

## 4. Knowledge and Skill Comparison (Emergency Medical Technician)

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