Emergency Medical Dispatch with T-CPR

Emergency Medical Dispatch with T-CPR prepares telecommunicators to assess medical emergencies, recognize life-threatening conditions, coordinate emergency response, and provide appropriate Pre-Arrival Instructions. The course establishes the telecommunicator's role as the first emergency professional involved in an incident and develops foundational knowledge of anatomy and physiology, respiratory and cardiac emergencies, T-CPR, trauma, altered levels of consciousness, childbirth, and environmental emergencies. Learners also develop the knowledge necessary to coach callers through chest compressions, rescue breathing, AED use, and other lifesaving interventions.

Learning Objectives

Upon completion of this course, learners will be able to:

1. Explain the responsibilities, legal considerations, and professional expectations of an Emergency Medical Dispatcher.
2. Apply basic anatomy and physiology when assessing emergency medical calls.
3. Recognize signs and symptoms associated with common life-threatening medical and traumatic conditions.
4. Determine when T-CPR and other immediate lifesaving interventions are required.
5. Coach callers through high-quality chest compressions, rescue breathing, and AED use.
6. Provide appropriate Pre-Arrival Instructions for respiratory, cardiac, traumatic, neurological, childbirth, and environmental emergencies.
7. Apply emergency medical dispatch principles to adults, children, infants, and other special populations.

Course Introduction

The course introduction establishes the telecommunicator as the "first, first responder" and introduces the legal, professional, and operational responsibilities associated with Emergency Medical Dispatch. It emphasizes the telecommunicator's responsibility for rapid information gathering, caller stabilization, appropriate resource assignment, Pre-Arrival Instructions, accurate documentation, and adherence to agency training and standard operating procedures.

Content/Activities

- Telecommunicators: The First, First Responders
- Awareness of Liability
- Duty to Act
- EMD Philosophy
- Traits for a Telecommunicator
- Good Samaritan Law
- Course Learning Goals and Module Overview

Module 1: Anatomy & Physiology

This module provides the foundational knowledge of human anatomy and physiology needed to quickly and accurately evaluate a caller's medical emergency. Learners examine homeostasis, the major body systems, respiratory and cardiovascular function, circulation, oxygenation, and the relationship between basic body functions and emergency medical assessment.

Module Objectives

Upon completion of this module, learners will be able to:

1. Describe basic human body functions and the concept of homeostasis.
2. Identify the major systems of the human body and explain their primary functions.
3. Explain the basic functions and components of the respiratory and cardiovascular systems.
4. Differentiate normal breathing from agonal breathing.
5. Apply knowledge of human body systems when assessing medical emergencies and determining appropriate Pre-Arrival Instructions.

Content/Activities

- The Human Body, Cells, Tissues, Organs, and Systems
- Homeostasis and the Ten Systems of the Human Body
- Skeletal, Muscular, Nervous, and Endocrine Systems
- Respiratory System, Components, and Agonal Breathing
- Video: Agonal Breathing Demonstration
- Cardiovascular System: Heart, Blood, Blood Flow, Pulse, and Blood Pressure
- Lymphatic, Digestive, Urinary, and Reproductive Systems
- Module Knowledge Checks

Module 2: Respiratory Incidents

This module prepares telecommunicators to recognize and respond to respiratory emergencies. Learners examine the mechanics of breathing, causes and signs of respiratory distress, choking emergencies, opioid-induced breathing problems, Naloxone administration, allergic reactions, anaphylaxis, and the use of an EpiPen.

Module Objectives

Upon completion of this module, learners will be able to:

1. Recognize the signs and symptoms of respiratory distress.
2. Provide appropriate Pre-Arrival Instructions for choking victims.
3. Recognize signs of opioid-induced respiratory depression and prioritize emergency response.
4. Support callers in administering Naloxone when available.
5. Recognize anaphylaxis and coach callers in proper EpiPen administration.

Content/Activities

- Telecommunicator Roles and Causes of Breathing Problems
- Respiratory System and Video: Mechanics of Breathing
- Signs of Respiratory Distress
- Choking: Adults, Children, Infants, Pregnant Patients, and Obese Patients
- Opioids and Signs of Opioid Overdose
- Naloxone/Narcan: Nasal Atomizer, Nasal Spray, and Auto-Injector
- Allergic Reactions, Anaphylaxis, and EpiPen Administration
- Module Knowledge Checks

Module 3: Cardiac Incidents

This module examines the cardiovascular conditions and cardiac emergencies a telecommunicator may encounter. Learners review cardiac function, coronary artery disease, angina, heart attack, cardiac arrest, ventricular fibrillation, and special circumstances that may affect resuscitation. Emphasis is placed on rapid recognition, immediate dispatch, and appropriate caller support.

Module Objectives

Upon completion of this module, learners will be able to:

1. Explain basic cardiac function and conditions that interfere with normal blood flow to the heart.
2. Recognize signs associated with angina, heart attack, and cardiac arrest.
3. Explain ventricular fibrillation and its relationship to sudden cardiac arrest.
4. Identify special considerations associated with opioid-induced cardiac arrest, DNR situations, and irreversible death.
5. Describe appropriate actions when a patient has an implanted cardiac device.

Content/Activities

- Cardiac Function, ATP, and the Heart's Energy Needs
- Coronary Artery Disease and Angina
- Heart Attack and Other Cardiac Emergencies
- Cardiac Arrest and Ventricular Fibrillation
- Agonal Breathing and Recognition of Cardiac Arrest
- Opioid-Induced Cardiac Arrest and Naloxone Considerations
- DNR, Signs of Irreversible Death, and Resuscitation Considerations
- Implantable Cardiac Devices and Module Knowledge Checks

Module 4: How to Recognize the Need for CPR

This module introduces T-CPR as a lifesaving intervention and emphasizes the telecommunicator's responsibility for rapidly identifying cardiac arrest. Learners examine the importance of early bystander CPR, high-quality CPR, recognition of abnormal breathing, and effective caller coaching.

Module Objectives

Upon completion of this module, learners will be able to:

1. Explain the importance and value of T-CPR.
2. Describe the characteristics of high-quality CPR.
3. Identify the key assessment questions used to recognize cardiac arrest.
4. Recognize agonal breathing as abnormal and potentially associated with cardiac arrest.
5. Explain the telecommunicator's role in coaching callers to begin CPR without unnecessary delay.

Content/Activities

- What Is T-CPR?
- Importance of Early Bystander CPR
- High-Quality CPR Characteristics
- Cardiac Arrest Recognition
- Consciousness and Normal-Breathing Assessment
- Agonal Breathing
- Caller Coaching and Rapid Initiation of T-CPR
- Module Knowledge Checks

Module 5: Mechanics of Hands-Only CPR

This module develops the telecommunicator's ability to coach callers through effective Hands-Only CPR. Learners examine performance standards for high-quality chest compressions, proper compression rate and depth, recoil, patient positioning, minimizing interruptions, bystander hesitation, and pediatric considerations.

Module Objectives

Upon completion of this module, learners will be able to:

1. Identify American Heart Association performance standards for high-quality CPR.
2. Describe the components of Hands-Only CPR that provide maximum benefit to the patient.
3. Coach callers to achieve an appropriate compression rate, depth, and chest recoil.
4. Explain appropriate positioning of the patient and caller during chest compressions.
5. Identify CPR modifications and considerations for children, infants, and other special populations.

Content/Activities

- Components of High-Quality Chest Compressions and AHA Metrics
- Value of Hands-Only CPR and Overcoming Bystander Hesitation
- Compression Rate and the Dangers of Compressing Too Fast
- Establishing and Correcting Compression Rate
- Compression Depth, Achieving Proper Depth, and Chest Recoil
- Minimizing Interruptions and Responding to Patient Movement
- Child and Infant CPR and Avoiding Delays in Pediatric CPR
- Module Knowledge Checks

Module 6: Rescue Breaths

This module introduces conventional CPR and rescue breathing. Learners examine when ventilation is required, how rescue breaths are integrated with chest compressions, airway positioning, effective ventilation techniques, near-drowning considerations, and adaptations for infants and children.

Module Objectives

Upon completion of this module, learners will be able to:

1. Identify the mechanics of conventional CPR.
2. Discuss medical emergencies that require ventilation in addition to chest compressions.
3. Explain how to coach a caller through effective rescue breaths.
4. Describe appropriate airway positioning and ventilation techniques.
5. Explain adaptations necessary when providing rescue breaths to children and infants.

Content/Activities

- Conventional CPR
- Chest Compression and Rescue-Breath Sequence
- Emergencies Requiring Ventilation
- Near Drowning and CPR
- Airway Positioning and Creating an Effective Seal
- Administering Rescue Breaths and Avoiding Over-Ventilation
- Child and Infant Rescue-Breathing Adaptations
- Module Knowledge Checks

Module 7: Role of AEDs

This module explains how Automated External Defibrillators support resuscitation during sudden cardiac arrest. Learners examine ventricular fibrillation, AED mechanics, common AED locations, device operation, pad placement, safety, and the integration of AED use with high-quality CPR.

Module Objectives

Upon completion of this module, learners will be able to:

1. Discuss the role of AEDs in improving outcomes from sudden cardiac arrest.
2. Explain the relationship between ventricular fibrillation and defibrillation.
3. Describe the basic mechanics and operation of an AED.
4. Identify locations where AEDs are commonly available.
5. Coach a caller to use an AED as part of high-quality CPR.

Content/Activities

- Ventricular Fibrillation and Sudden Cardiac Arrest
- Purpose and Mechanics of an AED
- Common AED Locations
- Locating and Preparing an AED
- Patient Preparation and Pad Placement
- AED Voice Prompts and Shock Delivery
- Integrating AED Use with Continuous High-Quality CPR
- Module Knowledge Checks

Module 8: Physical Trauma Incidents

This module prepares telecommunicators to identify and respond to physical trauma. Learners examine mechanisms of injury, fractures, burns, burn severity, the Rule of Nines, internal and external bleeding, and Pre-Arrival Instructions appropriate for traumatic emergencies.

Module Objectives

Upon completion of this module, learners will be able to:

1. Recognize physical traumatic incidents and provide appropriate Pre-Arrival Instructions.
2. Differentiate common mechanisms of trauma and types of fractures.
3. Identify burn depth, severity, categories, and potential complications.
4. Use the Rule of Nines to estimate total body surface area affected by burns.
5. Differentiate internal and external bleeding and provide appropriate caller instructions.

Content/Activities

- Physical Trauma and Mechanisms of Injury
- Penetrating, Blunt, and Deceleration Trauma
- Simple and Compound Fractures
- Burns, Skin Anatomy, and Degrees of Burn Injury
- Major vs. Minor Burns and Burn Complications
- Adult and Pediatric Rule of Nines
- Thermal, Inhalation, Chemical, and Electrical Burns
- Internal/External Bleeding, Pre-Arrival Instructions, and Knowledge Checks

Module 9: Altered Levels of Consciousness

This module examines conditions that may affect a patient's responsiveness and mental status. Learners identify levels of consciousness and apply emergency dispatch principles to diabetes, stroke, fainting, and shock.

Module Objectives

Upon completion of this module, learners will be able to:

1. State and differentiate levels of consciousness.
2. Recognize diabetic emergencies and provide appropriate Pre-Arrival Instructions.
3. Recognize stroke symptoms and apply F.A.S.T. assessment principles.
4. Identify causes and characteristics of fainting and altered responsiveness.
5. Recognize the types, stages, and signs of shock and provide appropriate caller support.

Content/Activities

- Levels of Consciousness and Determining Responsiveness
- Diabetes and Low Blood Sugar
- Stroke Recognition and F.A.S.T.
- Fainting and Causes of Loss of Consciousness
- What Is Shock? and the Telecommunicator's Role
- Cardiogenic, Hypovolemic, Anaphylactic, Septic, and Neurogenic Shock
- Compensated, Decompensated, and Irreversible Shock
- Treating Shock and Module Knowledge Checks

Module 10: Childbirth

This module prepares telecommunicators to support callers during childbirth emergencies. Learners review stages of pregnancy and labor, recognize when delivery is imminent, identify delivery presentation, support callers through delivery, provide after-delivery instructions, and monitor the patient for shock.

Module Objectives

Upon completion of this module, learners will be able to:

1. Explain the telecommunicator's role when responding to a childbirth call.
2. Describe the stages of pregnancy and the three stages of labor.
3. Recognize signs that delivery is imminent and distinguish true labor from false labor.
4. Identify normal and abnormal delivery presentations and provide appropriate caller support.
5. Provide appropriate Pre-Arrival Instructions during and after delivery while monitoring for signs of shock.

Content/Activities

- Telecommunicator Role in Childbirth Emergencies
- Stages of Pregnancy and the Three Trimesters
- Labor: Stages 1, 2, and 3
- Signs of Labor, False Labor, and Imminent Delivery
- Delivery Presentation and Abnormal Presentations
- Supporting Callers During Delivery
- After-Delivery Care, Placenta, and Monitoring for Shock
- Module Knowledge Checks

Module 11: Cold and Heat Exposure

This module addresses medical emergencies caused by environmental temperature extremes. Learners examine the body's response to cold, mild cold exposure, frostbite, hypothermia, carbon monoxide poisoning, and a range of heat-related illnesses. Special considerations for infants and toddlers are also addressed.

Module Objectives

Upon completion of this module, learners will be able to:

1. Recognize the effects of cold exposure and identify appropriate treatment for mild cold emergencies.
2. Identify the signs, symptoms, and stages of frostbite and hypothermia.
3. Describe appropriate first-aid and caller-support measures for hypothermia and cold exposure.
4. Differentiate among common heat-related illnesses and recognize signs of heat stroke.
5. Provide appropriate Pre-Arrival Instructions for heat-related emergencies and identify special risks for infants and toddlers.

Content/Activities

- Danger of Being Cold and the Body's Response to Cold
- Treatment for Mild Cold Exposure
- Frostbite: Symptoms and Stages
- Hypothermia: Signs, Stages, and First Aid
- Carbon Monoxide Poisoning
- Heat-Related Emergencies and Types of Heat Illness
- Heat Rash, Heat Cramps, Heat Syncope, Heat Exhaustion, and Heat Stroke
- Infants and Toddlers and Module Knowledge Checks

Course Completion Criteria

To successfully complete this course and earn a certificate and continuing education hours, learners must achieve a minimum score of 75%. The quiz must be completed within 30 minutes.

- CE hours awarded: 6
- Certificate duration: 12 Months

Technical Requirements

- Desktop, laptop, or mobile device
- Speakers or headphones
- High-speed Internet access
- A current web browse