Emergency Medical Responder

8336 36 weeks

Table of Contents

Acknowledgments

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Course Description

Suggested Grade Level: 10 or 11 or 12

The Emergency Medical Responder (EMR) course prepares the EMR student to provide immediate life-saving interventions for patients of all ages while awaiting additional emergency medical services (EMS) resources. Areas of study include an introduction to EMS systems, roles and responsibilities of the EMR, anatomy and physiology, medical emergencies, trauma, and special considerations for working in the pre-hospital setting. Students must complete a minimum of 85 percent of the didactic and lab aspects of the course, per 12VAC5-31-1501 in the Code of Virginia. Successful completion of all course requirements and instructor endorsement may lead to eligibility to take the Virginia State Psychomotor Exam and the National Registry of Emergency Medical Technicians (NREMT) EMR cognitive exam. Students must meet the requirements of the Functional Position Description for the Basic Life Support Provider (refer to EMS.TR.14B and 12VAC5-31-1501 in the Code of Virginia).

Note: Students must be 16 or older to take this course. Please note all students will need to undergo a criminal background check that includes fingerprinting and drug screening.

Task Essentials Table

- Tasks/competencies designated by plus icons (⊕) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (◯) are optional
- Tasks/competencies designated by minus icons (⊖) are omitted
- Tasks marked with an asterisk (*) are sensitive.

8336	Tasks/Competencies
Introducing Emergency Medical Responder (EMR)	
⊕	Outline mandatory course requirements and paperwork.
⊕	Complete a state-approved certification for cardiopulmonary resuscitation (CPR).
Exploring Medical Responder Fundamentals	
⊕	Describe the components of EMS systems.
⊕	Explain the influence of research and evidence-based decision making on EMS care.
⊕	Describe the roles and responsibilities of an EMR toward personal safety and the safety of the crew, patient, and bystanders.
⊕	Explain the components and legal considerations of EMS documentation.
⊕	Describe the techniques of effective and efficient team communication.
⊕	Describe the communication skills that should be used to interact with the patient, family, and bystanders while providing patient care.
⊕	Explain the legal implications of EMS care.
⊕	Describe the EMS system's role in prevention of illness and injury through public education.
Exploring the Human Body	
⊕	Describe the anatomy and physiology of the major body systems.
⊕	Define common medical terms and abbreviations.
⊕	Use knowledge of shock and respiratory compromise to respond to life threats.
⊕	Describe the major physiological and psychosocial characteristics of life stages in relation to patient care.

Understanding Principles of Pharmacology

⊕ Describe the medications that the EMR may administer.

⊕ Demonstrate the steps for assisting or administering medications that are within an EMR's scope of practice.

Managing Airway, Respiration, and Artificial Ventilation

⊕ Discuss the general anatomy and physiology of respiration and ventilation.

⊕ Demonstrate the assessment and management of the airway.

⊕ Demonstrate the assessment of respiration and management of adequate respiration.

⊕ Demonstrate the assessment and management of adequate and inadequate ventilation.

Assessing the Patient

⊕ Demonstrate a scene size-up for single-patient and multiple-patient situations.

⊕ Demonstrate a primary assessment.

⊕ Demonstrate history taking.

⊕ Demonstrate a secondary assessment.

⊕ Demonstrate a reassessment.

Managing Medical Emergencies

⊕ Describe life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.

⊕ Demonstrate the assessment and management of patients experiencing neurological emergencies.

⊕ Describe the assessment and management of patients with abdominal or gastrointestinal disorders.

⊕ Demonstrate the assessment and management of patients with allergic reactions.

⊕ Identify a patient with a potential infectious disease.

⊕ Describe the assessment and management of patients with diabetic emergencies.

⊕	Describe the assessment and management of patients displaying psychotic behaviors or signs of other psychiatric disorders.
⊕	Demonstrate the assessment and management of patients experiencing cardiac emergencies.
⊕	Demonstrate the assessment and management of patients suspected of suffering from poisoning.
⊕	Demonstrate the assessment and management of patients with respiratory emergencies.
⊕	Describe the assessment and management of patients with genitourinary/renal disorders.
⊕	Describe emergency medical care of patients with gynecological emergencies.
⊕	Describe the identification, assessment, and management of patients with disorders of the eyes, ears, nose, and throat.

Managing Traumatic Injuries

⊕	Describe the assessment and management of patients with shock, respiratory failure or arrest, and cardiac arrest.
⊕	Describe bleeding.
⊕	Describe chest trauma.
⊕	Describe abdominal trauma.
⊕	Describe orthopedic trauma.
⊕	Describe soft-tissue trauma.
⊕	Describe head, facial, neck, and spine trauma.
⊕	Describe special considerations in trauma.
⊕	Describe environmental emergencies.
⊕	Describe multi-system trauma.

Managing Special Patient Populations

⊕	Describe the assessment and management of obstetric patients.
⊕	Describe the care of neonatal patients.
⊕	Describe the care of pediatric patients.

⊕	Demonstrate the assessment and management of geriatric patients.
⊕	Describe the assessment and management of patients with special challenges.
Understanding EMS/EMR Operations	
⊕	Discuss the risks and responsibilities of emergency response.
⊕	Explore establishment of incident command.
⊕	Evaluate the role of an EMR in a multiple-casualty situation.
⊕	Describe the use of air medical transport.
⊕	Describe the fundamental concepts of extrication.
⊕	Explain the EMR's role during a call involving hazardous materials.
⊕	Evaluate the role of the EMR in a mass-casualty situation due to terrorism or disaster.
Performing Clinical Behavior and Judgment Assessments	
⊕	Demonstrate long-bone splinting.
⊕	Demonstrate joint splinting.
⊕	Demonstrate airway management.
⊕	Demonstrate bleeding control and care of shock.
⊕	Perform simulated patient scenarios.
Exploring Requirements for Certification and Work-Based Learning Opportunities	
⊕	Research certification requirements for the EMR.
○	Observe emergency medical services operations.
⊕	Research recertification requirements for the EMR.
Describing the Opioid Crisis	
⊕	Describe the history and current state of the opioid crisis in the United States.
⊕	Describe the history and current state of the opioid crisis in Virginia.
⊕	Define the pharmacological components and common uses of opioids.

Examining the Key Factors of Drug Addiction	
⊕	Examine the science of addiction.
⊕	Explain prevention and early intervention strategies.
⊕	Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).
⊕	Describe the treatment models of addiction therapy.
⊕	Describe the medication management antidote used to prevent fatal opioid overdoses.
Understanding Pain Management Protocols	
⊕	Explain the science of physiological and mental pain.
⊕	Describe the diagnostic tools used in developing pain management plans.
⊕	Describe pain treatment options available to various populations of patients.
⊕	Describe the effects of opioid dependency on the human body systems.
⊕	Explain the mechanism and physical effects of opioids on the human body.
⊕	Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.
⊕	Describe the withdrawal and tapering side effects of opioid use.
⊕	Describe storage and disposal options for opioids.
⊕	Explain community resources for education about opioid use.
Working with Patients and Caregivers	
⊕	Describe key communication topics involving opioids for patients.
⊕	Describe communication topics for caregivers and family members.

Legend: ⊕Essential ◯Non-essential ⊖Omitted

Curriculum Framework

Introducing Emergency Medical Responder (EMR)

Task Number 39

Outline mandatory course requirements and paperwork.

Definition

Outline should include

- reviewing prerequisites for emergency medical services (EMS) training programs, criminal history and standards of conduct on the first and last day of the course (refer to [High School Based Emergency Medical Technician [EMT] Educational Programs](#))
- completing First Night paperwork from the Virginia Department of Health's Office of Emergency Medical Services (OEMS) (refer to the [Training Program Administration Manual [TPAM]](#))
- acknowledging that a student must take the following assessments at the completion of the course:
  - o Virginia Psychomotor Exam
  - o National Registry of Emergency Medical Technicians (NREMT) EMR cognitive examination.

Process/Skill Questions

- What are the requirements for the Virginia Psychomotor Exam?
- When is the NREMT cognitive examination given?
- When would the EMR student be eligible to begin certification testing?
- What options does a student have if he/she does not meet eligibility requirements for EMS training programs?
- What is the significance of the completion of the First Night paperwork from the Virginia Department of Health's OEMS?

Task Number 40

Complete a state-approved certification for cardiopulmonary resuscitation (CPR).

Definition

Completion should include

- CPR training and certification prior to the first day of EMR curriculum and instruction
- successful fulfillment of the [CPR certification requirements of the Virginia OEMS](#).

Process/Skill Questions

- What level of CPR training is required for an EMR?
- When must students have proof of CPR completion?
- When should an individual retrain in CPR?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid

Exploring Medical Responder Fundamentals

Task Number 41

Describe the components of EMS systems.

Definition

Description should include

- history of EMS
- patient safety
- quality improvement and the EMR's role
- professional roles, responsibilities, and expectations for EMS providers, as specified in Virginia statutes
- medical direction and the EMR's role
- methods used to access the EMS system.

Process/Skill Questions

- What is the significance of the EMS White Paper (1966) in the creation of EMS systems?

- What areas of the run report would be identified for quality improvement?
- What is the difference between online and offline medical direction?

Task Number 42

Explain the influence of research and evidence-based decision making on EMS care.

Definition

Explanation should include

- the effects on on-scene care decisions
- the recording of patient data by an EMR
- improvement of EMS care through patient reports
- the effect of research on changes in healthcare guidelines.

Process/Skill Questions

- How are new medical advancements integrated into EMS?
- What influence does military field medicine have on EMS?
- How is research involved in the revision of local or state protocols?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 43

Describe the roles and responsibilities of an EMR toward personal safety and the safety of the crew, patient, and bystanders.

Definition

Description should include

- standard safety precautions
- personal protective equipment (PPE)
- stress management
- dealing with death and dying
- prevention of work-related injuries
- lifting and moving patients
- disease transmission
- wellness principles.

Teacher resource: [The Code Green Campaign](#)

Process/Skill Questions

- What probable stressors are EMRs exposed to?
- What resources are available to support mental health and stress management for EMS providers?
- What effect does using improper lifting technique have on the provider and on the patient?
- Why should an EMR have a good understanding of the stages of grief?
- What are some measures that can be taken for provider safety?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 44

Explain the components and legal considerations of EMS documentation.

Definition

Explanation should include

- the principles of medical documentation and report writing
- the information included on a written or electronic report, including standard methods of recording patient information
- cybersecurity and privacy (e.g., Health Insurance Portability and Accountability Act of 1996 [HIPAA]) considerations.

Process/Skill Questions

- How does an EMR use documentation to paint a picture for the patient-care continuum?
- What information should be included in the narrative section of patient documentation?
- What are the legal considerations of a patient-care report that is used as a court document?

HOSA Competitive Events (High School)

       Health Science Events

- o   Knowledge Test: Medical Law and Ethics

       Emergency Preparedness Events

- o   Emergency Medical Technician

Task Number 45

Describe the techniques of effective and efficient team communication.

Definition

Description should include the techniques for

- calling for additional resources
- transferring care of the patient to another EMS provider or to hospital staff
- interacting within the team structure
- using the EMS communication system
- communicating with other public safety and healthcare professionals.

Process/Skill Questions

- What information should be communicated when transferring a patient to another EMS provider or to the hospital staff?
- How should an EMS provider communicate on the radio when additional resources are required?
- How should an EMR communicate with team members, public safety professionals, and healthcare professionals during an incident?

HOSA Competitive Events (High School)

Task Number 46

Describe the communication skills that should be used to interact with the patient, family, and bystanders while providing patient care.

Definition

Description should include

- the difference between communication skills used to interact with the patient and those used to interact with others
- ways to adjust communication strategies for a patient's age, stage of development, special needs, and cultural differences
- interviewing techniques
- verbal defusing strategies
- family-presence issues.

Process/Skill Questions

- How do various stages of development affect communication with patients?
- What can the EMS provider discuss with the family concerning a patient and his/her care?
- How can the EMR communicate with a patient with special needs or with the patient's caregiver?
- How should an EMR communicate with patients, patient family members, and bystanders during an incident?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 47

Explain the legal implications of EMS care.

Definition

Explanation should include aspects such as

- scope of practice of an EMR
- consent and refusal of care
- confidentiality
- advance directives
- tort and criminal actions
- evidence preservation
- statutory responsibilities
- mandatory reporting
- ethical and moral obligations
- end-of-life issues.

Teacher resource: VEMSES, OEMS, Virginia Department of Health

Process/Skill Questions

- What type of consent must be obtained for an EMR to provide patient care?
- What information is necessary for an EMR and patient if refusal of care or an advance directive is documented?
- What is the difference between scope of practice and standard of care?
- What situations require mandatory reporting?

HOSA Competitive Events (High School)

Health Science Events

o Knowledge Test: Medical Law and Ethics

Teamwork Events

o HOSA Bowl

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 48

Describe the EMS system's role in prevention of illness and injury through public education.

Definition

Description should include

- local public health resources for preventing illness and injury
- the role of EMS personnel in public health emergencies
- the principles of illness and injury prevention in emergency care.

Process/Skill Questions

- How can public education be used to inform the community about prevention of illness and injury?
- How can an EMR use public education as a means to promote illness and injury prevention when answering an emergency call?
- What agencies assist EMS in public health emergencies?

Exploring the Human Body

Task Number 49

Describe the anatomy and physiology of the major body systems.

Definition

Description should include the structures and functions of the following systems:

- Respiratory
- Circulatory
- Musculoskeletal
- Nervous
- Endocrine
- Gastrointestinal
- Genitourinary
- Reproductive

- Integumentary

Process/Skill Questions

- How does the respiratory system distribute oxygen to the red blood cells?
- What are the components of the circulatory system?
- How can one system affect another system during an illness?

HOSA Competitive Events (High School)

Teamwork Events

- o HOSA Bowl

Task Number 50

Define common medical terms and abbreviations.

Definition

Definition should include

- listing common anatomical and topographical terms and abbreviations
- providing a standard definition of each.

Process/Skill Questions

- What is the purpose of using anatomical terms when communicating with another healthcare provider or documenting the patient's illness or injury?
- What abbreviations are acceptable on the patient care report?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Terminology

Task Number 51

Use knowledge of shock and respiratory compromise to respond to life threats.

Definition

Use should include the interrelationship of body systems.

Process/Skill Questions

- What is shock? What causes it?
- What body systems are affected during shock?
- How does perfusion affect the circulatory and respiratory systems?

HOSA Competitive Events (High School)

Health Science Events

o Knowledge Test: Pathophysiology

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 52

Describe the major physiological and psychosocial characteristics of life stages in relation to patient care.

Definition

Description should include

- identification of life stages, including the physiological and psychosocial characteristics that define each
- the ways life-span development affects patient assessment, management, and end-of-life considerations.

Process/Skill Questions

- What is the proper approach for assessing a pediatric patient?
- What are the likely fears of an injured adolescent?

- What is the proper approach for assessing an elderly patient?
- What additional factors involve end-of-life considerations across the lifespan?

HOSA Competitive Events (High School)

Health Science Events

o Knowledge Test: Human Growth and Development

Understanding Principles of Pharmacology

Task Number 53

Describe the medications that the EMR may administer.

Definition

Description should include

- the fundamentals of medication safety
- the forms and routes of medications that an EMR may administer during an emergency
- general pharmacological terms, including the names, indications, contraindications, side effects, actions, and common dosages of medications.

Process/Skill Questions

- Why do medications have multiple names, such as trade names, generic names, and brand names?
- What information should be given to medical control to obtain permission to assist a patient with his/her medication?
- What are the indications, contraindications, side effects, actions, and dosages of medications with which EMRs are allowed to assist?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 54

Demonstrate the steps for assisting or administering medications that are within an EMR's scope of practice.

Definition

Demonstration should include

- identifying the *five rights* of medication administration
- assisting with giving medication to a patient
- administering medication
  - o patient administration
  - o self-administration
  - o peer-administration.

Process/Skill Questions

- What is the importance of the *five rights* of assisting the patient with the administration of his/her medications?
- How would an EMR assist with or administer medications that are within the EMR's scope of practice?
- What should an EMR do if he or she believes medical control provided an incorrect dosage?

HOSA Competitive Events (High School)

  Emergency Preparedness Events

  o Emergency Medical Technician

Managing Airway, Respiration, and Artificial Ventilation

Task Number 55

Discuss the general anatomy and physiology of respiration and ventilation.

Definition

Discussion includes definition of *respiration* (internal and external) and *ventilation*.

Teacher resource: [National EMS Education Standards and EMR Instructional Guidelines](#)

Process/Skill Questions

- What is respiration?
- What is ventilation?
- What is the difference between ventilation and respiration?

Task Number 56

Demonstrate the assessment and management of the airway.

Definition

Demonstration should include

- a description of the anatomy and physiology related to the airway
- standard procedures used to assess airways of patients of all ages
- techniques within an EMR's scope of practice that are used to maintain airways for patients of all ages.

Process/Skill Questions

- What is adequate breathing? What is inadequate breathing?
- What are the sections of the pharynx?
- How is the airway assessed during a primary assessment?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Task Number 57

Demonstrate the assessment of respiration and management of adequate respiration.

Definition

Demonstration should include

- a description of the related pathophysiology and physiology, including pulmonary ventilation, oxygenation, and respiration (e.g., external, internal, cellular)
- an explanation of the signs and symptoms of adequate vs. inadequate breathing
- minute ventilation
- alveolar ventilation
- administration of supplemental oxygen therapy
- a description and use of the components of an oxygen delivery system.

Process/Skill Questions

- What are the various ways oxygen can be administered to a patient?
- How is the oxygen delivery system set up and checked before each ambulance call?
- What is the difference between external and internal respiration?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 58

Demonstrate the assessment and management of adequate and inadequate ventilation.

Definition

Demonstration should include

- an explanation of the effect of ventilation on cardiac output
- implementation of artificial ventilation and assisted ventilation.

Process/Skill Questions

- How is artificial ventilation given to an adult patient, a child, and an infant?
- How is minute ventilation calculated?
- How does one calculate the amount of oxygen reaching the alveoli?

HOSA Competitive Events (High School)

  Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Assessing the Patient

Task Number 59

Demonstrate a scene size-up for single-patient and multiple-patient situations.

Definition

Demonstration should include

- scene safety issues
- mechanism of injury or nature of illness
- steps needed for scene management
- presence and effect of environmental hazards, if any
- presence and management of violence, if any
- Standard Precautions appropriate to the scene
- need for additional resources.

Process/Skill Questions

- Why is determining the mechanism of injury or nature of illness an important part of the scene size-up?
- What are examples of hazards that may be found on a motor-vehicle collision scene, an assault scene, or another scene type specific to the local area?
- When should an EMR call for additional resources?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CERT (Community Emergency Response Team) Skills
- o CPR/First Aid
- o Emergency Medical Technician

Task Number 60

Demonstrate a primary assessment.

Definition

Demonstration should include

- forming a general impression
- assessing a patient's level of consciousness
- assessing a patient's airway, breathing, and circulation (ABC)
- identifying life threats
- assessing vital functions
- integrating treatment or procedures needed to preserve life
- making and communicating a transport decision.

Process/Skill Questions

- What things should an EMR consider when forming a general impression?
- What are the three parts of the assessment of circulation, and what does each one tell the EMR about the patient's condition?
- What treatments should be performed during the primary assessment, and which ones can be delayed until the secondary assessment?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 61

Demonstrate history taking.

Definition

Demonstration should include

- investigating the chief complaint
- assessing the mechanism of injury or nature of illness
- soliciting and recording a patient's past medical history
- identifying associated signs or symptoms.

Process/Skill Questions

- How does the mechanism of injury or nature of illness change the questions that are included when an EMR is investigating the chief complaint?
- How does the patient's chief complaint (medical or trauma) change when the patient history is performed within the assessment sequence?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Task Number 62

Demonstrate a secondary assessment.

Definition

Demonstration should include

- deciding on the appropriate type of physical exam for the patient's situation
- performing a rapid body scan
- carrying out a focused assessment of pain
- assessing vital signs
- acquiring a 12-lead electrocardiogram (ECG)
- using techniques of physical examination for various body systems (e.g., respiratory, cardiovascular, neurological, musculoskeletal).

Process/Skill Questions

- What determines whether a patient should have a rapid physical exam or a focused exam?
- What techniques are used during a physical exam?
- What are the components of a set of baseline vital signs? What does each one tell an EMR about a patient's condition?

HOSA Competitive Events (High School)

    Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Task Number 63

Demonstrate a reassessment.

Definition

Demonstration should include

- explaining when and how to perform a reassessment for all patient situations
- identifying and performing the components of a reassessment.

Process/Skill Questions

- What components of a reassessment are most important?
- How does the severity of the patient's condition determine the frequency of the reassessment?
- Why should a reassessment be performed?

HOSA Competitive Events (High School)

    Emergency Preparedness Events

- Emergency Medical Technician

Managing Medical Emergencies

Task Number 64

Describe life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.

Definition

Description should include

- identifying the steps needed to assess the patient's medical complaint, using signs/symptoms, allergies, medications, pertinent past history, last oral intake, events leading to injury or illness (SAMPLE) and onset, provocation, quality, radiation, severity, timing (OPQRST)
- determining the proper mode of transport
- deciding the best destination for patient transport.

Process/Skill Questions

- What are the advantages of using SAMPLE and OPQRST when performing a patient assessment?
- When is it appropriate to use lights and sirens during an emergency call?
- Why would an EMR choose a specialty treatment center over the closest appropriate hospital?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 65

Demonstrate the assessment and management of patients experiencing neurological emergencies.

Definition

Demonstration should include assessing and managing such emergencies as

- decreased level of responsiveness
- seizure
- stroke.

Process/Skill Questions

- What are the steps in treating a patient with a decreased level of responsiveness?
- How are seizures treated?
- How is stroke identified?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 66

Describe the assessment and management of patients with abdominal or gastrointestinal disorders.

Definition

Description should include ways to assess and manage patients with gastrointestinal bleeding.

Process/Skill Questions

- What are the common causes of acute and chronic nontraumatic abdominal pain?
- What are the solid and hollow abdominal organs, and where are they located?
- What are the common treatments for abdominal disorders?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 67

Demonstrate the assessment and management of patients with allergic reactions.

Definition

Demonstration should include

- evaluating the signs and symptoms of an allergic reaction or anaphylaxis, or both
- recognizing the interrelationship between the patient with an allergic reaction and airway management
- recognizing the mechanisms of allergic response and implications for airway management
- justifying the use of an epinephrine autoinjector.

Process/Skill Questions

- What is the best position/posture for a conscious patient suffering from an allergic reaction?
- What are the five most common categories of allergens?
- How does an epinephrine injection help a patient who is suffering from anaphylaxis?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 68

Identify a patient with a potential infectious disease.

Definition

Identification includes

- awareness of a patient who may have an infectious disease
- how to decontaminate equipment after treating a patient.

Process/Skill Questions

- What are some signs and symptoms of infectious diseases?

- How is equipment decontaminated after treatment of a patient?
- What are standard precautions that guard against infectious disease transmission?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 69

Describe the assessment and management of patients with diabetic emergencies.

Definition

Description should include

- the reasons why diabetic emergencies can cause altered mental states
- ways to recognize acute diabetic emergencies (e.g., hyperglycemia, hypoglycemia).

Process/Skill Questions

- What are the key symptoms of a diabetic emergency?
- How can a diabetic emergency affect mental status?
- How are symptoms of hyperglycemia and hypoglycemia different and how are they similar?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 70

Describe the assessment and management of patients displaying psychotic behaviors or signs of other psychiatric disorders.

Definition

Description should include the ways to recognize behaviors that pose a risk to the EMR, patient, or others, including the risk of suicide.

Process/Skill Questions

- What behaviors can indicate that a patient could be dangerous to the EMR, self, or others?
- What are the two basic categories that a physician uses for diagnosing a psychiatric disorder?
- When is it appropriate to restrain a patient?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 71

Demonstrate the assessment and management of patients experiencing cardiac emergencies.

Definition

Demonstration should include acquiring a 12-lead ECG and assessing and managing emergencies related to chest pain and cardiac arrest.

Process/Skill Questions

- What is the best treatment for chest pain?
- What are the advantages of using an automated external defibrillator (AED)?
- What are common errors in using an AED?
- What are three consequences of an acute myocardial infarction?

HOSA Competitive Events (High School)

    Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Task Number 72

Demonstrate the assessment and management of patients suspected of suffering from poisoning.

Definition

Demonstration should include

- identifying how and when to contact a poison control center
- managing poisoning by carbon monoxide
- managing poisoning by a nerve agent
- managing opioid overdoses (see REVIVE program information)
- describing the main routes of poisoning (i.e., inhaled, ingested, injected, absorbed)
- administering toxicology medications.

Process/Skill Questions

- What is a poison?
- What are the two main types of food poisoning?
- What clues at the scene would help an EMR identify poisoning as the cause of a patient's illness?
- What is the most commonly abused drug in the United States?

HOSA Competitive Events (High School)

    Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Task Number 73

Demonstrate the assessment and management of patients with respiratory emergencies.

Definition

Demonstration should include assessing and managing emergencies related to the upper and lower airway.

Process/Skill Questions

- How does one assess and manage a patient in respiratory distress?
- Why might a patient be experiencing a respiratory emergency?
- What are indicators of an upper vs. a lower airway emergency?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Task Number 74

Describe the assessment and management of patients with genitourinary/renal disorders.

Definition

Description should include a blood pressure assessment of a hemodialysis patient.

Process/Skill Questions

- What is the function of the kidneys?
- What are kidney stones?
- What is hemodialysis?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- Emergency Medical Technician

Task Number 75

Describe emergency medical care of patients with gynecological emergencies.

Definition

Description should include assessing and managing emergencies related to vaginal bleeding.

Process/Skill Questions

- How does an EMR assess a gynecological emergency? What steps does an EMR take?
- What additional issues does an EMR face when assessing a possible victim of sexual assault?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 76

Describe the identification, assessment, and management of patients with disorders of the eyes, ears, nose, and throat.

Definition

Description should include explaining how to manage a nosebleed.

Process/Skill Questions

- What is one of the most common causes of nosebleed? Are nosebleeds dangerous? Explain.
- What complications are associated with a nosebleed?
- When does a nosebleed patient need further medical intervention?

HOSA Competitive Events (High School)

Managing Traumatic Injuries

Task Number 77

Describe the assessment and management of patients with shock, respiratory failure or arrest, and cardiac arrest.

Definition

Description should be based on assessment findings and should include

- identification of the signs and symptoms of shock, respiratory failure, and cardiac arrest
- recognition of the appropriate management techniques for each
- considerations related to withholding resuscitation efforts (e.g., do-not-resuscitate [DNR] orders).

Process/Skill Questions

- What is shock?
- What are the signs and symptoms of shock, of respiratory failure, and of cardiac arrest?
- What are the appropriate management techniques for shock, for respiratory failure, and for cardiac arrest?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o   CPR/First Aid
o   Emergency Medical Technician

Task Number 78

Describe bleeding.

Definition

Description should include

- recognition of the different types of bleeding
- identification of the appropriate means of controlling bleeding
- demonstration of tourniquet use.

Process/Skill Questions

- What does it mean to apply direct pressure?
- Why might a tourniquet have to be applied for bleeding?
- When is more than one tourniquet necessary?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Task Number 79

Describe chest trauma.

Definition

Description should include

- differentiation between blunt and penetrating injuries to the chest
- appropriate management of both closed and open chest injuries
- appropriate management of an impaled object in the chest.

Process/Skill Questions

- What is another name for sucking chest injuries?
- What is a pneumothorax?

HOSA Competitive Events (High School)

Task Number 80

Describe abdominal trauma.

Definition

Description should include

- differentiation between blunt and penetrating injuries to the abdomen
- management of both closed and open abdominal injuries
- management of impaled objects.

Process/Skill Questions

- What should an EMR suspect if there is bruising to the abdomen?
- What would be an appropriate treatment for an abdominal evisceration?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o   Emergency Medical Technician

Task Number 81

Describe orthopedic trauma.

Definition

Description should include

- identification of closed and open fractures and dislocations
- management of fractures and dislocations
- management of an amputated body part.

Process/Skill Questions

- What are the major types of fractures?
- What does RICE mean?
- What are appropriate splinting techniques?
- How should an amputated part be handled?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 82

Describe soft-tissue trauma.

Definition

Description should include identification and management of various types of soft tissue injuries, including

- open and closed wounds
- burns (severity, patterns, and source)
  - o thermal
  - o electrical
  - o chemical
- chemicals in the eyes and/or on the skin.

Process/Skill Questions

- What is a contusion?
- What is a hematoma?
- What is the management of different types of burns?
- How is the severity of a burn ascertained?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 83

Describe head, facial, neck, and spine trauma.

Definition

Description should include

- identification and management of life threats associated with head, facial, neck and spine trauma
- treatment of spinal trauma (e.g., immobilization).

Process/Skill Questions

- For what type of injury is a C-collar used?
- What is a C-spine immobilization?
- What life threats are involved in head and neck trauma?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 84

Describe special considerations in trauma.

Definition

Description should include considerations for the EMR when managing traumatic injuries in special patient populations including

- pregnant patients
- pediatric patients
- geriatric patients.

Process/Skill Questions

- What are some special considerations when immobilizing children under eight years of age?
- Why can geriatric traumas be complicated?

- How should a pregnant patient be positioned?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 85

Describe environmental emergencies.

Definition

Description should include recognition and management of

- submersion incidents
- temperature-related illnesses.

Process/Skill Questions

- What safety considerations are related to submersion incidents?
- What are some types of temperature-related illnesses?
- What's the best way to assess a patient who is potentially having a temperature-related illness?
- What is the difference between a local and general cold emergency?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o CERT (Community Emergency Response Team) Skills
o Emergency Medical Technician

Task Number 86

Describe multi-system trauma.

Definition

Description should include recognition and management of the multi-system trauma patient.

Process/Skill Questions

- Why is it important to determine how many people have been injured?
- What are the management protocols for various types of trauma (e.g., motor-vehicle collision, industrial accident, shooting)?

HOSA Competitive Events (High School)

       Emergency Preparedness Events

          o   Emergency Medical Technician

Managing Special Patient Populations

Task Number 87

Describe the assessment and management of obstetric patients.

Definition

Description should include

- anatomy and physiology of a normal delivery
- vaginal bleeding in a pregnant patient.

Process/Skill Questions

- How does an EMR determine whether an obstetric patient is ready to deliver?
- What are the three stages of labor?
- What are some causes of third-trimester bleeding?

HOSA Competitive Events (High School)

       Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 88

Describe the care of neonatal patients.

Definition

Description should include the assessment and management of a newborn (e.g., calculation of the Apgar score) and neonatal resuscitation.

Process/Skill Questions

- When should the Apgar score be calculated?
- What is the correct way to stimulate a neonatal patient to breathe?
- What are the procedures for neonatal resuscitation?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Task Number 89

Describe the care of pediatric patients.

Definition

Description should include

- age-related assessment and management techniques
- the developmental stages of pediatric patients
- treatment modifications for pediatric patients with such emergencies or disorders as upper airway obstruction, lower airway disease, respiratory distress/failure/arrest, shock, or seizures
- sudden infant death syndrome (SIDS)
- equipment modifications needed for pediatric patients.

Process/Skill Questions

- Why are age-related assessment and management important in the care of a pediatric patient?
- Why are the developmental stages of a pediatric patient important in treatment decisions?
- What is the most common cause of dehydration in children?
- What is SIDS?

HOSA Competitive Events (High School)

    Emergency Preparedness Events

       o Emergency Medical Technician

Task Number 90

Demonstrate the assessment and management of geriatric patients.

Definition

Explanation should include the effect of age-related changes on patient assessment and care.

Process/Skill Questions

- What are the most frequently occurring conditions in geriatric patients?
- Why is it important for EMRs to understand the physiologic and psychosocial changes in geriatric patients?
- What factors commonly affect a geriatric patient's vital signs?

HOSA Competitive Events (High School)

    Emergency Preparedness Events

       o Emergency Medical Technician

Task Number 91

Describe the assessment and management of patients with special challenges.

Definition

Description should include recognizing and reporting abuse and neglect.

Process/Skill Questions

- Who are mandated reporters of suspected abuse and neglect?
- What are some indicators of abuse and neglect?
- How does one report suspected abuse or neglect?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o Emergency Medical Technician

Understanding EMS/EMR Operations

Task Number 92

Discuss the risks and responsibilities of emergency response.

Definition

Discussion should include the principles of safely operating an emergency vehicle.

Process/Skill Questions

- What is due regard for safety?
- What is required to drive an emergency vehicle?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o   Emergency Medical Technician

Task Number 93

Explore establishment of incident command.

Definition

Exploration should include

- explaining the roles and responsibilities in the incident management system
- establishing incident command
- working within the incident management system.

Process/Skill Questions

- What are three questions to ask when first arriving at a mass casualty incident?
- Who establishes incident command?
- How does an EMR initiate incident command?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o   CERT (Community Emergency Response Team) Skills
- o   Emergency Medical Technician

Task Number 94

Evaluate the role of an EMR in a multiple-casualty situation.

Definition

Evaluation should include the role of an EMR in

- performing triage and re-triage
- managing resources.

Teacher resource: Virginia Department of Health, OEMS, Mass Casualty Incident Management (MCIM) Modules I and II

Process/Skill Questions

- What is an EMR's role during a multiple-casualty situation?
- How does an EMR perform triage and re-triage?
- What is resource management? How does an EMR appropriately apply it?

HOSA Competitive Events (High School)

    Emergency Preparedness Events

- CERT (Community Emergency Response Team) Skills
- Emergency Medical Technician

Task Number 95

Describe the use of air medical transport.

Definition

Description should include

- safety factors or procedures related to air medical operations
- criteria for using air medical transport
- the role of an EMR in air medical transport
- landing zones
- safe approach.

Process/Skill Questions

- How is a landing zone established?
- How should one safely approach an aircraft?
- How can an EMR help to ensure safety of self, the patient, and others during air medical transport?

HOSA Competitive Events (High School)

    Emergency Preparedness Events

- CERT (Community Emergency Response Team) Skills
- Emergency Medical Technician

Task Number 96

Describe the fundamental concepts of extrication.

Definition

Description should include

- safety factors or procedures related to vehicle extrication
- use of simple hand tools to perform extrication.

Process/Skill Questions

- What is extrication?
- What steps must be taken to safely and effectively extricate a patient?
- What tools are used during extrication?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CERT (Community Emergency Response Team) Skills
- o Emergency Medical Technician

Task Number 97

Explain the EMR's role during a call involving hazardous materials.

Definition

Explanation should include the risks, standard operating procedures, and responsibilities of operating in a cold zone.

Teacher resources: [Virginia Department of Emergency Management Hazardous Materials](#) and [U.S. Department of Labor's Occupational Health and Safety Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER)](#)

Process/Skill Questions

- What is a cold zone?

- How can an EMR manage the risks of entering a cold zone?
- How can an EMR manage the responsibilities of operating in a cold zone?
- How can an EMR be sure of following all standard procedures for operating in a cold zone?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CERT (Community Emergency Response Team) Skills
- Emergency Medical Technician

Task Number 98

Evaluate the role of the EMR in a mass-casualty situation due to terrorism or disaster.

Definition

Evaluation should include the risks, standard operating procedures, and responsibilities of operating at the scene of a natural or man-made disaster.

Process/Skill Questions

- What is the role of an EMR during a mass-casualty situation?
- How can an EMR manage the risks associated with operating at the scene of a natural or man-made disaster?
- How can an EMR manage the responsibilities of operating at the scene of a natural or man-made disaster?
- What is the difference between a disaster and a mass-casualty incident?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CERT (Community Emergency Response Team) Skills
- Emergency Medical Technician

Performing Clinical Behavior and Judgment Assessments

Task Number 99

Demonstrate long-bone splinting.

Definition

Demonstration should include

- selection of appropriate splinting materials
- proper application of a splint to a long-bone injury to stabilize the injury.

Process/Skill Questions

- Why should motor and sensory functions be assessed before performing long-bone splinting?
- What materials should be used for proper application of a splint?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 100

Demonstrate joint splinting.

Definition

Demonstration should include

- selection of appropriate splinting materials
- proper application of a splint to stabilize the injury.

Process/Skill Questions

- What size splint is needed?
- How does an EMR assess circulation, motor function, and sensory function (CMS) after splinting?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 101

Demonstrate airway management.

Definition

Demonstration should include

- techniques for opening the airway (e.g., head-tilt, chin-lift, and jaw-thrust)
- use of a suction catheter to clear the airway
- proper measurement and insertion of airway adjuncts (e.g., oropharyngeal airway [OPA], nasopharyngeal airway [NPA])
- use of the bag-valve mask device with supplemental oxygen to ventilate a nonbreathing patient.

Process/Skill Questions

- What is meant by respiratory distress?
- When is an airway adjunct appropriate?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o CPR/First Aid
o Emergency Medical Technician

Task Number 102

Demonstrate bleeding control and care of shock.

Definition

Demonstration should include

- application of direct pressure over the wound
- use of a tourniquet (commercial and/or improvised) to control life-threatening or uncontrolled bleeding
- performance of interventions to stabilize a patient showing signs and symptoms of shock.

Process/Skill Questions

- When should direct pressure be applied?
- What interventions are used to stabilize a patient showing signs and symptoms of shock?
- When is use of a tourniquet appropriate?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 103

Perform simulated patient scenarios.

Definition

Performance should include

- completion of all major components of a patient assessment
  - o scene size-up
  - o primary assessment
  - o patient history
  - o secondary assessment/vital signs
  - o reassessment
- identification of life-threatening and secondary injuries
- management of all injuries found.

Process/Skill Questions

- What constitutes a life-threatening injury?
- What are considerations during a scene size-up?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CERT (Community Emergency Response Team) Skills
- o CPR/First Aid
- o Emergency Medical Technician

Exploring Requirements for Certification and Work-Based Learning Opportunities

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Task Number 104

Research certification requirements for the EMR.

Definition

Research should include

- determining the fees to be paid
- reviewing end-of-class paperwork
- reviewing the national certification requirements (see NREMT)
- reviewing the state certification requirements (see Virginia Department of Health, OEMS)
- reviewing the Virginia EMS regulations
- completing a state authorization for National Registry EMR Test Eligibility
- taking practice examinations, if available.

Process/Skill Questions

- What is the cost of the EMR exam and national registration?
- How should a student register for psychomotor and cognitive testing?
- What is the process for psychomotor and cognitive retesting?
- What paperwork is needed for psychomotor and cognitive testing?

Task Number 105

Observe emergency medical services operations.

Definition

Observation should include a period of time sufficient to gain an appreciation for the continuum of care.

Process/Skill Questions

- Why is the continuum of care important?
- What are appropriate observation times for emergency medical services?

Task Number 106

Research recertification requirements for the EMR.

Definition

Research should include

- determining the fees to be paid
- reviewing the Virginia OEMS certification requirements
- reviewing the NREMT: EMR recertification information
- exploring local and national continuing education opportunities.

Process/Skill Questions

- What are recertification requirements for Virginia and for NREMT?
- Where can one locate EMR continuing education requirements in Virginia?
- When does an EMR have to recertify? What are the fees associated with recertification?
- How soon after certification can an EMR begin obtaining recertification credit?
- What is the process for recertification once all EMS recertification requirements have been met?
- What is the process for recertification if an EMR's certification expires before meeting recertification requirements?

Describing the Opioid Crisis

Task Number 107

Describe the history and current state of the opioid crisis in the United States.

Definition

Description should include

- the relationship between opioid prescribing and illicit opioid use to overall opioid overdose deaths
- the prevalence of co-occurring mental health disorders
- the shift in attitudes in the 1990s toward pain management and use of opioids, including the role of pharmaceutical marketing
- the stigma associated with addiction and the changing view of addiction from a moral failing to a chronic, relapsing disease
- statistics, trends, and demographics surrounding the crisis
- population health and other public health aspects of the crisis, including its effects on family and neonates, as well as overall health costs.

Process/Skill Questions

- How are opioids created?
- Can opioids be safely prescribed to patients taking psychotropic drugs?
- How does society stereotype individuals with a history of drug addiction?
- What are the current trends that have contributed to the nationwide opioid crisis?
- How has the opioid epidemic affected emergency rooms and the first responder system?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Spelling
- o Medical Terminology

Teamwork Events

- o Creative Problem Solving
- o HOSA Bowl
- o Public Service Announcement

Task Number 108

Describe the history and current state of the opioid crisis in Virginia.

Definition

Description should include

- the relationship between opioid prescribing and illicit opioid use to overall opioid overdose deaths
- the prevalence of co-occurring mental health disorders
- the shift in attitudes in the 1990s toward pain management and use of opioids, including the role of pharmaceutical marketing
- the stigma associated with addiction and the changing view of addiction from a moral failing to a chronic, relapsing disease
- statistics, trends, and demographics surrounding the crisis
- population health and other public health aspects of the crisis, including its effects on family and neonates, as well as overall health costs
- the Virginia Department of Health's Declaration of a Public Health Emergency on November 21, 2016
- proposed legislation to address the crisis in Virginia (i.e., House Bill 2161 and Senate Bill 1179, which require the secretary of health and human resources to convene a workgroup to establish educational guidelines for training healthcare providers in the safe prescribing and appropriate use of opioids)
- the development of curricula and educational standards regarding opioid addiction.

Resource: The Opioid Crisis Among Virginia Medicaid Beneficiaries

Process/Skill Questions

- What agencies participated in the governor's task meeting on the opioid crisis?
- What educational organizations will be tasked with providing opioid training to their students?
- What is the benefit of educating future medical professionals about opioid addiction?
- What is the current attitude in society about opioid use and addiction?
- How is the local community affected by the opioid epidemic?

HOSA Competitive Events (High School)

Health Science Events

o Medical Spelling
o Medical Terminology

Task Number 109

Define the pharmacological components and common uses of opioids.

Definition

Definition should include

- plant-based opioids (e.g., opium from poppy seeds)
- names of legal and illegal opioids
- heroin
- names of the most common opioids
- fentanyl
- medical diagnoses and injuries associated with opioid prescriptions
- commonly used terms.

Resource: Prescription Pain Medications, National Institute on Drug Abuse for Teens

Process/Skill Questions

- For what illnesses are opioids commonly prescribed?
- What is the current medical protocol when opioids are prescribed?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Spelling
- o Medical Terminology
- o Knowledge Test: Pharmacology

Health Professions Events

- o Clinical Nursing

Examining the Key Factors of Drug Addiction

Task Number 110

Examine the science of addiction.

Definition

Examination should include

- biopsychosocial aspects of addiction
- the role of endorphins and dopamine
- the role of religious beliefs
- behavioral aspects of addiction
- life cycle of addiction
- misuse of opioids.

Process/Skill Questions

- How will understanding the physiological absorption of opioids in the body provide a holistic assessment?
- What spiritual characteristics might be observed in the science of addiction?
- What are some genetic explanations for some family members being more prone to addiction?

Task Number 111

Explain prevention and early intervention strategies.

Definition

Explanation should include

- risk and protective factors in opioid addiction
- specific populations at risk of addiction

- motivational interviewing and other communication strategies
- naloxone co-prescribing
- roles of family and social institutions in prevention and early intervention.

Resources:

- [Prevention Tip Card](#), Office of the Attorney General of Virginia
- [Prescription Opioids: Even When Prescribed by a Doctor](#) (video), Centers for Disease Control and Prevention (CDC)

Process/Skill Questions

- What are the physiological characteristics of opioid addiction?
- What demographic is most affected by the opioid epidemic? What are some explanations for this?
- How can provision of naloxone and training in its use be sustained financially?
- What obligations do families and society as a whole have in preventing and providing early intervention related to drug addiction?

Task Number 112

Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

Definition

Identification should include

- DSM-5 Criteria for Substance Use Disorders
- American Society of Addiction Medicine (ASAM) Criteria (i.e., The Six Dimensions of Multidimensional Assessment)
- CONTINUUM, The ASAM Criteria Decision Engine
- clinical and behavioral aspects of addiction
- practice-appropriate screening tools, including co-morbidity screening.

Process/Skill Questions

- What are DSM-5 and ASAM and what information do they provide to healthcare professionals?
- What are clinical and behavioral elements of addiction that should be recognized by healthcare professionals?

- Who is responsible for providing the necessary screening tools and training?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Spelling
- o Medical Terminology
- o Knowledge Test: Behavioral Health

Health Professions Events

- o Clinical Nursing

Task Number 113

Describe the treatment models of addiction therapy.

Definition

Description should include

- a recognition that addiction is a chronic disease
- evidence-based treatment models for addiction in general and opioid addiction in particular
- medication-assisted treatment
- the continuum of care in opioid addiction treatment
- how and when to make a referral for treatment
- the roles in an interdisciplinary addiction team
- the role of peers in the treatment of addiction
- the difference between a drug culture and recovery culture
- the management of patients in recovery, including factors contributing to relapse.

Process/Skill Questions

- How many treatment models exist for addiction therapy? Why is one model better than the other?
- What are the advantages of evidence-based treatments and models?
- What medication-assisted treatment programs are available? Who provides them?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Spelling
- o Medical Terminology
- o Knowledge Test: Behavioral Health

Health Professions Events

- o Clinical Nursing

Task Number 114

Describe the medication management antidote used to prevent fatal opioid overdoses.

Definition

Description should include

- availability and use of naloxone
- naloxone training (e.g., REVIVE!)
- naloxone training agencies
- monitoring of concurrent prescriptions.

Resources:

- Frequently Asked Questions about Naloxone, Virginia Department of Health
- How to administer Narcan nasal spray, Adapt Pharma
- How to prepare naloxone for administration, Virginia Department of Behavioral Health and Developmental Services

Process/Skill Questions

- What is naloxone?
- How much does naloxone cost with health insurance? How much does naloxone cost without health insurance?
- Who should receive naloxone training?

HOSA Competitive Events (High School)

Health Science Events

- o Knowledge Test: Pharmacology

Understanding Pain Management Protocols

Task Number 115

Explain the science of physiological and mental pain.

Definition

Explanation should include

- definition of pain from the International Association for the Study of Pain (IASP)
- neurobiological basis of pain
- biopsychosocial model of pain
- types of pain (e.g., neuropathic)
- acute, sub-acute, and chronic pain, including pain generation
- spinal and brain modulation, behavioral adaptation and maladaptation, and the continuum from acute to chronic disabling pain
- the underlying science of pain relief.

Process/Skill Questions

- What is the IASP definition of pain?
- How can a medical professional get a patient to describe physiological pain?
- What assessment tools can be used to help patients describe physiological pain? How do tools differ for describing mental pain?
- How are pain and levels of pain categorized?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Nutrition
- Knowledge Test: Transcultural Health Care

Teamwork Events

- Community Awareness
- Creative Problem Solving
- HOSA Bowl

Task Number 116

Describe the diagnostic tools used in developing pain management plans.

Definition

Description should include

- pain-related health history and examination
- understanding the role of family in supporting individuals in need of pain management
- practice-appropriate screening tools that include aspects such as mood and function
- the use and limitations of pain scales
- differential diagnosis of pain and its placement on the pain continuum.

Resource: [Promoting Safer and More Effective Pain Management](#), CDC

Process/Skill Questions

- What are the Wong-Baker, LEGO, and Hospice assessment tools?
- How do pain assessment tools vary across the life span?
- When completing an assessment, is pain considered subjective or objective?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Nutrition
- Knowledge Test: Transcultural Health Care

Teamwork Events

- Community Awareness
- Creative Problem Solving
- HOSA Bowl

Task Number 117

Describe pain treatment options available to various populations of patients.

Definition

Description should include

- special populations in pain management, such as palliative/end-of-life care patients, patients with cancer, pediatric patients, and geriatric populations
- non-pharmacologic treatment of pain, including active care and self-care, evidence- and non-evidence-based approaches, and multimodal pain management
- non-opioid pharmacologic management of pain
- the challenges in discussing the psychological aspects of pain and the role of the central nervous system
- adverse drug event prevention for all pain medications
- the roles in an interdisciplinary pain management team
- the significance of issues such as anxiety, depression, and sleep deprivation in pain management
- the placebo effect
- goals and expectations in the treatment of pain, based on diagnosis and pain continuum
- when to make a pain referral and to whom.

Resources:

- [CDC Fact Sheet for Prescribing Opioids for Chronic Pain](#)
- [CDC Guidelines for Prescribing Opioids for Chronic Pain](#)

Process/Skill Questions

- What pain management resources are available for special populations?
- What are alternative forms of pain management?
- What role does the mind play in pain management?

HOSA Competitive Events (High School)

Health Science Events

- o Knowledge Test: Nutrition
- o Knowledge Test: Transcultural Health Care

Teamwork Events

- o Community Awareness
- o Creative Problem Solving
- o HOSA Bowl

Task Number 118

Describe the effects of opioid dependency on the human body systems.

Definition

Description should include the short- and long-term effects of opioids on the following:

- Nervous system
- Respiratory system
- Circulatory system
- Digestive system
- Skeletal system

Resource: Drugs and Your Body, Scholastic

Process/Skill Questions

- How does the misuse of opioids affect nutrition and weight loss?
- How might opioid misuse be evident in a person's vital signs?
- How do opioids affect the brain as the control center for homeostasis?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Spelling
- o Medical Terminology

Teamwork Events

- o HOSA Bowl

Task Number 119

Explain the mechanism and physical effects of opioids on the human body.

Definition

Explanation should include the following:

- Mechanism of action and metabolism of opioids
- Development of tolerance, dependence, and addiction
- Health consequences of drug misuse
  - HIV, hepatitis, and other infectious diseases
  - Cancer
  - Cardiovascular effects
  - Respiratory effects
  - Gastrointestinal effects
  - Musculoskeletal effects
  - Kidney damage
  - Liver damage
  - Neurological effects
  - Hormonal effects
  - Prenatal effects
  - Other health effects
  - Mental health effects
  - Death
- Withdrawal
  - Causes
  - Timeframe (i.e., peaks of withdrawal symptoms)
  - Physical signs (e.g., nausea, diarrhea, vomiting, cold flashes)

Process/Skill Questions

- What are the short- and long-term effects of withdrawal dependence symptoms?
- How long can the human body function while exhibiting the symptoms of withdrawal?
- What are other medical conditions that may arise because of the symptoms of physical dependence?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- HOSA Bowl

Task Number 120

Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.

Definition

Explanation should include

- appropriate use of different opioids in various practice settings
- the interactions, risks, and intolerance of prescription opioids
- the role and effectiveness of opioids in acute, sub-acute, and chronic pain
- a reassessment of opioid use based on stage of pain
- contemporary treatment guidelines, best practices, health policies, and government regulations related to opioid use
- use of opioids in pain management of patients with substance abuse disorders, in recovery, and in palliative/end-of-life care.

Process/Skill Questions

- When should risk factors regarding opioids be reviewed with the patient?
- What are the options when treating patients with a history of substance abuse?
- What government regulations and policies are in place to improve the safe administration of opioids?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Spelling
- o Medical Terminology
- o Knowledge Test: Pharmacology

Teamwork Events

- o Creative Problem Solving
- o HOSA Bowl

Task Number 121

Describe the withdrawal and tapering side effects of opioid use.

Definition

Description should include

- characteristics of acute and protracted withdrawal from opioid dependence or addiction
- tapering
- pain contracts or agreements.

Process/Skill Questions

- What are the stages of withdrawal in opioid abuse transition?
- What medications might be needed in the withdrawal stage?
- What information should be included in the pain management contract?

HOSA Competitive Events (High School)

Health Science Events

o Knowledge Test: Pharmacology

Health Professions Events

o Clinical Nursing

Task Number 122

Describe storage and disposal options for opioids.

Definition

Description should include

- medicine take-back options (e.g., National Drug Take Back Day)
- disposal in the household trash and flushing certain potentially dangerous medicines down the toilet.

Resources:

- [Disposal of Unused Medicines: What You Should Know](#), Food and Drug Administration (FDA)
- [Prescription Drug Abuse and Tips for Proper Disposal](#), Office of the Attorney General of Virginia

Process/Skill Questions

- How should medications be stored in the house?
- What is National Prescription Drug Take Back Initiative?
- What is the *black box*?

HOSA Competitive Events (High School)

Health Science Events

o Knowledge Test: Pharmacology

Health Professions Events

o Clinical Nursing

Task Number 123

Explain community resources for education about opioid use.

Definition

Explanation should include key components of and resources for patient education in the use of opioids, including

- risks
- benefits
- side effects
- tolerance
- signs of sedation or overdose
- naloxone, including its storage and disposal.

Process/Skill Questions

- What resources for opioid education are available locally, statewide, and nationally?
- Where should the patient first be informed about the resources available?

- How does social media aid in patient education on opioid addiction?

HOSA Competitive Events (High School)

      Health Science Events

- Knowledge Test: Pharmacology

      Health Professions Events

- Clinical Nursing

Working with Patients and Caregivers

Task Number 124

Describe key communication topics involving opioids for patients.

Definition

Description should include

- benefits and risks of opioids
- opioid risk screening (i.e., taking a social, medical, and financial history)
- risk mitigation (e.g., naloxone, safe storage, pain contracts)
- medication tapers and/or discontinuation of therapy.

Process/Skill Questions

- What are the benefits of using opioids in medicine?
- What is the relationship between demographics and risk of opioid addiction?
- How does culture influence risk factors in opioid abuse?

HOSA Competitive Events (High School)

      Health Science Events

- Medical Spelling

o   Medical Terminology

Health Professions Events

o   Clinical Nursing

Task Number 125

Describe communication topics for caregivers and family members.

Definition

Description should include

- basic knowledge about opioids
- signs of addiction
- treatment options for addiction
- naloxone training for caregivers
- legal issues related to misuse.

Process/Skill Questions

- What rights do caregivers have in regard to medical information of the abuser?
- What legal steps might the caregiver or family have to take for treatment?
- Where can the caregiver or family members receive naloxone training? Are children of opioid abusers eligible for training?

HOSA Competitive Events (High School)

Health Science Events

o   Medical Spelling
o   Medical Terminology

Health Professions Events

o   Clinical Nursing

SOL Correlation by Task

39	Outline mandatory course requirements and paperwork.	English: 10.6, 10.7, 11.6, 11.7, 12.6, 12.7
40	Complete a state-approved certification for cardiopulmonary resuscitation (CPR).	
41	Describe the components of EMS systems.	English: 10.5, 11.5, 12.5 History and Social Science: GOVT.1
42	Explain the influence of research and evidence-based decision making on EMS care.	English: 10.5, 11.5, 12.5
43	Describe the roles and responsibilities of an EMR toward personal safety and the safety of the crew, patient, and bystanders.	English: 10.5, 11.5, 12.5
44	Explain the components and legal considerations of EMS documentation.	English: 10.5, 11.5, 12.5 History and Social Science: VUS.14, WG.17, WHII.14
45	Describe the techniques of effective and efficient team communication.	English: 10.5, 11.5, 12.5
46	Describe the communication skills that should be used to interact with the patient, family, and bystanders while providing patient care.	English: 10.5, 11.5, 12.5
47	Explain the legal implications of EMS care.	English: 10.5, 11.5, 12.5
48	Describe the EMS system's role in prevention of illness and injury through public education.	English: 10.5, 11.5, 12.5 History and Social Science: VUS.14, WG.17, WHII.4, WHII.14
49	Describe the anatomy and physiology of the major body systems.	English: 10.5, 11.5, 12.5 History and Social Science: WHII.4 Science: BIO.4
50	Define common medical terms and abbreviations.	English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 History and Social Science: WHII.4
51	Use knowledge of shock and respiratory compromise to respond to life threats.	History and Social Science: WHII.4

52	Describe the major physiological and psychosocial characteristics of life stages in relation to patient care.	English: 10.5, 11.5, 12.5
53	Describe the medications that the EMR may administer.	English: 10.5, 11.5, 12.5
54	Demonstrate the steps for assisting or administering medications that are within an EMR's scope of practice.	English: 10.5, 11.5, 12.5 History and Social Science: WHI.5, WHII.4
55	Discuss the general anatomy and physiology of respiration and ventilation.	English: 10.1, 11.1, 12.1 History and Social Science: WHII.4
56	Demonstrate the assessment and management of the airway.	English: 10.5, 11.5, 12.5 History and Social Science: WHII.4
57	Demonstrate the assessment of respiration and management of adequate respiration.	English: 10.5, 11.5, 12.5 History and Social Science: WHII.4
58	Demonstrate the assessment and management of adequate and inadequate ventilation.	English: 10.5, 11.5, 12.5 History and Social Science: WHII.4
59	Demonstrate a scene size-up for single-patient and multiple-patient situations.	
60	Demonstrate a primary assessment.	English: 10.5, 11.5, 12.5
61	Demonstrate history taking.	English: 10.5, 11.5, 12.5
62	Demonstrate a secondary assessment.	
63	Demonstrate a reassessment.	English: 10.5, 11.5, 12.5
64	Describe life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.	English: 10.5, 11.5, 12.5
65	Demonstrate the assessment and management of patients experiencing neurological emergencies.	
66	Describe the assessment and management of patients with abdominal or gastrointestinal disorders.	English: 10.5, 11.5, 12.5
67	Demonstrate the assessment and management of patients with allergic reactions.	
68	Identify a patient with a potential infectious disease.	English: 10.5, 11.5, 12.5
69	Describe the assessment and management of patients with diabetic emergencies.	English: 10.5, 11.5, 12.5
70	Describe the assessment and management of patients displaying psychotic behaviors or signs of other psychiatric disorders.	English: 10.5, 11.5, 12.5
71	Demonstrate the assessment and management of patients experiencing cardiac emergencies.	

72	Demonstrate the assessment and management of patients suspected of suffering from poisoning.	English: 10.5, 11.5, 12.5
73	Demonstrate the assessment and management of patients with respiratory emergencies.	
74	Describe the assessment and management of patients with genitourinary/renal disorders.	English: 10.5, 11.5, 12.5
75	Describe emergency medical care of patients with gynecological emergencies.	English: 10.5, 11.5, 12.5
76	Describe the identification, assessment, and management of patients with disorders of the eyes, ears, nose, and throat.	English: 10.5, 11.5, 12.5
77	Describe the assessment and management of patients with shock, respiratory failure or arrest, and cardiac arrest.	English: 10.5, 11.5, 12.5
78	Describe bleeding.	English: 10.5, 11.5, 12.5
79	Describe chest trauma.	English: 10.5, 11.5, 12.5
80	Describe abdominal trauma.	English: 10.5, 11.5, 12.5
81	Describe orthopedic trauma.	English: 10.5, 11.5, 12.5
82	Describe soft-tissue trauma.	English: 10.5, 11.5, 12.5
83	Describe head, facial, neck, and spine trauma.	English: 10.5, 11.5, 12.5
84	Describe special considerations in trauma.	English: 10.5, 11.5, 12.5
85	Describe environmental emergencies.	English: 10.5, 11.5, 12.5
86	Describe multi-system trauma.	English: 10.5, 11.5, 12.5
87	Describe the assessment and management of obstetric patients.	English: 10.5, 11.5, 12.5
88	Describe the care of neonatal patients.	English: 10.5, 11.5, 12.5
89	Describe the care of pediatric patients.	English: 10.5, 11.5, 12.5
90	Demonstrate the assessment and management of geriatric patients.	English: 10.5, 11.5, 12.5
91	Describe the assessment and management of patients with special challenges.	English: 10.5, 11.5, 12.5
92	Discuss the risks and responsibilities of emergency response.	English: 10.1, 11.1, 12.1
93	Explore establishment of incident command.	English: 10.5, 11.5, 12.5
94	Evaluate the role of an EMR in a multiple-casualty situation.	
95	Describe the use of air medical transport.	English: 10.5, 11.5, 12.5
96	Describe the fundamental concepts of extrication.	English: 10.5, 11.5, 12.5
97	Explain the EMR's role during a call involving hazardous materials.	English: 10.5, 11.5, 12.5
98	Evaluate the role of the EMR in a mass-casualty situation due to terrorism or disaster.	English: 10.5, 11.5, 12.5 History and Social Science: VUS.14, WG.17, WHII.14
99	Demonstrate long-bone splinting.	
100	Demonstrate joint splinting.	

101	Demonstrate airway management.	
102	Demonstrate bleeding control and care of shock.	
103	Perform simulated patient scenarios.	
104	Research certification requirements for the EMR.	English: 10.8, 11.8, 12.8
105	Observe emergency medical services operations.	
106	Research recertification requirements for the EMR.	English: 10.8, 11.8, 12.8
107	Describe the history and current state of the opioid crisis in the United States.	English: 10.5, 11.5, 12.5
108	Describe the history and current state of the opioid crisis in Virginia.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8
109	Define the pharmacological components and common uses of opioids.	English: 10.3, 10.8, 11.3, 11.8, 12.3, 12.8
110	Examine the science of addiction.	English: 10.5, 11.5, 12.5
111	Explain prevention and early intervention strategies.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8
112	Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).	English: 10.5, 11.5, 12.5
113	Describe the treatment models of addiction therapy.	English: 10.5, 11.5, 12.5
114	Describe the medication management antidote used to prevent fatal opioid overdoses.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8
115	Explain the science of physiological and mental pain.	English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5
116	Describe the diagnostic tools used in developing pain management plans.	English: 10.5, 11.5, 12.5
117	Describe pain treatment options available to various populations of patients.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8
118	Describe the effects of opioid dependency on the human body systems.	English: 10.5, 11.5, 12.5 History and Social Science: WHII.4
119	Explain the mechanism and physical effects of opioids on the human body.	English: 10.5, 11.5, 12.5
120	Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.	English: 10.5, 11.5, 12.5
121	Describe the withdrawal and tapering side effects of opioid use.	English: 10.5, 11.5, 12.5
122	Describe storage and disposal options for opioids.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8
123	Explain community resources for education about opioid use.	English: 10.5, 11.5, 12.5
124	Describe key communication topics involving opioids for patients.	English: 10.5, 11.5, 12.5
125	Describe communication topics for caregivers and family members.	English: 10.5, 11.5, 12.5

Teacher Resources

Please note that the documents listed below are Word (.docx) files and will download automatically when you click the links.

- [Virginia Department of Health, Office of Emergency Medical Services (OEMS)](#)
- [High-School-Based Emergency Medical Services (EMS) Educational Programs Guide (2019)](#)
- [Initial BLS Training Programs: First Class Paperwork, Virginia OEMS](#) (as of 2019; to access the most recent version of this document, please visit the [Virginia OEMS website](#))
- [Initial BLS Training Programs: Last Class Paperwork, Virginia OEMS](#) (as of 2019; to access the most recent version of this document, please visit the [Virginia OEMS website](#))

Opioid Abuse Prevention Education

This [Opioid Abuse Prevention](#) document includes resources for opioid abuse prevention education from kindergarten to 12th grade.

Other Opioid Resources

Virginia Department of Behavioral Health and Developmental Services. Revive! Opioid Overdose and Naloxone Education for Virginia. [Naloxone Fact Sheet](#) (PDF).

Virginia Department of Behavioral Health and Developmental Services. [Revive! Opioid Overdose and Naloxone Education for Virginia](#) (Website).

Office of National Drug Control Policy, White House. [Fentanyl: Safety Recommendations for First Responders](#) (PDF).

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Alcohol](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Bath Salts](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Cocaine](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: E-Cigarette](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Heroin](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Marijuana](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: MDMA](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Meth](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Pain Medicine](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Spice (K2)](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Tobacco and Nicotine](#) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Other Drugs People Use and Misuse](#) (Website; PDF available)

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- College and Work Readiness Assessment (CWRA+)
- National Career Readiness Certificate Assessment
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Introduction to Health and Medical Sciences (8302/36 weeks)
- Introduction to Health and Medical Sciences (8301/18 weeks)

Career Cluster: Health Science	
Pathway	**Occupations**
Therapeutic Services	Emergency Medical Technician, Paramedic