator**

EMS EDUCATION COORDINATOR PROGRAM

Background:

Currently Virginia utilizes EMT Instructors for the coordination/instruction of First Responder (EMR) and Emergency Medical Technician–Basic (EMT) programs. Enhanced (AEMT), Intermediate and Paramedic Programs are coordinated by ALS Coordinators. Significant disparity exists between the two coordinator levels as they complete their respective EMT Instructor Institutes and/or ALS-Coordinator Seminars. Presently ALS-Coordinators are not required to demonstrate competency in adult teaching techniques or instructional delivery nor are they required to instruct specific hours during their endorsement. EMT Instructor candidates must complete an adult education module and demonstrate competency in delivering the didactic material at an EMT Instructor Institute as well as document 50 hours of instruction of Category 1 topics every two years in order to recertify their EMT Instructor status.

It has been identified that the two separate programs are inconsistent. Because both require the same set of tasks, the office is proposing to streamline the coordinator programs into a single EMS Education Coordinator process to prevent confusion, avoid duplication, ensure quality and provide consistent EMS educational instruction.

The proposed *EMS Regulations* are written as follows:

12VAC5-31-1548. EMS Education Coordinator

Note: Current EMT-Instructors and or ALS Coordinators will be transitioned to EMS Education Coordinator within 4 years of adoption of these regulations.

A. The EMS Education Coordinator may announce and teach courses at or below their provider certification level.

1. An EMS-Education Coordinator who certifies at a higher level may not begin announcing/coordinating courses at that level until they have attained one year of field experience at that level.

B. Performance of any medical procedure is not permitted based upon EMS Education Coordinator certification.

Any ALS Coordinator who desires to become an Education Coordinator after the four (4) year transition period will be required to complete the Education Coordinator program and is not eligible for the transition program.

12VAVC-5-31-1549. EMS Education Coordinator Prerequisites.

Prerequisites for certification as an EMS Education Coordinator are:

- A. Be a minimum of 21 years of age.
- B. Posses a high school diploma or equivalent.
- C. Have three years medical experience with a minimum of two years verified field experience as an EMS provider at the appropriate EMS level or two years of current Virginia licensure as an RN, PA, DO, or MD.
- D. Must not have any EMS compliance enforcement actions within the previous five years.

12VAC5-31-1551. EMS Education Coordinator Certification Process.

A. Eligible EMS Education Coordinator candidates will submit an application to include endorsement from an EMS physician.

B. Upon receipt and verification of the application, the eligible EMS Education Coordinator candidate will be required to complete a written and practical examination.

1. Education Coordinator candidates are required to pass the EMT Instructor pre-test with a minimum score of 85%.
2. Education Coordinator candidates are required to pass the EMT Instructor practical examination.

C. After successfully completing the written and practical examination, the qualified eligible EMS Education Coordinator candidate shall attend training as required by OEMS.

ALS-COORDINATORS (NOT-CERTIFIED as an EMT INSTRUCTOR)

Those candidates who are not presently certified as Virginia EMT Instructors will be required to complete the existing EMT Instructor process that includes:

1. Endorsement by a Virginia EMS physician (PCD or OMD).
2. Successful completion of the EMT Instructor pre-test based on the new EMS Education Standards.
3. Successfully complete the EMT practical exam.
4. Complete the two and half (2 ½) day EMT Instructor Institute which includes:
 - a. 2 days of adult education principles*
 - b. ½ day for the “stand & deliver” component to determine their competency for instructing adult learners and must obtain a “pass” on their presentation.*

ALS-Coordinators who do not wish to seek certification as an EMS Education Coordinator may elect to continue their endorsement as ALS-Coordinators. ALS-Coordinators may coordinate Category 1 ALS programs up to their level of certification. ALS-Coordinators have a two-year reentry period, where they must meet their re-endorsement requirements as outlined below. ALS Coordinators are not eligible to announce or coordinate BLS initial or continuing education programs. ALS-Coordinators must complete the following to maintain their two year endorsement period:

- a. Complete an ALS-Coordinator application
- b. Attend one EMS Education Coordinator Update within their endorsement period.

PRESENTLY CERTIFIED EMT INSTRUCTORS or educators who are both Certified EMT Instructors and Endorsed ALS Coordinators

Educators who are presently certified as Virginia EMT Instructors only or *those that are also Endorsed ALS Coordinators*

will be automatically recertified as an EC shortly after the EMS regulations are promulgated.

CANDIDATES WISHING TO BECOME EDUCATION COORDINATORS

Those candidates who are neither EMT Instructors nor ALS-Coordinators must complete the EC pretest, EC practical and all components of the EC Institute that includes two (2) days of adult education theory, two (2) days of administration and a “stand and deliver” component.

12VAC5-31-1552. EMS Education Coordinator Recertification Process.

A. To be eligible to recertify, the EMS Education Coordinator shall:

1. Maintain their EMS provider certification.
2. Teach a minimum of 50 hours of initial certification or Category 1 CE and documentation of completion submitted in a process established by OEMS.
3. Complete one (1) EMS Education Coordinator update in the three-year certification period.
4. Submit an EMS Education Coordinator application to include endorsement from an EMS Physician.

B. Upon completion of the recertification requirements, the EMS Education Coordinator will receive an “Eligibility Notice” and must take and pass the EMS Education Coordinator recertification examination.

The recertification exam can not be waived by an OMD. The recertification examination evaluates the administrative responsibilities of the EMS Education Coordinator and their knowledge of the Training Program Administration Manual (TPAM).

C. All EMS Education Coordinator recertification requirements must be completed and submitted to OEMS prior to the certification expiration date.

12VAC5-31-1553. EMS Education Coordinator Reentry.

A. If an EMS Education Coordinator does not complete or submit all recertification requirements prior to their expiration date, they will go into a two-year reentry period.

B. During the reentry, the EMS Education Coordinator will not be allowed to coordinate any EMS certification or CE courses.

1. Any current courses in progress at the time of loss of EMS Education Coordinator certification will be suspended and the enrolled students will be notified in writing by OEMS.

C. All outstanding recertification requirements shall be completed during the reentry period.

D. Failure to complete all recertification requirements during the reentry period will require the provider to complete the entire certification process as prescribed in 12VAC5-31-1551.

CURRENT EMT INSTRUCTORS	CURRENT ALS-COORDINATORS	CURRENT EMT-INSTRUCTOR & ALS-COORDINATOR
<p>Automatically will become an EC upon promulgation of the EMS regulations.</p>	<p>Must complete EMT Instructor process:</p> <ul style="list-style-type: none"> a. EMT Pretest b. EMT Practical exam c. 2 day adult education techniques d. 1/2 day “stand & deliver “ component 	<p>No requirements to complete. Automatically will become an EC upon promulgation of the EMS regulations.</p>

* Fire Instructors and candidates who have documented completion of a Masters degree in education may be exempted from the adult education/”stand & deliver” requirement.

**Attachment: D to the
April 7, 2010 PDC Minutes**

**DED Proposal Regarding the
Knowledge Gap of
EMT-B/Enh Instructors
Transitioning to EMS
Education Coordinator**

Proposal to Professional Development Committee of the
State EMS Advisory Board

Proposal to: Upgrade the knowledge base of EMT Instructors who are certified at the EMT-B or EMT-Enhanced level.

Purpose: With the implementation of the Virginia EMS Education Standards, the EMT material includes didactic knowledge and concepts that current EMT-Basics and EMT-Enhanced providers may not have been exposed to. In order to ensure their understanding of proper didactic knowledge and concepts, current EMT-Instructors certified at the EMT-B or Enhanced level must demonstrate their knowledge of current educational curricula prior to teaching an EMT Course.

Plan: Current EMT Instructors certified at the EMT-B or EMT-Enhanced levels will be required to pass a knowledge exam in order to continue teaching EMT Courses after implementation of the Virginia EMS Education Standards (VEMSES).

EMT-Instructors will have a total of 4 attempts to pass the knowledge exam. If they are unsuccessful after the first two attempts, they will be required to complete a secondary eligibility process in order to be eligible for the final two attempts.

DISCUSSION POINT: What should the secondary eligibility process look like? If it is some sort of upgrade course, how do we deliver it? Should you have to get an endorsement from an OMD of your competence with the material? How long should the window be to obtain this secondary eligibility? 90 days minimum?

The testing window will mirror that of state certification testing:
-1 year period from the date of the first test
-90-day retest window

If the EMT-Instructor is unsuccessful in all 4 attempts, they will be required to complete the EMS Education Coordinator Certification process (written pre-test, practical exam and entire EC Institute).

Impact: It is estimated that this requirement will affect no more than 160 current EMT Instructors.

Other: Current EMT-Instructors certified at the Intermediate or Paramedic level have been exposed to the updated didactic knowledge and concepts within their educational courses and are not required to attend this upgrade process.

Structure: The exam and upgrade course will be based on items identified within the NASEMSO Gap Analysis Template and Virginia EMS Education Standards.

Timeline: Implementation of this proposal will depend on the timeline for implementation of the EMS Regulations, Virginia EMS Educational Standards (VEMSES) and testing of this material.

DRAFT

**Attachment: E to the
April 7, 2010 PDC Minutes**

**DED Proposal Regarding
Identifying the Gap between
NSC and VEMSES
(Phoenix Document)**

The Phoenix Document: An Evolution from NSC to The Virginia EMS Education Standards

Introduction:

EMS Instructors and Coordinators should use this document as a tool in conjunction with the specific *Instructor Guidelines (IG)* for the certification level(s) that are being instructed and the *Virginia Scope of Practice – Procedures & Formulary* to ensure that the required material/skills are appropriately covered by the instructor/coordinator.

Emergency Medical Responder (EMR)

See the Instructor Guidelines for the Emergency Medical Responder (129 pages) at: <http://www.nhtsa.gov/staticfiles/DOT/NHTSA/ems/811077b.pdf>

Knowledge and Skill Comparison

The order of content is not meant to imply the order of delivery.

a. Emergency Medical Responder: New Course Considerations

When planning and conducting a new EMR course, the Program Director or Course Coordinator must consider the following:

- Instructional resources
- Instructor qualifications
- Medical director oversight
- Review and verify integration of the clinical behavior/judgment section of the Education Standards, particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment
- Program effectiveness evaluation

b. Emergency Medical Responder: Skills

For a current First Responder (based on 1995 First Responder National Standard Curriculum) transitioning to Emergency Medical Responder (EMR), the following skills are no longer taught:

- Insertion of a nasopharyngeal airway
- ~~Pressure points and elevation for hemorrhage control~~

For a current 1995 First Responder transitioning to 2009 Emergency Medical Responder, the following skills were optional in 1995 First Responder National Standard Curriculum with State approval:

- Use of supplemental oxygen
- Use of nasal cannula

- Use of non-rebreather face mask
- Use of the automated external defibrillator (AED)

For a current 1995 First Responder transitioning to 2009 Emergency Medical Responder, the following skills are new:

- Use of a bag-valve-mask
- Use of an auto-injector (self or peer)
- Obtaining manual blood pressures
- Performing eye irrigation

c. Emergency Medical Responder: Content

Preparatory

- EMS Systems - there is more content about quality improvement here than in the First Responder curriculum; contains section on required affective/behavioral characteristics
- Research – extremely limited information, but new to this level
- EMS System Communication – addition of fundamental information about transferring patient care to incoming EMTs
- Therapeutic Communications – addition of fundamental information about improving communication with the patient
- Medical/Legal/Ethics – Health Insurance Portability and Accountability Act (HIPAA) did not exist when the First Responder curriculum was authored; includes a brief discussion on living wills, surrogate decision makers, and civil and criminal court cases; in the discussion on advanced directives, the reference to International Liaison Committee on Resuscitation (ILCOR) should have been removed.

Anatomy and Physiology

- Brief discussion on the life support chain focusing on oxygenation and perfusion

Medical Terminology

- This content is new to this level

Pathophysiology

- This content is new to this level but only focuses on respiratory dysfunction and shock

Life-Span Development

- Minimal new information at this level

Public Health

- Minimal new information at this level

Pharmacology

- Medication administration – discussion focuses on the use of an auto-injector for self-preservation or for use on one's peers (chemical attack)
- Emergency Medications – chemical antidote auto-injector only

Airway Management, Respiration, and Oxygenation

- Anatomy and Physiology – more detailed than in the previous First Responder curriculum, especially in the area of respiratory physiology. The increases in this

area are related to enhanced skills in scope of practice and new evidence that demonstrates the important interrelationship between ventilation and circulation.

- Respiration - more detailed than in the previous First Responder curriculum
- Artificial Ventilation - more detailed than in the previous First Responder curriculum

Patient Assessment

- Scene Size-Up – no new information here but a re-emphasis on the need for scene safety for everyone present
- Primary Assessment - new terminology that more closely mimics other health care professionals
- History Taking - new terminology that more closely mimics other health care professionals; some content specific to geriatrics added
- Secondary Assessment - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum; blood pressure assessment added to this level
- Reassessment - blood pressure reassessment added to this level

Medicine

- Medical Overview – re-use of the new assessment terminology
- Neurology – stroke discussion is new information at this level
- Abdominal and Gastrointestinal Disorders – minimal new information at this level
- Immunology - minimal new information at this level
- Infectious Diseases – two definitions added and a brief discussion about transmission routes
- Endocrine – a brief discussion about diabetes, more detailed than in the previous curriculum
- Psychiatric – includes new material, a brief discussion on the assessment for suicide risk
- Cardiovascular – deeper discussion on chest pain and heart attack
- Toxicology – new information at this level; discussion on the use of chemical antidote auto-injector
- Respiratory – deeper discussion on respiratory distress
- Genitourinary/Renal – discussion focuses on hemodialysis
- Gynecology – discussion focuses on vaginal bleeding
- Diseases of Eyes, Ears, Nose, and Throat – focuses on nosebleed

Shock and Resuscitation

- New section that combines the CPR information from the old curriculum with more detail and a discussion on the use of the AED; more detailed shock information

Trauma

- Overview – discussion on the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol
- Orthopedic Trauma - The terms fracture and dislocation appear here; they did not appear in the previous First Responder National Standard Curriculum
- Soft Tissue Trauma – brief discussion added about foreign bodies in the eye; assessment information added about the extent of burns.

- Head, Facial, Neck, and Spine Trauma – elaboration on special management situations
 - Special Considerations in Trauma – added discussion on the elderly and the pregnant patient
 - Environmental – AEDs mentioned, brief discussion on submersions added
 - Multi-system Trauma – new material at this level
- Special Patient Populations
- Pregnant Patient – vaginal bleeding discussion added, the term Braxton Hicks did not appear in the previous First Responder National Standard Curriculum
 - Pediatrics – pediatric assessment triangle included; discussion of shock in the pediatric patient in the previous curriculum, it was called circulatory failure
 - Geriatrics – all new section for this level
 - Patients with Special Challenges – elder abuse added

EMS Operations

- Principles of Safely Operating a Ground Ambulance - increased depth of discussion on the risks of emergency response and leaving the scene
- Incident Management – references the incident management system and the federal requirements for compliance
- Air Medical – new material at this level; patient transfer issues, interaction with flight personnel, scene safety, landing zone selection/prep
- Vehicle Extrication – added discussion on situational safety and the use of simple hand tools
- Hazardous Materials Awareness – references Hazardous Waste Operations and Emergency Response (HAZWOPER) standard
- Mass Casualty Incidents Due to Terrorism or Disaster – all new material at this level

Emergency Medical Technician (EMT)

See the Instructor Guidelines for Emergency Medical Technician (214 pages) at: <http://www.nhtsa.gov/staticfiles/DOT/NHTSA/ems/811077c.pdf>

Knowledge and Skill Comparison

The order of content is not meant to imply the order of delivery.

a. Emergency Medical Technician: New Course Considerations

When planning and conducting a new EMT course, the Program Director or Course Coordinator must incorporate all considerations at the EMR levels plus,

- Student rotation through the emergency department
- Ten patient assessments
- Field patient contacts
- Review and verify integration of the clinical behavior/judgment section of the Education Standards particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment

b. Emergency Medical Technician: Skills

For a current EMT-Basic (based on 1994 EMT-B National Standard Curriculum) transitioning to 2009 Emergency Medical Technician (EMT), the following skills are no longer taught:

- Insertion of nasogastric and orogastric tubes (Not in the 1994 EMT-B National Standard Curriculum but in the 2002 Advanced Airway supplement)
- Activated charcoal removed from formulary

For a current 1994 EMT-Basic transitioning to 2009 Emergency Medical Technician EMT, the following skills are new:

- Use of oxygen humidifiers
- Use of partial rebreather masks
- Use of simple face masks
- Use of Venturi masks
- Obtaining a pulse oximetry value
- Use of automated transport ventilators
- Use of mechanical CPR devices (requires additional specialty training and device approval)
- Application of mechanical patient restraint (1994 EMT-B National Standard Curriculum contains an approach now deemed inappropriate—i.e. forceful restraint in a prone position, with wrists & ankles tightly tied together ("hobbled") behind the back.)
- Assisting a patient with his/her prescribed medications, nebulized/aerosolized (1994 EMT-B National Standard Curriculum advocated assisting a patient with hand-held aerosol inhalers, but not administer nebulized medications to a patient)
- Administration of aspirin by mouth
- Use of an auto-injector (self or peer) (introduced at the EMR level).

c. Emergency Medical Technician: Content

Preparatory – EMS Systems

- EMS Systems – more detailed discussion on patient safety issues, decreasing medical errors, and required affective/behavioral characteristics
- Research – extremely limited information on evidence based decision making
- Workforce Safety and Wellness – emphasizes the difference between body substance isolation and personal protective equipment; brief discussion on bariatric issues, neonatal isolettes and medical restraint
- Documentation - Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1994 EMT-B National Standard Curriculum was authored
- Therapeutic Communications – more detailed information about improving communication with the patient
- Medical/Legal/Ethics – Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1994 EMT-B National Standard Curriculum was authored; should include a state-specific discussion on

privileged communication; includes a brief discussion on living wills, surrogate decision makers, and civil and criminal court cases; ethics

Anatomy and Physiology

- The respiratory information found in the 2000 Supplemental Airway and Ventilation Module should be added; more detailed discussion on the life support chain focusing on oxygenation, perfusion, and the cellular environment

Medical Terminology

- Minimal new content added to this level

Pathophysiology

- This content is new to this level but only focuses on respiratory and perfusion dysfunction along with shock

Life-Span Development

- New information at this level

Public Health

- New information at this level; related to EMS Agenda for the Future issues

Pharmacology

- Medication administration – added the five rights of medication administration
- Emergency Medications – aspirin added to this level

Airway Management, Respiration, and Oxygenation

- Anatomy and Physiology – much more detailed than in the previous 1994 EMT-B National Standard Curriculum
- Respiration - much more detailed than in the previous 1994 EMT-B National Standard Curriculum
- Artificial Ventilation - much more detailed than in the previous 1994 EMT-B National Standard Curriculum

Patient Assessment

- Scene Size-Up – no new information here but a re-emphasis on the need for scene safety for everyone present
- Primary Assessment - new terminology that more closely mimics other health care professionals
- History Taking - new terminology that more closely mimics other health care professionals
- Secondary Assessment - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum
- Monitoring Devices – pulse oximetry added

Medicine

- Medical Overview – re-use of the new assessment terminology; with focus on medical patient
- Neurology – in the previous curriculum, most of the neurological conditions were bundled together into altered mental status. This new

section requires a greater assessment and differentiation; stroke is a rapidly changing area. Local standards and various national organizations should serve as a resource for currently accepted assessment and treatment

- Abdominal and Gastrointestinal Disorders – minimal new content added to this level
- Immunology - the term anaphylaxis did not appear in the 1994 EMT-B National Standard Curriculum; some geriatric information added
- Infectious Diseases – this section should include updated infectious disease information, for example methicillin-resistant Staphylococcus aureus (MRSA) and Acquired Immune Deficiency Syndrome (AIDS) update; should include a discussion on cleaning and sterilizing equipment and decontaminating the ambulance
- Endocrine – increased emphasis on pathophysiology and acknowledgement of the increasing prevalence and incidence of diabetes in the community
- Psychiatric – includes new material on excited delirium; the 1994 EMT-B National Standard Curriculum has incorrect and dangerous information about the use of restraint and should no longer be presented (i.e. “hog-tied” or hobble technique)
- Cardiovascular – increased emphasis on anatomy, physiology and pathophysiology; increased emphasis on specific cardiovascular emergencies, addition of aspirin information for acute coronary syndrome
- Toxicology – poison control information included; addition of drugs of abuse
- Respiratory – more in-depth evaluation of a patient with respiratory problems.
- Hematology – brief discussion of sickle cell disease
- Genitourinary/Renal – more detailed discussion of this organ system
- Gynecology – includes brief discussion of sexually transmitted diseases and pelvic inflammatory disease
- Non-Traumatic Musculoskeletal Disorders – new information at this level

Shock and Resuscitation

- This shock content was moved from trauma to emphasize the fact that it occurs in contexts other than trauma; the cardiac arrest information was moved from cardiology for the same reason; brief discussion on devices to assist circulation, although subject to local protocol; shock should be taught in a more comprehensive context rather than simply as a consequence of bleeding

Trauma

- Overview – discussion on the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol; assessment focuses on trauma patient; the term fracture was placed back into the vocabulary
- Chest Trauma – more detailed discussion

- Abdominal Trauma – more detailed discussion
- Orthopedic Trauma - the term fracture was placed back into the vocabulary
- Head, Facial, Neck, and Spine Trauma – more detail about neck, eye, oral and brain injuries; emphasizes the harm of hyperventilation in most circumstances
- Nervous System Trauma - the old curriculum was separated into soft tissue and injuries to the head and spine; more detail on brain anatomy; emphasizes the harm of hyperventilation; references the Brain Trauma Foundation; increased emphasis on neurological assessment
- Special Considerations in Trauma – added discussion on the elderly, pediatrics, the pregnant patient, the cognitively impaired
- Environmental – more in depth discussion on submersion, bites, envenomations, diving injuries (subject to local protocols) and radiation exposure
- Multi-system Trauma – new material at this level; includes discussion of kinematics and blast injury

Special Patient Populations

- Pregnant Patient – more detailed discussion on complications of pregnancy; uses the terms preeclampsia, eclampsia and premature rupture of membranes (which do not require a lengthy discussion)
- Pediatrics – this section is more detailed than in the previous version
- Geriatrics – all new section for this level
- Patients with Special Challenges – elder abuse, homelessness, poverty, bariatric, more technology dependant, hospice, sensory deficit, homecare, and developmental disabilities added

EMS Operations

- Principles of Safely Operating a Ground Ambulance - increased depth of discussion on the risks of emergency response and leaving the scene
- Incident Management – references the incident management system and the federal requirements for compliance
- Multiple Casualty Incidents – references Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol
- Air Medical – all material at this level represents the same depth and breadth as at the EMR level
- Vehicle Extrication – all material at this level represents the same depth and breadth as the EMR level
- Hazardous Materials Awareness – all material at this level represents the same depth and breadth as the EMR level
- Mass Casualty Incidents Due to Terrorism or Disaster – all material at this level represents the same depth and breadth as the EMR level.

Advanced Emergency Medical Technician (AEMT)

See the Instructor Guidelines for the Advanced EMT (151 pages) at:

<http://www.nhtsa.gov/staticfiles/DOT/NHTSA/ems/811077d.pdf>

Knowledge and Skill Comparison

The order of content is not meant to imply the order of delivery.

a. Advanced Emergency Medical Technician: New Course Considerations

When planning and conducting a new AEMT course, the Program Director or Course Coordinator must incorporate all considerations at the EMR and EMT levels plus,

- Clinical skills
- Field experience as a team leader
- Review and verify integration of the clinical behavior/judgment section of Education Standards, particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment

b. Advanced Emergency Medical Technician: Skills

c. Advanced Emergency Medical Technician: Content

Preparatory – EMS Systems

- EMS Systems – more detailed discussion on patient safety issues, strategies to decrease medical errors
- Research – extremely limited information on evidence based decision making
- Workforce Safety and Wellness – emphasizes the difference between body substance isolation and personal protective equipment; brief discussion on bariatric issues, neonatal isolettes and medical restraint
- Documentation - the Health Insurance Portability and Accountability Act (HIPAA) did not exist when either of the EMT-Intermediate curricula was authored
- Therapeutic Communications – more detailed information about improving communication with the patient
- Medical/Legal/Ethics – the Health Insurance Portability and Accountability Act (HIPAA) did not exist when the EMT-Intermediate curriculum was authored; should include a state-specific discussion on privileged communication; includes a brief discussion on living wills, surrogate decision makers, and civil and criminal court cases; ethics

Anatomy and Physiology

- More detailed discussion than in the previous version

Medical Terminology

- Although not detailed, this content is new to this level

Pathophysiology

- This content is new to this level but only focuses on respiratory and perfusion dysfunction along with shock

Life-Span Development

- New information at this level

Public Health

- New information at this level; related to EMS Agenda for the Future issues

Pharmacology

- Principles of Pharmacology – new information at this level
- Medication Administration – added the five rights of medication administration; more detailed information
- Emergency Medications – specific list of medications

Airway Management, Respiration, and Oxygenation

- Anatomy and Physiology – much more detailed than in the previous EMT-Intermediate curriculum
- Artificial Ventilation - much more detailed than in the previous EMT-Intermediate curriculum
- Respiration - much more detailed minimal new content added to this level in the previous EMT-Intermediate curriculum

Patient Assessment

- Scene Size-Up – no new information here but a re-emphasis on the need for scene safety for everyone present
- Primary Assessment - new terminology that more closely mimics other health care professionals
- History Taking - new terminology that more closely mimics other health care professionals
- Secondary Assessment - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum
- Monitoring Devices – blood glucose monitoring and blood chemistry analysis added to this level

Medicine

- Medical Overview – re-use of the new assessment terminology
- Abdominal and Gastrointestinal Disorders – minimal new content added to this level
- Immunology – all new information
- Infectious Diseases – this section should include updated infectious disease information, for example methicillin-resistant Staphylococcus aureus, hepatitis, and Acquired Immune Deficiency Syndrome update; should include a discussion on cleaning and sterilizing equipment and decontaminating the ambulance

- Endocrine – increased emphasis on pathophysiology and acknowledgement of the increasing prevalence and incidence of diabetes in the community
- Psychiatric – includes new material on excited delirium
- Cardiovascular – increased emphasis on anatomy, physiology and pathophysiology; increased emphasis on specific cardiovascular emergencies
- Toxicology – all new information
- Respiratory – more in-depth evaluation of a patient with respiratory problems.
- Hematology – brief discussion in sickle cell disease
- Genitourinary/Renal – more detailed discussion of this organ system
- Gynecology – includes brief discussion of sexually transmitted diseases and pelvic inflammatory disease
- Non-Traumatic Musculoskeletal Disorders – new information at this level

Shock and Resuscitation

- This shock content was moved from trauma to emphasize the fact that it can happen in a context other than trauma; the cardiac arrest/ cardiovascular emergencies information was moved from an optional module at the Intermediate-99 level; brief discussion on devices to assist circulation, although subject to local protocol; shock should be taught in a more comprehensive context rather than simply as a consequence of bleeding

Trauma

- Overview – all material at this level represents the same depth and breadth as at the EMT level
- Bleeding – more detailed discussion
- Chest Trauma – more detailed discussion
- Abdominal Trauma – more detailed discussion
- Orthopedic Trauma - more detailed discussion
- Head, Facial, Neck, and Spine Trauma – more detail about neck eye, oral and brain injuries; emphasizes the harm of over ventilation in most situations
- Nervous System Trauma - more detail on brain anatomy; emphasizes the harm of hyperventilation; references the Brain Trauma Foundation; increased emphasis on neurological assessment
- Special Considerations in Trauma – all section new or increased emphasis
- Environmental – all material at this level represents the same depth and breadth as at the EMT level
- Multi-system Trauma – new material at this level; includes discussion of kinematics and blast injury

Special Patient Populations

- Pregnant Patient – more detailed discussion on complications of pregnancy; uses the terms preeclampsia, eclampsia and premature rupture of membranes which do not require a lengthy discussion
- Pediatrics – this section is much more detailed than in the previous version
- Geriatrics – all new section for this level
- Patients with Special Challenges – elder abuse, homelessness, poverty, bariatric, more technology dependant, hospice, sensory deficit, homecare, and developmental disabilities added

EMS Operations

- Principles of Safely Operating a Ground Ambulance - all material at this level represent the same depth and breadth as at the EMT level
- Incident Management – all material at this level represents the same depth and breadth as at the EMT level
- Multiple Casualty Incidents – all material at this level represents the same depth and breadth as at the EMT level
- Air Medical – all material at this level represents the same depth and breadth as at the EMT level
- Vehicle Extrication – all material at this level represents the same depth and breadth as at the EMT level
- Hazardous Materials Awareness – all material at this level represents the same depth and breadth as at the EMT level
- Mass Casualty Incidents Due to Terrorism or Disaster – all material at this level represents the same depth and breadth as at the EMT level

Intermediate

Knowledge and Skill Comparison

The order of content is not meant to imply the order of delivery.

a. Intermediate: New Course Considerations

When planning and conducting a new Intermediate course, the Program Director or Course Coordinator must incorporate all considerations at the EMR, EMT, and AEMT levels plus,

- Reference Virginia Office of EMS Accreditation of EMS Programs Standards and Guidelines
- Review and verify integration of the clinical behavior/judgment section of the Education Standards, particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment.

b. Intermediate: Skills

EMT-Intermediate

For a current 1999 EMT-Intermediate (based on 1999 EMT-Intermediate National Standard Curriculum), the following skills are no longer taught:

- ~~Pressure points and elevation for hemorrhage control~~
- ~~Umbilical vein access~~
- ~~Urinary catheterization~~

For a current 1999 EMT-Intermediate, the following skills are now taught in the 2009 EMR, 2009 EMT or 2009 AEMT and are to be considered new:

- Self or peer use of an auto-injector (introduced at the EMR level)
- Use of mechanical CPR devices (introduced at EMT level)

For a current 1999 EMT- Intermediate, the following skills are new:

- Use of BiPAP/CPAP
- Waveform capnography
- ~~Monitoring and management of a chest tube~~
- ~~Performing a percutaneous cricothyrotomy (not a surgical airway)~~
- Interpretation and monitoring of end-tidal carbon dioxide (including waveform capnography)
- ~~Nasotracheal intubation~~
- Use of therapeutic positive end-expiratory pressure (PEEP)
- Multi-lead ECG interpretation
- Performing electrical synchronized cardioversion
- Performing carotid massage
- Central line monitoring
- Initiation of intraosseous (IO) infusion in all patients (previously used IOs on children only)
- Initiation and maintenance of intravenous medication drips
- Intranasal medication administration
- Nasogastric medication administration
- Oral medication administration
- Eye irrigation with the Morgan® lens
- ~~Initiation and monitoring of thrombolytic medication~~
- Obtaining venous blood samples
- Blood chemistry analysis (this includes the psychomotor skills involved with collection of blood for analysis [point of care testing] and the cognitive material necessary to understand the implications of the results)
- ~~Assist in the insertion of a chest tube~~
- Accessing indwelling catheters and implanted central IV ports

c. Intermediate: Content

Preparatory – EMS Systems

- EMS Systems – more detailed discussion on patient safety issues
- Research – the section is primarily focused on evidence based decisions and how to interpret research; the section on conducting research is gone.

- Workforce Safety and Wellness – the 1998 EMT-Intermediate National Standard Curriculum mentioned CISM. The new standards does not use that term instead focusing more on stress management issues.
- Documentation - Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1998 EMT-Intermediate National Standard Curriculum was authored
- Therapeutic Communications – increased depth of cultural competence issues.
- Medical/Legal/Ethics – Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1998 EMT-Intermediate National Standard Curriculum was authored; increased depth of discussion regarding advance directives; the term "end-of-life" was not previously used; there is an increased emphasis on end of life issues; increased depth and breadth on ethics

Anatomy and Physiology

- The current recommendation calls for more comprehensive coverage of A&P than provided in the previous 1998 EMT-Intermediate National Standard Curriculum. Programs should evaluate their current A&P program to see how much upgrade they need to reach a comprehensive and complex understanding, especially in the cardiovascular, respiratory, and neurological systems.

Pathophysiology

- The current recommendation calls for more comprehensive coverage of pathophysiology than provided in the previous 1998 EMT-Intermediate National Standard Curriculum. Programs should evaluate their current pathophysiology program to see how much upgrade they need to reach a comprehensive and complex understanding, especially in the cardiovascular, respiratory, and neurological systems.

Public Health

- Consistent with the EMS Agenda for the Future, there is a greater emphasis on public health issues

Pharmacology

- Principles of Pharmacology – programs should evaluate their current pharmacology program to see how much upgrade they need to reach a comprehensive and complex understanding
- Medication Administration – programs should evaluate their current pharmacology program to see how much upgrade they need to reach a comprehensive and complex understanding
- Emergency Medications – In the 1998 EMT-Intermediate National Standard Curriculum, there was no list of medications; the list below represents medications commonly used in numerous Virginia EMS systems and is a minimum list that all Intermediates should know. This list may become dated quickly.

Airway Management, Respiration, and Oxygenation

- Confusion exists about the differences between oxygenation, ventilation, and respiration. The Education Standards were organized to attempt to

highlight the differences between the concepts. There is a greater emphasis on ventilation and respirations and the importance of artificial ventilation. Research suggests that EMS can make a difference in this area.

Patient Assessment

- Scene Size-Up – no new information here but a re-emphasis on the need for scene safety for everyone present
- Primary Assessment - new terminology that more closely mimics other health care professionals
- History Taking - new terminology that more closely mimics other health care professionals
- Secondary Assessment - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum
- Monitoring Devices – includes capnography, chemistry analysis, arterial blood gas interpretation
- Reassessment - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum

Medicine

- Medical Overview – re-use of the new assessment terminology; emphasis on pathophysiologic basis; updated destination decisions for some medical conditions such as stroke and acute coronary syndrome.
- Neurological Disorders - the term "demyelinating" was not used in the 1998 EMT-Intermediate National Standard Curriculum; more detailed information on stroke assessment and management
- Abdominal and Gastrointestinal Disorders – in the 1998 EMT-Intermediate National Standard Curriculum, the topic was gastroenterology; new section on mesenteric ischemia, rectal foreign body obstructions and rectal abscess
- Immunology – the term anaphylactoid is used here; that term was not used in the 1998 EMT-Intermediate National Standard Curriculum; transplant related problems and collagen vascular disease added
- Infectious Diseases – refocused with more of an emergency medicine flavor; drug-resistant bacteria discussed
- Endocrine Disorders - added long term effects of diabetes and how the disease impacts other conditions
- Psychiatric – includes new material on excited delirium; other psychiatric conditions are re-categorized with an increase in depth and breadth
- Cardiovascular – increased emphasis on anatomy, physiology and pathophysiology; acute coronary syndrome, 12-lead interpretation; updated information on heart failure
- Toxicology - includes section on over-the-counter medication toxicology
- Respiratory – more in-depth evaluation of a patient with respiratory problems.

- Hematology – reorganized with added section on blood transfusion reactions
- Genitourinary/Renal - urinary catheter management (not insertion)
- Non-Traumatic Musculoskeletal Disorders – added section on disorders of the spine, joint abnormalities, muscles abnormalities, and overuse syndromes
- Diseases of the Eye, Ears, Nose and Throat - new section emphasizing major eye, ear, nose, and throat disease

Shock and Resuscitation

- Reorganized for emphasis, more pathophysiology

Trauma

- Overview – discussion on the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol and trauma scoring
- Bleeding – increased emphasis on pathophysiology
- Chest Trauma – more detailed discussion, added section on **commotio cordis**
- Abdominal Trauma – increased emphasis on pathophysiology
- Orthopedic Trauma - greater emphasis on pathophysiology
- Soft Tissue Trauma - added section on high pressure injection
- Head, Facial, Neck, and Spine Trauma – grouped these conditions separately from neurological trauma
- Nervous System Trauma - added section on **cauda equina syndrome**
- Special Considerations in Trauma – more detailed discussion concerning pregnancy, pediatric, elderly, cognitively impaired
- Environmental – increased emphasis on pathophysiology
- Multi-system Trauma – more detailed discussion; critical thinking skills emphasized, blast injuries

Special Patient Populations

- Pregnant Patient – added section on **hyperemesis gravidarum**
- Pediatrics – more detailed discussion
- Geriatrics – added section on **Herpes zoster**
- Patients with Special Challenges – added section on **bariatrics**

EMS Operations

- Principles of Safely Operating a Ground Ambulance - all material at this level represents the same depth and breadth as at the EMT level
- Incident Management – references the incident management system and the federal requirements for compliance
- Multiple Casualty Incidents – all material at this level represents the same depth and breadth as at the EMT level
- Air Medical – updated material at this level concerning risks/needs/advantages of air transport
- Vehicle Extrication – all material at this level represents the same depth and breadth as at the EMT level
- Hazardous Materials Awareness – all material at this level represents the same depth and breadth as at the EMT level

- Mass Casualty Incidents Due to Terrorism or Disaster – all material at this level represents the same depth and breadth as at the EMT level

Paramedic

See the Instructor Guidelines for the Paramedic (387 pages) at:

<http://www.nhtsa.gov/staticfiles/DOT/NHTSA/ems/811077e.pdf>

Knowledge and Skill Comparison

The order of content is not meant to imply the order of delivery.

a. Paramedic: New Course Considerations

When planning and conducting a new Paramedic course, the Program Director or Course Coordinator must incorporate all considerations at the EMR, EMT, and AEMT levels plus,

- Reference Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP) Standards and Guidelines
- Review and verify integration of the clinical behavior/judgment section of the Education Standards, particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment.

b. Paramedic: Skills

1999 EMT-Intermediate

For a current 1999 EMT-Intermediate (based on 1999 EMT-I National Standard Curriculum) transitioning to 2009 Paramedic, the following skills are no longer taught:

- ~~Pressure points and elevation for hemorrhage control~~

For a current 1999 EMT- Intermediate transitioning to Paramedic, the following skills may be new:

- Use of BiPAP/CPAP
- Monitoring and management of a chest tube
- Performing a percutaneous cricothyrotomy (not a surgical airway)
- Interpretation and monitoring of end-tidal carbon dioxide (including waveform capnography)
- Nasotracheal intubation
- Use of therapeutic positive end-expiratory pressure (PEEP)
- Multi-lead ECG interpretation
- Performing electrical synchronized cardioversion
- Performing carotid massage
- Central line monitoring
- Initiation of intraosseous (IO) infusion in all patients (previously used

IOs on children only)

- Initiation and maintenance of intravenous medication drips
- Intranasal medication administration
- Nasogastric medication administration
- Oral medication administration
- Eye irrigation with the Morgan® lens
- Initiation and monitoring of thrombolytic medication
- Obtaining venous blood samples
- Blood chemistry analysis (this includes the psychomotor skills involved with collection of blood for analysis [point of care testing] and the cognitive material necessary to understand the implications of the results)
- Assist in the insertion of a chest tube
- Accessing indwelling catheters and implanted central IV ports

1998 EMT-Paramedic

For a current 1998 EMT-Paramedic (based on 1998 EMT-P National Standard Curriculum) transitioning to 2009 Paramedic, the following skills are no longer taught:

- ~~Pressure points and elevation for hemorrhage control~~
- ~~Umbilical vein access~~
- ~~Urinary catheterization~~

For a current 1998 EMT-Paramedic (based on 1998 EMT-P National Standard Curriculum) transitioning to 2009 Paramedic, the following skills may be new:

- Use of BiPAP/CPAP
- Waveform capnography
- Monitoring and management of a chest tube
- Assist in the insertion of a chest tube
- Performing a percutaneous cricothyrotomy
- Accessing indwelling catheters and implanted central IV ports
- Central line monitoring
- Initiation of intraosseous infusion in all patients (previously used IOs on children only)
- Intranasal medication administration (1998 Paramedic limited to intranasal decongestants)
- Eye irrigation with the Morgan® lens
- Initiation and monitoring of thrombolytic medication
- Blood chemistry analysis (includes psychomotor skills involved with collection of blood for analysis [point of care testing] and the cognitive material necessary to understand implications of results).

c. Paramedic: Content

Preparatory – EMS Systems

- EMS Systems – more detailed discussion on patient safety issues

- Research – the section is primarily focused on evidence based decisions and how to interpret research; the section on conducting research is gone.
- Workforce Safety and Wellness – the 1998 EMT-P National Standard Curriculum mentioned CISM. The new standards does not use that term instead focusing more on stress management issues.
- Documentation - Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1998 EMT-P National Standard Curriculum was authored
- Therapeutic Communications – increased depth of cultural competence issues.
- Medical/Legal/Ethics – Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1998 EMT-P National Standard Curriculum was authored; increased depth of discussion regarding advance directives; the term "end-of-life" was not previously used; there is an increased emphasis on end of life issues; increased depth and breadth on ethics

Anatomy and Physiology

- The current recommendation calls for more comprehensive coverage of A&P than provided in the previous 1998 EMT-P National Standard Curriculum. Programs should evaluate their current A&P program to see how much upgrade they need to reach a comprehensive and complex understanding, especially in the cardiovascular, respiratory, and neurological systems.

Pathophysiology

- The current recommendation calls for more comprehensive coverage of pathophysiology than provided in the previous 1998 EMT-P National Standard Curriculum. Programs should evaluate their current pathophysiology program to see how much upgrade they need to reach a comprehensive and complex understanding, especially in the cardiovascular, respiratory, and neurological systems.

Public Health

- Consistent with the EMS Agenda for the Future, there is a greater emphasis on public health issues

Pharmacology

- Principles of Pharmacology – programs should evaluate their current pharmacology program to see how much upgrade they need to reach a comprehensive and complex understanding
- Medication Administration – programs should evaluate their current pharmacology program to see how much upgrade they need to reach a comprehensive and complex understanding
- Emergency Medications – In the 1998 EMT-P National Standard Curriculum, there was no list of medications; the list in the IGs represents medications commonly used in numerous EMS systems and is a minimum list that all paramedics should know. States and programs are encouraged to add to the list, but should not delete. This list may become dated quickly.

Airway Management, Respiration, and Oxygenation

- Confusion exists about the differences between oxygenation, ventilation, and respiration. The Education Standards were organized to attempt to highlight the differences between the concepts. There is a greater emphasis on ventilation and respirations and the importance of artificial ventilation. Research suggests that EMS can make a difference in this area.

Patient Assessment

- Scene Size-Up – no new information here but a re-emphasis on the need for scene safety for everyone present
- Primary Assessment - new terminology that more closely mimics other health care professionals
- History Taking - new terminology that more closely mimics other health care professionals
- Secondary Assessment - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum
- Monitoring Devices – includes capnography, chemistry analysis, arterial blood gas interpretation
- Reassessment - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum

Medicine

- Medical Overview – re-use of the new assessment terminology; emphasis on pathophysiologic basis; updated destination decisions for some medical conditions such as stroke and acute coronary syndrome,
- Neurological Disorders - the term "demyelinating" was not used in the 1998 EMT-P National Standard Curriculum; more detailed information on stroke assessment and management
- Abdominal and Gastrointestinal Disorders – in the 1998 EMT-P National Standard Curriculum, the topic was gastroenterology; new section on mesenteric ischemia, rectal foreign body obstructions and rectal abscess
- Immunology – the term anaphylactoid is used here; that term was not used in the 1998 EMT-P National Standard Curriculum; transplant related problems and collagen vascular disease added
- Infectious Diseases – refocused with more of an emergency medicine flavor; drug-resistant bacteria discussed
- Endocrine Disorders - added long term effects of diabetes and how the disease impacts other conditions
- Psychiatric – includes new material on excited delirium; other psychiatric conditions are re-categorized with an increase in depth and breadth
- Cardiovascular – increased emphasis on anatomy, physiology and pathophysiology; acute coronary syndrome, 12-lead interpretation; updated information on heart failure
- Toxicology - includes section on over-the-counter medication toxicology

- Respiratory – more in-depth evaluation of a patient with respiratory problems.
- Hematology – reorganized with added section on blood transfusion reactions
- Genitourinary/Renal - urinary catheter management (not insertion)
- Non-Traumatic Musculoskeletal Disorders – added section on disorders of the spine, joint abnormalities, muscles abnormalities, and overuse syndromes
- Diseases of the Eye, Ears, Nose and Throat - new section emphasizing major eye, ear, nose, and throat disease

Shock and Resuscitation

- Reorganized for emphasis, more pathophysiology

Trauma

- Overview – discussion on the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol and trauma scoring
- Bleeding – increased emphasis on pathophysiology
- Chest Trauma – more detailed discussion, added section on commotio cordis
- Abdominal Trauma – increased emphasis on pathophysiology
- Orthopedic Trauma - greater emphasis on pathophysiology
- Soft Tissue Trauma - added section on high pressure injection
- Head, Facial, Neck, and Spine Trauma – grouped these conditions separately from neurological trauma
- Nervous System Trauma - added section on cauda equina syndrome
- Special Considerations in Trauma – more detailed discussion concerning pregnancy, pediatric, elderly, cognitively impaired
- Environmental – increased emphasis on pathophysiology
- Multi-system Trauma – more detailed discussion; critical thinking skills emphasized, blast injuries

Special Patient Populations

- Pregnant Patient – added section on hyperemesis gravidarum
- Pediatrics – more detailed discussion
- Geriatrics – added section on Herpes zoster
- Patients with Special Challenges – added section on bariatrics

EMS Operations

- Principles of Safely Operating a Ground Ambulance - all material at this level represents the same depth and breadth as at the EMT level
- Incident Management – references the incident management system and the federal requirements for compliance
- Multiple Casualty Incidents – all material at this level represents the same depth and breadth as at the EMT level
- Air Medical – updated material at this level concerning risks/needs/advantages of air transport
- Vehicle Extrication – all material at this level represents the same depth and breadth as at the EMT level

- Hazardous Materials Awareness – all material at this level represents the same depth and breadth as at the EMT level
- Mass Casualty Incidents Due to Terrorism or Disaster – all material at this level represents the same depth and breadth as at the EMT level

Essential Knowledge Content

Emergency Medical Responder (EMR)

This section identifies the knowledge content considered essential for transitioning currently certified First Responders (trained under the 1995 First Responder National Standard Curricula) to function as Emergency Medical Responders once the Education Standards are implemented. Individual states may determine whether this essential content should be delivered in the form of continuing education classes or a formal transitioning program.

Section - Content

- Pathophysiology
- Respiratory compromise; shock
- Airway Management, Respiration, and Oxygenation: Anatomy and Physiology
- Airway anatomy; airway assessment; techniques of assuring an open airway; age-related variation in airway anatomy
- Airway Management, Respiration, and Oxygenation: Respiration
- Anatomy of the respiratory system; physiology of respiration; pathophysiology of respiration; assessment of respiratory status; respiratory management; supplemental oxygen therapy; age-related respiratory variation
- Airway Management, Respiration, and Oxygenation: Artificial Ventilation
- Assessment of ventilation status; oxygenation; ventilation management (adequate, inadequate, apneic); differentiating normal from positive pressure ventilation; age-related ventilation variation
- Patient Assessment: All sections
- Orientation to the new terminology
- Patient Assessment: Secondary Assessment
- Blood pressure assessment and interpretation
- Shock and Resuscitation
- Use of the automatic external defibrillator
- Trauma: Overview
- Become familiar with the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol

Emergency Medical Technician (EMT)

This section identifies the knowledge content considered essential for transitioning currently certified Emergency Medical Technician - Basic (trained under the 1994 EMT-B National Standard Curricula) to function as Emergency Medical Technicians once the Education Standards are implemented. Individual states may determine whether this essential content should be delivered in the form of continuing education classes or a formal transitioning program.

Section - Content

- Preparatory: EMS Systems
- Patient safety; high risk activities; how errors happen; preventing errors, including medication administration safety (“rights” of drug administration)
- Preparatory: Research
- Importance of evidence-based decision making process
- Preparatory: Therapeutic Communication
- Contains section on required affective/behavioral characteristics
- Preparatory: Medical, Legal, and Ethics
- Morals, ethics and ethical conflicts
- Anatomy and Physiology; Pathophysiology
- Fundamental elements of the life support chain, including oxygenation, perfusion, and the cellular environment; composition of ambient air, airway patency; respiratory compromise; ventilation/perfusion mismatch; perfusion and shock, blood volume; myocardial effectiveness; microcirculation; blood pressure; alterations in cellular metabolism
- Airway Management, Respiration, and Oxygenation: All sections
- Airway anatomy; airway assessment; techniques of assuring an open airway; age-related variation in airway anatomy; anatomy of the respiratory system; physiology of respiration; pathophysiology of respiration; assessment of respiratory status; respiratory management; supplemental oxygen therapy; age-related respiratory variation; assessment of ventilation status; oxygenation; ventilation management (adequate, inadequate, apneic); differentiating normal from positive pressure ventilation; age-related ventilation variation
- Patient Assessment: All sections
- Orientation to the new terminology (may be covered in a handout)
- Patient Assessment: Monitoring Devices
- Pulse oximetry
- Medicine: Neurology
- Stroke/TIA; stroke alert criteria
- Medicine: Abdominal and Gastrointestinal Disorders
- Anatomy; assessment; management; gastrointestinal bleeding, peritonitis, ulcerative disease, age-related variations
- Medicine: Infectious Disease - Updated information on methicillin resistant *Staphylococcus aureus* (MRSA), human immunodeficiency virus (HIV); cleaning and disinfecting ambulance equipment; decontaminating ambulance
- Medicine: Endocrine Disorders
- Diabetes update

- Medicine: Psychiatric
- Excited delirium; medical/legal considerations; use of medical restraint
- Medicine: Cardiovascular
- Anatomy; physiology; pathophysiology; assessment; management; acute coronary syndrome; hypertensive emergencies; cardiogenic shock; aspirin administration;
- Medicine: Respiratory
- Anatomy; assessment; management; specific respiratory conditions; metered-dose inhalers; small volume nebulizers; age-related variations
- Medicine: Hematology
- Sickle cell disease
- Medicine: Genitourinary/Renal
- Anatomy, physiology, pathophysiology; dialysis emergencies
- Shock and Resuscitation
- General shock; reasons for shock; mechanism of shock
- Trauma: Overview
- Become familiar with the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol
- Trauma: Chest Trauma
- Incidence; anatomy; physiology; pathophysiology; blunt or open trauma
- Trauma: Abdominal and Genitourinary Trauma
- Incidence; anatomy; physiology; specific injuries; assessment; management
- Trauma: Head, Facial, Neck, and Spine Trauma
- Assessment and management of neck, eye, dental; laryngeal injuries
- Trauma: Nervous System Trauma
- Traumatic brain injuries
- Trauma: Special Considerations in Trauma
- Trauma in pregnancy, elderly, and cognitively impaired
- Special Patient Populations: Obstetrics
- Complications of pregnancy
- EMS Operations: Principles of Safely Operating a Ground Ambulance
- Safety issues during transport
- EMS Operations: Incident Management
- Incident management system
- EMS Operations: Hazardous Materials Awareness
- Hazardous Waste Operations and
- Emergency Response (HAZWOPER) First Responder Awareness Level
- EMS Operations: Mass Casualty Incidents Due to Terrorism and Disaster
- Roles and responsibilities at the scene;

Advanced Emergency Medical Technician (AEMT)

This section identifies the knowledge content considered essential for transitioning currently certified Emergency Medical Technicians to function as Advanced Emergency Medical

Technicians once the Education Standards are implemented. Individual states may determine whether this essential content should be delivered in the form of continuing education classes or a formal transitioning program.

Section - Content

- Preparatory: EMS Systems
- Patient safety; high risk activities; how errors happen; preventing errors, including medication administration safety (“rights” of drug administration)
- Preparatory: Research
- Importance of evidence-based decision making process
- Preparatory: Therapeutic Communication
- Contains section on required affective/behavioral characteristics
- Preparatory: Medical, Legal, and Ethics
- Morals, ethics and ethical conflicts
- Anatomy and Physiology; Pathophysiology
 - Fundamental elements of the life support chain including oxygenation, perfusion, and the cellular environment; composition of ambient air; airway patency; respiratory compromise; ventilation/perfusion mismatch; perfusion and shock, blood volume; myocardial effectiveness; microcirculation; blood pressure; alterations in cellular metabolism
- Airway Management, Respiration, and Oxygenation: All sections
- Airway anatomy; airway assessment; techniques of assuring an open airway; age-related variation in airway anatomy; anatomy of the respiratory system; physiology of respiration; pathophysiology of respiration; assessment of respiratory status; respiratory management; supplemental oxygen therapy; age-related respiratory variation; assessment of ventilation status; oxygenation; ventilation management (adequate, inadequate, apneic); differentiating normal from positive pressure ventilation; age-related ventilation variation
- Patient Assessment: All sections
- Orientation to the new terminology (may be covered in a handout)
- Patient Assessment: Monitoring Devices
- Pulse oximetry
- Medicine: Neurology
 - Stroke/TIA; stroke alert criteria
- Medicine: Abdominal and Gastrointestinal Disorders
 - Anatomy; assessment; management; gastrointestinal bleeding, peritonitis, ulcerative disease, age-related variations
- Medicine: Infectious Disease
 - Updated information on methicillin resistant Staphylococcus aureus (MRSA); human immunodeficiency virus (HIV); cleaning and disinfecting ambulance equipment; decontaminating ambulances
- Medicine: Endocrine Disorders
 - Diabetes update
- Medicine: Psychiatric
 - Agitated delirium; medical/legal considerations; use of medical restraint

- **Medicine: Cardiovascular**
 - Anatomy; physiology; pathophysiology; assessment; management; acute coronary syndrome; hypertensive emergencies; cardiogenic shock; aspirin administration
- **Medicine: Respiratory**
 - Anatomy; assessment; management; specific respiratory conditions; metered-dose inhalers; small volume nebulizers; age-related variations
- **Medicine: Hematology**
 - Sickle cell disease
- **Medicine: Genitourinary/Renal**
 - Anatomy; physiology; pathophysiology; dialysis emergencies
- **Shock and Resuscitation**
 - General shock; reasons for shock; mechanism of shock
- **Trauma: Overview**
 - Become familiar with the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol
- **Trauma: Chest Trauma**
 - Incidence; anatomy; physiology; pathophysiology; blunt or open trauma
- **Trauma: Abdominal and Genitourinary Trauma**
 - Incidence; anatomy; physiology; specific injuries; assessment; management
- **Trauma: Head, Facial, Neck, and Spine Trauma**
 - Assessment and management of neck, eye, dental; laryngeal injuries
- **Trauma: Nervous System Trauma**
 - Traumatic brain injuries
- **Trauma: Special Considerations in Trauma**
 - Trauma in pregnancy, elderly, and cognitively impaired
- **Special Patient Populations: Obstetrics**
 - Complications of pregnancy
- **EMS Operations: Principles of Safely Operating a Ground Ambulance**
 - Safety issues during transport
- **EMS Operations: Incident Management**
 - Incident management system
- **EMS Operations: Hazardous Materials Awareness**
 - Hazardous Waste Operations and
 - Emergency Response (HAZWOPER) First Responder Awareness Level
- **EMS Operations: Mass Casualty Incidents Due to Terrorism and Disaster**
 - Roles and responsibilities at the scene

Paramedic

This section identifies the knowledge content considered essential for transitioning currently certified EMT – Paramedics (trained under the 1998 EMT-P National Standard Curricula) to function as Paramedics once the Education Standards are implemented. Individual states may determine whether this essential content should be delivered in the form of continuing education classes or a formal transitioning program.

Section - Content

- Preparatory: EMS Systems
- More detailed discussion on patient safety issues
- Preparatory: Documentation
- Health Insurance Portability and Accountability Act (HIPAA)
- Preparatory: Medical/Legal/Ethics
- Health Insurance Portability and Accountability Act (HIPAA); advance directives and end-of-life issues
- Anatomy and Physiology
- Review--greater depth and breadth in cardiovascular, respiratory, and neurological systems
- Pathophysiology
- Review--greater depth and breadth in cardiovascular, respiratory, and neurological systems
- Pharmacology: Medication Administration
- Medication review related to the state scope of practice; accessing indwelling catheters and implanted ports, intraosseous in all patients, intranasal and nasogastric administration of medications, thrombolytics
- Airway Management, Respiration, and Oxygenation - Greater emphasis on ventilation and respirations and the importance of artificial ventilation. BiPAP/CPAP; percutaneous cricothyrotomy
- Patient Assessment
- New terminology, history taking, monitoring devices including waveform capnography, chemistry analysis; arterial blood gas interpretation
- Medicine: Overview
- New terminology, ACLS update, specialty care such as STEMI and stroke
- Medicine: Infectious Diseases
- Drug-resistant bacteria, other emerging diseases
- Medicine: Psychiatric
- Excited delirium
- Medicine: Cardiovascular
- Acute coronary syndrome, 12-lead ECG interpretation, updated information on heart failure
- Shock and Resuscitation
- Increased pathophysiology, central line monitoring
- Trauma: Overview
- Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol and trauma scoring
- Trauma: General
- Increased emphasis on pathophysiology plus commotio cordis, cauda equina syndromes, high pressure injection, blast injuries; critical thinking skills in trauma
- Trauma: Chest
- Monitoring and management of a chest tube

- Trauma: Head, Facial, Neck, and Spine Trauma
- Use of Morgan® lens
- EMS Operations: Principles of Safely Operating a Ground Ambulance
- Safety issues during transport
- EMS Operations: Incident Management
- Incident management system
- EMS Operations: Hazardous Materials Awareness
- Hazardous Waste Operations and
- Emergency Response (HAZWOPER) First Responder Awareness Level
- EMS Operations: Air Medical
- Risks, needs, advantages of air transport
- EMS Operations: Mass Casualty Incidents Due to Terrorism and Disaster
- Roles and responsibilities at the scene

DRAFT

Appendix A: Common Drug List

The drugs listed in this appendix MUST be covered as an educational minimum as indicated by the level of certification being instructed.

DRUG	EMR	EMT	AEMT	I	P
OXYGEN	•	•	•	•	•
ORAL GLUCOSE		•	•	•	•
EPI PEN		•	•	•	•
NITRO (Patient Assist)		•	•	•	•
INHALED BRONCHODILATORS		•	•	•	•
NITROUS OXIDE			•	•	•
ALBUTEROL			•	•	•
ATROPINE				•	•
DEXTROSE 50%			•	•	•
DIPHENHYDRAMINE				•	•
EPINEPHRINE 1:10,000				•	•
FUROSEMIDE				•	•
GLUCAGON			•	•	•
MAGNESIUM SULFATE				•	•
NALOXONE			•	•	•
NITROGLYCERIN TABS/SPRAY/PASTE			•	•	•
ADENOSINE				•	•
DIAZEPAM				•	•
EPINEPHRINE 1:1,000			•	•	•
MORPHINE				•	•
AMIODARONE				•	•
ASPIRIN		•	•	•	•
IPRATROPIUM					•
MIDAZOLAM					•
LIDOCAINE				•	•
DOPAMINE				•	•
THIAMINE				•	•
ACTIVATED CHARCOAL					•
AMYL NITRITE					•
FENTANYL					•
OXYTOCIN					•
PROMETHAZINE					•
LORAZEPAM					•
DILTIAZEM					•

Appendix B: Virginia Scope of Practice – Procedures & Formulary

The Virginia Scope of Practice demonstrates the “practice maximum” for each certification level established by the Virginia Office of EMS. Please utilize this document when instructing EMS programs.



Virginia Office of Emergency Medical Services Scope of Practice - Procedures for EMS Personnel

This SOP represents *practice maximums*.

PROCEDURE	SKILL	PROCEDURE SUBTYPE	EMR	EMT	AEMT	I	P
Specific tasks in this document shall refer to the Virginia Education Standards.							
AIRWAY TECHNIQUES							
Airway Adjuncts							
	Oropharyngeal Airway		●	●	●	●	●
	Nasopharyngeal Airway		●	●	●	●	●
Airway Maneuvers							
	Head tilt jaw thrust		●	●	●	●	●
	Jaw thrust		●	●	●	●	●
	Chin lift		●	●	●	●	●
	Cricoid Pressure		●	●	●	●	●
	Management of existing Tracheostomy			●	●	●	●
Alternate Airway Devices							
	Non Visualized Airway Devices	Supraglottic		●	●	●	●
Cricothyrotomy							
	Needle						●
	Surgical						●
Obstructed Airway Clearance							
	Manual		●	●	●	●	●
	Visualize Upper-airway				●	●	●
Intubation							
	Nasotracheal						●
	Orotracheal - Over age 12					●	●
	Pharmacological facilitation with paralytic	Adult Neuromuscular Blockade					●
	Pharmacological facilitation without paralytic						●
	Confirmation procedures			●	●	●	●
	Pediatric Orotracheal						●
	Pediatric paralytics						●
	Pediatric sedation						●
** Endotracheal intubation is prohibited for all levels except Intermediate and Paramedic							

Investigational medications and procedures which have been reviewed and approved by an Institutional Review Board (IRB) will be considered to be approved by the Medical Direction Committee solely within the context of the approved study. Investigators involved in IRB approved research are asked to present their study plans to the MDC for informational purposes so that the committee can maintain an awareness of on-going pre-hospital research in the Commonwealth. Those who desire to conduct non-IRB reviewed pilot projects, demonstration projects, or research are asked to present those proposals to the MDC prior to their implementation for review and approval by the MDC.*

Use of medication not listed which is indicated by medical control and/or the operational medical director due to the use of a weapon of mass destruction is exempt from this list.

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Virginia Office of Emergency Medical Services
Scope of Practice - Procedures for EMS Personnel

This SOP represents *practice maximums*.

PROCEDURE	SKILL	PROCEDURE SUBTYPE	EMR	EMT	AEMT	I	P
Oxygen Delivery Systems							
	Nasal Cannula		●	●	●	●	●
	Venturi Mask			●	●	●	●
	Simple Face Mask		●	●	●	●	●
	Partial Rebreather Face Mask			●	●	●	●
	Non-rebreather Face Mask		●	●	●	●	●
	Face Tent			●	●	●	●
	Tracheal Cuff			●	●	●	●
	Oxygen Hood					●	●
	O2 Powered Flow restricted device			●	●	●	●
	Humidification			●	●	●	●
Suction							
	Manually Operated		●	●	●	●	●
	Mechanically Operated		●	●	●	●	●
	Pharyngeal		●	●	●	●	●
	Bronchial-Tracheal			●	●	●	●
	Oral Suctioning		●	●	●	●	●
	Naso-pharyngeal Suctioning			●	●	●	●
	Endotracheal Suctioning			●	●	●	●
	Meconium Aspiration Neonate with ET						●
Ventilation – assisted / mechanical							
	Mouth to Mask		●	●	●	●	●
	Mouth to Mask with O2		●	●	●	●	●
	Bag-Valve-Mask Adult		●	●	●	●	●
	Bag-Valve-Mask with supplemental O2 Adult		●	●	●	●	●
	Bag-Valve-Mask with supplemental O2 and reservoir Adult		●	●	●	●	●
	Bag-Valve-Mask Pediatric		●	●	●	●	●

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	Bag-Valve-Mask with supplemental O2 Pediatric		●	●	●	●	●
	Bag-Valve-Mask with supplemental O2 and reservoir Pediatric		●	●	●	●	●
	Bag-Valve-Mask neonate/infant		●	●	●	●	●
	Bag-Valve-Mask with supplemental O2 Neonate/Infant		●	●	●	●	●
	Bag-Valve-Mask with supplemental O2 and reservoir Neonate/Infant		●	●	●	●	●
	Noninvasive positive pressure vent.		●	●	●	●	●
	Jet insufflation						●
	Mechanical Ventilator (Manual/Automated Transport Ventilator)				●	●	●
Anesthesia (Local)							
						●	●
Pain Control & Sedation							
	Self Administered inhaled analgesics			●	●	●	●
	Pharmacological (non-inhaled)				●	●	●
Blood and Component Therapy Administration							
						●	●
Diagnostic Procedures							
	Blood chemistry analysis			●	●	●	●
	Capnography			●	●	●	●
	Pulmonary function measurement				●	●	●
	Pulse Oximetry			●	●	●	●
	Ultrasonography						●
Genital/Urinary							
	Bladder catheterization						
	Foley catheter						●

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Head and Neck							
	ICP Monitor						●
	Control of epistaxis		●	●	●	●	●
	Tooth replacement		●	●	●	●	●
Hemodynamic Techniques							
	Arterial catheter maintenance						●
	Central venous maintenance				●	●	●
	Access indwelling port					●	●
	Intraosseous access & infusion				●	●	●
	Peripheral venous access and maintenance				●	●	●
	Umbilical Catheter Insertion/Management						●
	Cutdown						●
	Monitoring Existing IVs			●	●	●	●
	Mechanical IV Pumps				●	●	●
Hemodynamic Monitoring							
	ECG acquisition		●	●	●	●	●
	ECG Interpretation					●	●
	Invasive Hemodynamic Monitoring						●
Obstetrics							
	Delivery of newborn		●	●	●	●	●
Other Techniques							
	Vital Signs		●	●	●	●	●
	Bleeding control		●	●	●	●	●
	Foreign body removal						●
	Incision/Drainage						●
	Intravenous therapy				●	●	●
	Medication administration			●	●	●	●
	Nasogastric tube			●	●	●	●
	Orogastric tube			●	●	●	●

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PROCEDURE	SKILL	PROCEDURE SUBTYPE	EMR	EMT	AEMT	I	P
	Pericardiocentesis					●	●
	Pleural decompression					●	●
	Patient restraint physical			●	●	●	●
	Patient restraint chemical					●	●
	Sexual assault victim management			●	●	●	●
	Trephination of nails						●
	Wound closure techniques					●	●
	Wound management		●	●	●	●	●
	Pressure Bag for High altitude						●
	Treat and Release			●	●	●	●
Resuscitation							
	Cardiopulmonary resuscitation (CPR) (all ages)		●	●	●	●	●
	Cardiac pacing					●	●
	Defibrillation/Cardioversion	AED	●	●	●	●	●
	Post resuscitative care			●	●	●	●
Skeletal Procedures							
	Care of the amputated part		●	●	●	●	●
	Fracture/Dislocation immobilization techniques		●	●	●	●	●
	Fracture/Dislocation reduction techniques						●
	Spine immobilization techniques		●	●	●	●	●
Thoracic							
	Thoracostomy (refer to "Other Techniques")						●
Body Substance Isolation / PPE							
			●	●	●	●	●
Lifting and moving techniques							
			●	●	●	●	●

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PROCEDURE	SKILL	PROCEDURE SUBTYPE	EMR	EMT	AEMT	I	P
Gastro-Intestinal Techniques							
	Management of non-displaced gastrostomy tube						●
Ophthalmological							
	Morgan Lenses			●	●	●	●
	Corneal Exam with fluorescein					●	●
	Ocular irrigation		●	●	●	●	●

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Scope of Practice - Formulary for EMS Personnel

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CATEGORY		EMR	EMT	AEMT	I	P
Analgesics						
	Acetaminophen		●	●	●	●
	Nonsteroidal anti-inflammatory		●	●	●	●
	Opiates and related narcotics			●	●	●
Anesthetics						
	Otic			●	●	●
	General - initiate				●	●
	General - maintenance				●	●
	Ocular			●	●	●
	Inhaled-self administered		●	●	●	●
	Local			●	●	●
Anticonvulsants				●	●	●
Glucose Altering Agents						
	Glucose Elevating Agents					
			●	●	●	●
			●	●	●	●
				●	●	●
	Glucose Lowering Agents				●	●
Antidotes						
	Anticholinergic Antagonists				●	●
	Anticholinesterase Antagonists	●	●	●	●	●
	Benzodiazepine Antagonists					
	Narcotic Antagonists		●	●	●	●
	Nondepolarizing Muscle Relaxant Antagonist					
	Beta/Calcium Channel Blocker Antidote				●	●
	Tricyclic Antidepressant Overdose				●	●
	Cyanide Antidote				●	●
	Cholinesterase Reactivator	●	●	●	●	●
Antihistamines & Combinations				●	●	●
Biologicals						
	Immune Serums				●	●
	Antibiotics		●	●	●	●

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Blood/Blood products	Initiate					●	
	Maintain				●	●	
Blood Modifiers	Anticoagulants				●	●	
	Antiplatelet Agents		●	●	●	●	
	Hemostatic Agents		●	●	●	●	
	Thrombolytics					●	
	Cardiovascular Agents						
Cardiovascular Agents	Alpha Adrenergic Blockers				●	●	
	Adrenergic Stimulants				●	●	
	Antiarrhythmics				●	●	
	Beta Adrenergic Blockers				●	●	
	Calcium Channel Blockers				●	●	
	Diuretics				●	●	
	Inotropic Agents				●	●	
	Vasodilatory Agents		●	●	●	●	
	Vasopressors				●	●	
	Central Nervous System	Antipsychotic				●	●
	Dietary Supplements/Electrolyte	Vitamins					
Minerals - start at a health care facility		See section: Intravenous Fluids					
Salts - start at a health care facility		See section: Intravenous Fluids					
Electrolytes Solutions - start at a health care facility		See section: Intravenous Fluids					
Hypertonic Saline					●	●	
Gas	Oxygen	●	●	●	●	●	
	Heliox					●	
Gastrointestinal	Antacids						
		OTC		●	●	●	

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	Antidiarrheals		●	●	●	●
	Antiemetics		●	●	●	●
	H2 Blockers		●	●	●	●
Hormones	Steroids			●	●	●
Intravenous Fluids	isotonic			●	●	●
	hypotonic			●	●	●
	hypertonic			●	●	●
	M = Maintenance I = Initiate					
	Normal Saline Solutions (NSS - 0.9%)		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
	Lactated Ringers		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
	D5 1/2 NSS (0.45%)		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
	D5 1/4 NSS (0.25%)		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
	D5 1/3 NSS (0.33%)		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
	1/2 NSS		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
	1/3 NSS		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
	1/4 NSS		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
	D5LR		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
Neuromuscular Blockers						●
Respiratory	Anticholinergics		●	●	●	●
	Sympathomimetics		●	●	●	●
M = Maintenance						
I = Initiate						

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**Attachment: F to the
April 7, 2010 PDC Minutes**

**Reference Document – DRAFT
Proposed Timeline for
Implementation of the VEMSES,
End of NSC Testing
And Mandatory AEMT
Accreditation**

Education and Certification Examination Content Timeline

