

The Phoenix Document

An Evolution from National Standard Curriculum to the Virginia EMS Education Standards

Training Levels Included:

- Emergency Medical Technician (EMT)



Introduction:

This document identifies the differences in essential knowledge content between the National Standard Curricula/Virginia Standard Curricula and the 2010 Virginia EMS Education Standards (VEMSES). **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.**

Instructor/Coordinators may also use this document to identify topics for continuing education programs to assure current certified Virginia Providers meet the same knowledge competencies of Virginia Providers certified after the implementation of the VEMSES.

Emergency Medical Technician (EMT)

See the Instructor Guidelines for Emergency Medical Technician (214 pages) at: <http://www.ems.gov/pdf/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. A minimum of five patient assessments must be completed on live patients, and no more than five patient assessments on standardized programmed patients or advanced simulation mannequins
- 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
- Determining blood glucose
- 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)
- 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

Patient Assessment

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- Monitoring Devices –blood glucose monitoring, non-invasive blood gas and chemistry monitoring (e.g. capnography, pulse oximetry, etc.)

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 2009 National EMS Education Standards Gap Analysis Template 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.

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.

- To link to the Procedures click on the following web link:
http://www.vdh.virginia.gov/OEMS/Files_page/Training/ScopeOfPractice-Procedures.pdf
- To link to the Formulary click on the following web link:
http://www.vdh.virginia.gov/OEMS/Files_page/Training/ScopeOfPractice-Formulary.pdf

Appendix C: PES Practice Analysis

- To link to the PES Practice Analysis click on the following web link:
http://www.vdh.virginia.gov/OEMS/Files_page/Training/PESPracticeAnalysis.pdf