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NATIONAL EMERGENCY MEDICAL SERVICES
EDUCATION STANDARDS



**Transitioning BLS Providers to the
2021 NEMSES Through Continuing
Education**

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DISCLAIMER: The contents of this document does not constitute any endorsement of any EMS textbook or book publisher by the office, department or the Board of Health.

Transitioning BLS Providers to the 2021 NEMSES Through Continuing Education

Background

With the release of the 2021 National EMS Education Standards, there are a noteworthy number of changes and new content items which have been added to initial BLS training programs—especially EMT programs. In Virginia, as with the rest of the nation, any EMR or EMT trained from 1994 through 2022 will not have been exposed to these topics formally in the classroom.

Instead of requiring a mandatory transition program for BLS providers, the Virginia Office of EMS has opted to permit these providers—some 25,000 EMT's alone—to be transitioned to this new content and concepts through regular continuing education programs.

This document has been created to assist Education Coordinators in determining topics to be taught to BLS providers through their normal required continuing education.

A brief background about 2021 NEMSES is followed by specific topic areas which all BLS providers in Virginia are expected to know. New BLS providers completing training in 2023 and forward will have covered these topics in their initial training programs.

NEMSES Have Been Redesigned & Rearranged

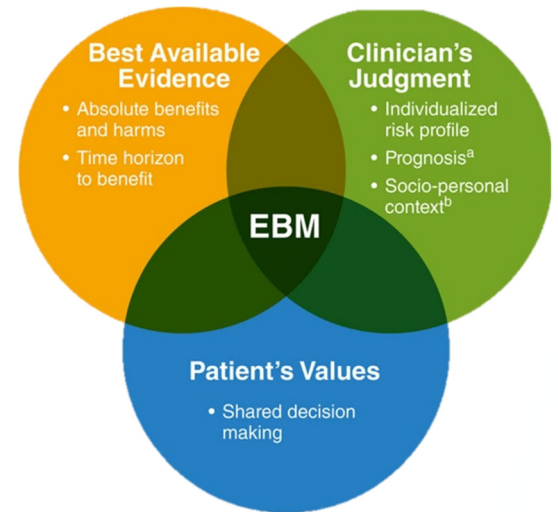
The updates and revisions to the 2021 National EMS Education Standards were to the following areas:

- Behavioral/Psychiatric
- Cultural Humility
- EMS Operations
- Pharmacology
- Public Health
- EMS Safety, Wellness and Resilience
- Pediatrics
- Geriatric

NEMSES Builds on Best Practices & Scientific Evidence

This flexible and adaptable format of the Standards allows for ongoing revisions and updates to EMS educational content.

This ensures that the Standards can be updated and will continue to be relevant when any changes occur due to new scientific evidence, educational practice advances, and updates to community standards of care.

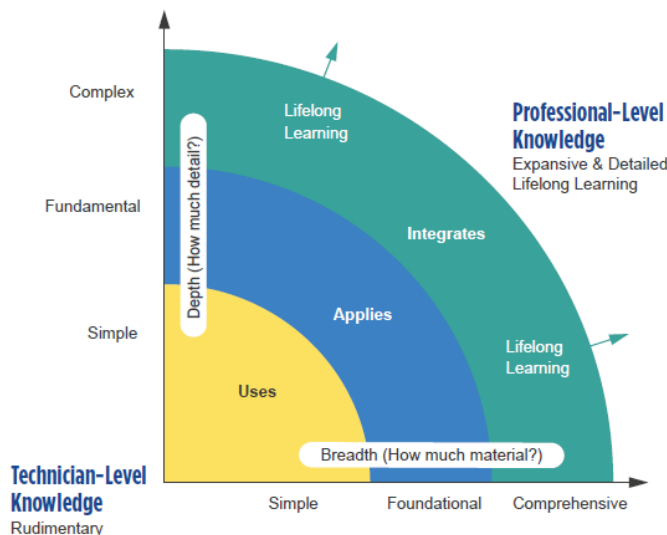


Understanding Depth and Breadth of Content

To describe the intended depth of knowledge of a particular concept within a provider level, the revision team uses the terms simple, fundamental and complex. These terms can seem ambiguous and confusing when used in

isolation (e.g., learning to correctly use a BVM is not a “simple” task).

Figure 2.1: Depth/Breadth Terminology



Instead, the meaning of each term is relative to the other terms. For example, knowledge that is categorized as “simple” is only simple relative to another curriculum that provides more detail, such as when comparing EMT to AEMT. EMT students may need a greater level of airway anatomy detail because the scope of practice is different.

Scope of practice is even more different for the AEMT and paramedic student, who will need increasingly greater levels of airway anatomy detail (complex). Course directors, instructors, medical directors and local stakeholders

can decide the precise level of detail based on community and student needs rather than establishing a single prescriptive curriculum for the entire nation.

A Note about Textbooks & Content

After much research, we have determined that as of December 31, 2022, there is only one EMT textbook on the market that minimally reflects the contents and modifications introduced in the new 2021 National EMS Standards. We have been assured by that all publishers are working on new textbooks which will reflect the 2021 National EMS Education Standards, however they are not yet on the market.

If you are using an old textbook or a textbook which does not minimally meet the 2021 National EMS Education Standards, it is incumbent on you as an Education Coordinator to ensure that you are appropriately covering the content in the 2021 NEMSES. In most cases, this will mean additional work for you as you will need to research the new content and provide supplemental resources to your students.

Some of the content areas which will require significant updating and additional resources on your part include:

- Behavioral/Psychiatric
- Cultural Humility
- Pharmacology
- Public Health
- EMS Safety, Wellness, and Resilience
- Patients with Special Challenges

Topics NOT Covered in Initial EMT Education Programs

Most notably, for EMT initial courses, there are two skills that will not be taught as a part of the NEMSES:

- Supraglottic airways

- Capnography

For these skills, additional training and skills verification will be required of the EMS agency in coordination with their EMS Physician.

NOT all EMT programs in the Commonwealth will opt to teach these skills and providers coming into Virginia of out-of-state may not have been exposed to these skills.

Agencies and their EMS Physician must have a plan in place to ensure providers to provide additional training necessary for the provider to meet the requirements of the Virginia Scope of Practice Procedures and Formulary.

Behavioral/Psychiatric

Many, if not most EMS systems have seen a steady rise in behavioral emergencies and patients experiencing acute and chronic manifestations of psychiatric illnesses. Moreover, a lack of available in-patient beds at mental health facilities has resulted in EMS clinicians needing to manage these patients for longer periods of time and over longer distances.

As a result, the behavioral/psychiatric section of the Education Standards was revised to include more information regarding acute behavioral crisis and mental health disorders.

Greater depth and breadth of knowledge were recommended for areas involving potential safety hazards to patients and EMS providers. Some psychiatric disease and syndrome areas were revised and simplified.

NEW TOPICS TO COVER

- Basic principles of the mental health system (S,S)
- Patterns of violence, abuse and neglect (S,S)
- Anxiety (F,F)
- Depression (F,F)
- Medical fear (F,F)
- Substance use disorder (F,F)
- PTSD (F,F)

- Other psychiatric/behavioral disorders to be determined locally (S,S)

Cultural Humility

To increase recognition of the importance of maintaining an awareness of the assumptions and biases related to cultural issues and how they may affect our patients, co-workers, and students.

It is recommended that in EMS Cultural Humility should address education, EMS workforce, and patient care.

This would include understanding bias in the classroom, creating a diversified workforce, and providing culturally competent, equitable, and medically appropriate care to every patient regardless of their background.

One goal of the Standards is to ensure *“our students provide culturally competent, equitable and medically appropriate prehospital care to each and every patient no matter their background.”*

NEW TOPIC TO COVER

- Effectively communicates in a non-discriminatory manner that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome.

EMS Operations

EMS Operations are determined by a variety of factors, including the setting, the clinician’s role, and the EMS system design. Because of this, it is not possible to provide rigid and or simple training requirements across these diverse settings. EMS educators and institutions need to work with local and state agencies to determine the appropriate level of knowledge that providers need to perform their duties safely and efficiently.

NEW TOPICS TO COVER

Content should be taught by Subject Matter Experts (SME):

- Specific minimum requirements for:
 - Emergency Vehicle Operations
 - Incident Management
 - Mass Casualty Situations
 - Natural Disasters
 - ASHER - (Active Shooter/Hostile Event Response)
 - Other events
 - Landing Zone Operations
 - Rescue Operations
 - Hazardous Materials

Pharmacology

The pharmacology section has been expanded in the Standards for EMR, EMT, AEMT, and paramedics. It was determined that is not enough to solely teach pharmacology in a traditional didactic manner. It should also include psychomotor and affective instruction.

In addition, significant opportunities to practice the skills should be provided before leaving the education program.

From the Standards: *“It is not enough to solely teach pharmacology in a traditional didactic manner. This skill should include didactic, psychomotor and affective instruction.”*

- Increased emphasis on medication safety practices at all levels
 - i.e. medication cross checks
 - Medication skills during simulation
- Significant opportunities to practice
 - Simulation
 - Patient clinical experience
 - Adult, pediatric and geriatric concerns taught due to chance of medication errors in all populations

NEW TOPICS TO COVER

Principles of Pharmacology

- Medication safety (F,F)
- Medication legislation (F,F)
- Naming (F,F)
- Classifications (F,F)
- Storage and security (F,F)
- Medication interactions (S,S)
- Adverse drug reactions (S,S)
- Metabolism and excretion (F,F)
- Mechanism of action (F,F)
- Medication response relationships (F,F)

Medication Administration

- Use a Medication Cross Check procedure (F,F)
- Use an autoinjector (S,S)
- Use a unit-dose, premeasured intranasal device (S,S)
- Administer medications to a patient (F,F)
- Provide pain management, including ethical and safety considerations (F,F)

Acute Medications

- Names (F,S)
- Effects (S,S)
- Indications (F,S)
- Contraindications (F,S)
- Side effects (F,S)
- Routes of administration (F,S)
- Dosages (F,S)
- Actions (F,S)
- Complications (F,S)
- Interactions (F,S)

Chronic or Maintenance Medications

- Class names (S,S)
- Class indications (S,S)
- Class complications (S,S)
- Class side effects (S,S)
- Polypharmacy (S,S)

Public Health

The changes to the public health section reflect the evolution in EMS. Public health prevention and pandemic preparedness efforts are essential functions in the future as EMS continues to be at the crossroads between health care, public health, and public safety.

- The enhancements of the public health segment enable EMS providers to work alongside of other disciplines.
- The enhancements also lay the foundation of growth into specialty fields for paramedics

- The enhancements also help paramedics make safety and more informed decisions about alternative destinations and healthcare navigation for patients.
 - Community Paramedicine is one example of this.

From the Standards: *“The new standards are intended to prepare the entry-level provider to work alongside and collaboratively with specially trained community paramedics, social workers, public health organizations, health care entities, emergency management agencies and non-governmental organizations in their day-to-day duties and lay the foundation for advancement into specialized roles.”*

NEW TOPICS TO COVER

- EMS roles in public health (S,S)
- Infection prevention and control (S,S)
- Human trafficking (S,S)
- EMS EHR reporting and data collection (S,S)
- Governmental/nongovernmental roles & resources (S,S)
- Public health mission and goals (S,S)
- Social, geographic, economic, demographic determinants of health (S,S)
- Patient and community education (S,S)
- Injury prevention and wellness (S,S)
- Unique pediatric, geriatric and special populations public health concerns (S,S)
- Screenings and vaccinations/ immunizations (S,S)

EMS Safety, Wellness, and Resilience

Workforce safety and wellness have been expanded to reflect principles of stress management, responder mental health, resilience, and suicide prevention across all levels.

An overall greater emphasis on EMS mental health resources is recommended. Standard safety precautions, use of personal protective equipment, illness and injury prevention, and lifting and moving patients continue to be emphasized at all levels of emergency responders. Other areas that have been added include

crew resource management across all levels and disease transmission in the EMT, AEMT and paramedic curricula.

NEW TOPICS TO COVER

- Stress management (F,F)
- Prevention of work-related injuries and illnesses (F,F)
- Responder mental health, resilience and suicide prevention (F,F)
- Wellness principles (F,F)
- Disease transmission (F,F)

Patients with Special Challenges

Emergency medical providers are regularly called upon to care for special populations with unique healthcare needs. While it is estimated approximately 20% of the population in the United States has some form of disability, those patients with developmental conditions, in particular, may pose distinct challenges in the prehospital setting.

These conditions may either have unique medical issues associated with them, or may force the EMS provider to use different approaches for common issues.

It is important for EMS providers to recognize the basic elements of many disabilities. Detailed appreciation of certain aspects, such as pathophysiology or long-term management, can be helpful in some cases, but are often less pertinent in the emergent situation.

NEW TOPICS TO COVER

- Recognizing and reporting abuse and neglect (S,S)
- Abuse/Intimate partner violence (S,S)
- Neglect (S,S)
- Child/dependent adult maltreatment (S,S)
- Homelessness (S,S)
- Poverty (S,S)
- Bariatrics (S,S)

- Technology dependent (locally determined) (S,S)
- Hospice/ terminally ill (S,S)
- Tracheostomy care/dysfunction (S,S)
- Homecare (S,S)
- Sensory deficit/loss (S,S)
- Developmental disability (S,S)
- Autism Spectrum Disorder (S,S)
- Orthotics/prosthetics (S,S)

Emerging Technologies

There are many new and emerging technologies in healthcare.

- EMS-POCUS
- Blood Products
- Simple Thoracostomies
- And more....

As stated in the Standards: *“Widespread education based on specific technologies should be decided at the local or state level. Only after national adoption and inclusion in a practice analysis should technologies be included in the National EMS Education Standards and National EMS Scope of Practice Model.”*