| EMT FIELD TRIAGE ACTIVITIES | Successful | Unsuccessful |
|---|---|---|
| 1. Outline the differences between trauma triage and disaster/MCI triage | | |
| 2. Triage patients, in accordance with local protocol, using the SALT or the START/JumpSTART algorithm in a simulated multi-casualty scenario | | |
| Documentation of successful completion of each skill must be maintained for each student in order to award full credit for this topic. | | |

| | EMERGENCY MEDICAL TECHNICIANS |
|---|---|
| **National Registry of Emergency Medical Technicians®** THE NATION'S EMS CERTIFICATION | **OPERATIONS** *EMS PROVIDER HYGIENE, SAFETY, AND VACCINATIONS* ADULT & PEDIATRIC PATIENTS: RECOMMEND ½ HOUR |

## INSTRUCTOR PREPARATIONS
- *National EMS Education Standards*
- [30]CDC—Hand Hygiene Guideline
- [31]APIC—*Guide to Infection Prevention in Emergency Medical Services*

## LESSON OBJECTIVES
- Identify proper hand washing technique
- Identify appropriate use of alcohol-based hand cleaner
- Discuss the CDC's recommendations of vaccines for healthcare providers
- Assess eye safety indications and measures

## LESSON CONTENT
I.  Always wash hands
- a. Before and after patient contact
- b. Before eating
- c. After cleaning the ambulance or equipment
- d. After using the restroom
- e. After nose blowing, coughing, or sneezing

II.  CDC Recommendations for washing with soap and water
- a. Reference: [30]CDC—Hand Hygiene Guideline
- b. Remove all jewelry
- c. Wet hands with clean running water
- d. Apply soap
- e. Scrub the back of hands
- f. Clean underneath fingernails
- g. Continuously rub hands for at least 20 seconds
- h. Rinse hands well under running water
- i. Dry hands using a clean towel or air dry

III.  Alcohol-based hand cleaner/sanitizer
- a. Should contain at least 60% alcohol
- b. Reduces number of germs
- c. Does not eliminate all types of germs
- d. Does not kill viruses
  - i. Creates inhospitable environments for viruses to live
- e. Ineffective when hands are visibly dirty
- f. Techniques for using hand sanitizer
  - i. Know that soap and water is more effective than hand sanitizer
  - ii. Apply to palm of one hand
  - iii. Rub hands together
  - iv. Rub all surfaces of hands and fingers until dry
  - v. Wash hands when soap and water become available

IV.  Eye and face protections
- a. Eye protection is recommended by the CDC when workers may be at risk of acquiring infectious diseases via ocular exposure
  - i. Adenovirus
  - ii. Herpes simplex
  - iii. Staphylococcus aureus
  - iv. Hepatitis B and C

          v.  HIV
         vi.  Rhinoviruses

    b.  Eye protection devices
          i.  Goggles
         ii.  Face Shields
       iii.  Safety glasses
       iv.  Full-face respirators

V.    Vaccinations for healthcare providers
    a.  Reference: [32]CDC—Vaccines:  Healthcare Provider/Professionals
    b.  Recommended vaccines (not exhaustive)
          i.  Hepatitis B
         ii.  Influenza
       iii.  MMR (measles, mumps and rubella)
       iv.  Varicella
         v.  Pertussis
       vi.  Consider vaccines recommended for disaster response
    c.  Vaccines
          i.  Help prevent transmission of certain diseases
         ii.  Some are attenuated (weakened or killed) viruses
       iii.  Some mimic certain diseases
            1.  Produce antibodies in the blood
       iv.  Some provide antibodies directly

| EMT HYGIENE SKILLS | none |
|---|---|

**EMERGENCY MEDICAL TECHNICIANS**
OPERATIONS
*EMS CULTURE OF SAFETY*
ADULT & PEDIATRIC PATIENTS:  ½ HOUR

National Registry of
Emergency Medical Technicians®
THE NATION'S EMS CERTIFICATION™

**INSTRUCTOR PREPARATIONS**
- [28]*Strategy for a National EMS Culture of Safety*

**LESSON OBJECTIVES**
- Define culture of safety
- Identify and explain the six core elements necessary to advance an EMS Culture of Safety
- Identify the role of the EMS providers in establishing a culture of safety within EMS organizations

**LESSON CONTENT**
I.  Define culture of safety
    a.  Reference:  [28]*Strategy for a National EMS Culture of Safety*
    b.  "The enduring value and priority placed on worker and public safety by everyone in every group at every level of an organization. It refers to the extent to which individuals and groups will commit to personal responsibility for safety; act to preserve, enhance and communicate safety concerns; strive to actively learn, adapt and modify (both individual and organizational) behavior based on lessons learned from mistakes; and be rewarded in a manner consistent with these values."

II.  Identify and explain the six core elements necessary to advance an EMS Culture of Safety as described in the 2013 *Strategy for a National EMS Culture of Safety*
    a.  Just Culture
        i.  Development of environments in which EMS personnel are safe to report errors
            1.  Focus on the various factors that contributed to the error
        ii.  Assess risks in order to identify means of overcoming factors that contribute to errors
            1.  Systems factors and individual factors are examined in order to make improvements to avoid future errors
        iii.  Blaming or punishing is not an option in a Just Culture
    b.  Coordinated support and resources
        i.  Creation of a guidance and resource coordination body
            1.  e.g., EMS Safety Resource Center (EMSSRC)
                a.  Purpose is to determine the best way to effectively serve EMS in the support role
                b.  Partner with governing bodies to serve as a conduit of information and resources for EMS Safety
                c.  No oversight or authority
                d.  Suggested support areas:
                    i.  Outreach and Resources for EMS and other stakeholders
                    ii.  Resources for Public Outreach
                    iii.  Measuring Progress and Success
    c.  EMS Safety Data System
        i.  Data driven decisions and policies related to EMS safety can only be made if all data is accessible on a national level.
        ii.  A robust, secure system would allow access to researchers, decision makers, and national stakeholder groups.

        iii. Data sets have been identified; data will be analyzed and used to inform future plans, initiatives, processes, and policies in order to protect the health and well-being of EMS personnel, their patients, and the general public
1. Injuries
2. Illnesses
3. Incidents

  d. EMS Education Initiatives
     i. Safety starts with EMS leaders and educators and involves everyone
     ii. Initial EMS programs must encourage a culture of safety throughout the program
     iii. Continuing education and new employee onboarding must infuse culture of safety throughout the curricula

  e. EMS safety standards
     i. Safety standards for patient and responder safety must be developed using data and evidence
     ii. EMSSRC can coordinate the efforts to combine work and data completed by various EMS stakeholders and projects

  f. Requirements for reporting and investigation
     i. Mandates for reporting safety are necessary so a common language and data set can be created to improve responder and patient safety
1. Steps may include:
    a. Determining what data are already mandated and available
    b. Determining what data are necessary and useful
    c. Learning from those with hands-on experience
    d. Assigning and obtaining authorization for an investigative body
    e. Identifying existing best practices

III. Consider these questions in regards to the policies, practices, and daily operations in your organization/agency:
  a. What changes are needed to encourage the development of a culture of safety?
  b. How are mistakes handled if one is made during a patient care encounter?
  c. How should it be handled if applying the concept of Just Culture?

| EMT CULTURE OF SAFETY SKILLS | none |
| --- | --- |

| | EMERGENCY MEDICAL TECHNICIANS |
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| **National Registry of Emergency Medical Technicians®** THE NATION'S EMS CERTIFICATION™ | **OPERATIONS**<br>*PEDIATRIC TRANSPORT*<br>PEDIATRIC PATIENTS: RECOMMEND ½ HOUR |

**INSTRUCTOR PREPARATIONS**

- [33]*Working Group Best Practice Recommendations for the Safe Transportation of Children in Emergency Ground Ambulances*

**LESSON OBJECTIVES**

- Explain how to appropriately secure a child safety restraint to a wheeled ambulance stretcher
- Differentiate between the NHTSA recommendations for safe ambulance transport of children based on the condition of the child
- Discuss the on-going initiatives to increase the safety of children during ambulance transport
- Discuss the limitations of the current recommendations

**LESSON CONTENT**

I. Explain guiding principles of safely transporting pediatric patients
   a. All ambulances should have seats and restraints appropriate for securing children from newborn on up
   b. All Child seats/restraints in ambulances should be tested to FMVSS 213 ATD injury criteria using the pulse criteria from J3026
   c. Child seats/restraints should only be attached to cots, cot mounts and restraints that have been tested and comply with standards of J3027
   d. Child seats/restraints should only be attached to seating positions that pass the appropriate standard when tested as a system together
   e. A child passenger, especially a newborn, must never be transported on an adult's lap
   f. It is NOT appropriate to transport children, even in a child restraint system, on the multi-occupant squad bench located in the patient compartment of ground ambulances

II. Differentiate between the NHTSA recommendations for safe ambulance transport of children based on the condition of the child
   a. Situation 1: For a child who is uninjured/not ill (child who is accompanying an injured or ill patient)
      i. Transport the child in a vehicle other than an emergency ground ambulance
      ii. When other transportation not possible/available
         1. Transport in a size-appropriate child restraint system that complies with FMVSS NO. 213, installed appropriately in the front passenger seat, with airbags in the "off" position; or
         2. Transport in the forward-facing EMS provider seat/captain's chair in a size appropriate child restraint system that complies with FMVSS NO. 213; or
         3. Transport in the rear-facing EMS provider seat/captain's chair in a size-appropriate child restraint system that complies with FMVSS No. 213; or
         4. Leave the uninjured/not ill child under appropriate adult supervision on scene
   b. Situation 2: For a child who is ill and/or injured and whose condition does not require continuous and/or intensive medical monitoring and/or interventions
      i. Appropriately secure and transport the child on the cot in a size-appropriate child restraint system that complies with the injury criteria of FMVSS No. 213
      ii. Situation 3 For a child whose condition requires continuous and/or intensive medical monitoring and/or interventions

           1. Appropriately secure and transport the child on the cot in a size-appropriate child restraint system that complies with the injury criteria of FMVSS No. 213

    c. Situation 4: For a child whose condition requires spinal immobilization or lying flat
       i. Secure the child to a size appropriate spine board
      ii. Secure the spine board to the cot
           1. Head first, with a tether at the foot (if possible) to prevent forward movement
           2. Use three horizontal restraints across the torso (chest, waist, and knees)
           3. Use a vertical restraint across each shoulder

    d. Situation 5: For a child or children who require transport as part of a multiple patient transport (newborn with mother, multiple children, etc.)
       i. When possible, transport each as a single patient according to the guidance shown for Situations 1through 4.
      ii. Transport in the forward-facing EMS provider's seat in a size-appropriate child restraint system that complies with FMVSS No. 213
     iii. For mother and newborn, transport the newborn in an approved size-appropriate child restraint system that complies with the injury criteria of FMVSS No. 213
           1. In the rear-facing EMS provider seat that prevents both lateral and forward movement
           2. Transport the mother on the cot
           3. Do not use a rear-facing only seat in the rear-facing EMS provider's seat
           4. Consider using an integrated child restraint system certified by the manufacturer to meet the injury criteria of FMVSS No. 213.

III. Discuss the ongoing initiatives to increase the safety of children during ambulance transport
    a. NASEMSO leads the Safe Transport of Children Committee with the following goals:
       i. To recommend the criteria or specifications for proper restraint of children in ambulances. Such criteria will be evidence-based and will consider safety of both patients and providers
      ii. To have the recommended criteria adopted by one or more accredited standard setting organizations.
     iii. To develop a strategy and resources for educating EMS providers on safely transporting children in ground ambulances based on the recommended criteria or standards.

IV. Discuss the limitations of the current recommendations
    a. Available research on child- restraint systems only rates the safety in normal use, not in ambulances
    b. Not enough evidence from research on simulated ambulance crashes involving child restraint systems to recommend evidence-based guidelines
    c. All child restraint systems are only as effective as the manner in which they are secured to a cot and in an ambulance

| EMT PEDI-TRANSPORT SKILLS | none |
|---|---|

| | EMERGENCY MEDICAL TECHNICIANS |
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| National Registry of Emergency Medical Technicians® THE NATION'S EMS CERTIFICATION™ | OPERATIONS *CREW RESOURCE MANAGEMENT* ADULT & PEDIATRIC PATIENTS: RECOMMEND 1 HOUR |

**INSTRUCTOR PREPARATIONS**

- [34]*IAFC Crew Resource Management Manual*

**LESSON OBJECTIVE**

- Define Crew Resource Management (CRM)
- Explain the benefits of CRM to EMS
- State the guiding principles of CRM and briefly explain each
- Explain the concept of communication in the team environment using advocacy/inquiry or appreciative inquiry
- State characteristics of effective team leaders
- State characteristics of effective team members
- Explain how the use of CRM can reduce errors in patient care

**LESSON CONTENT**

I. Define Crew Resource Management
    a. Reference: [34]*IAFC Crew Resource Management Manual*
    b. Effectively using all resources in an effort to minimize errors, improve safety, and improve performance.
    c. Based on crew resource management training created by the aviation industry
        i. Their mission is "preventing accident by improving crew performance through better crew coordination."  U.S.D.O.T., F.A.A., 2004
    d. Addresses various human factors that contribute to errors
    e. Created to optimize human performance by reducing the effect of human error through the use of all resources, including:
        i. People
        ii. Hardware
        iii. Information

II. Benefits of Crew Resource Management to EMS
    a. Overarching aim is to minimize errors
    b. Improved safety for patients and care providers
    c. Improved team performance
        i. Conflict resolution
        ii. Improved communication
        iii. Increased feedback
        iv. Better workload management; task assignments
        v. Improved clinical decision making
    d. Improved situational awareness
    e. All team members have equal value and input
    f. All members of the organization participate in CRM and CRM training

III. Five guiding principles of Crew Resource Management
    a. Situational Awareness
        i. Awareness of surroundings
        ii. Evaluation of options
        iii. Communicating options with team members
    b. Decision making
        i. Life threatening vs. non-life-threatening
        ii. Entire team should be aware of all necessary information

        iii. Collective team knowledge and experience should be utilized to make a decision

        iv. Team leader is ultimate authority on final decision but relies on input from all members with equal weight, incorporating experience and knowledge of team

    c. Workload/Task management

        i. Tasks should be divided among all team members to optimize functioning of team as a whole

        ii. Team leaders and members must recognize and communicate limitations

    d. Teamwork

        i. Teams are comprised of leaders and followers

        ii. There are competencies for each role: leadership and followership

        iii. Development of leadership and followership allows teams to resolve conflicts during stressful situations and stay on task with the mission of the team

        iv. Team leaders and team members must develop accurate self-assessment skills (meta-cognition) to be effective in their roles

    e. Communication

        i. Involves transmitting and receiving messages

        ii. Possibility of transmitting erroneous information

        iii. Possibility of interpreting information incorrectly

        iv. Clarification is necessary in both transmission and reception of information

        v. Clarify and agree on the message between individuals and gain agreement prior to any proposed action (closed-loop communication) in order to reduce errors

IV. Advocacy and Inquiry Communication; appreciative inquiry

    a. Four steps to using inquiry/advocacy or appreciative inquiry to improve communication among teams

        i. Alert the other members of the team to a situation or action of concern

        ii. State the problem as it is seen

        iii. State a solution or alternative

        iv. Obtain agreement among the team to alter plan or action

V. Characteristics of effective team leaders

    a. Creates, implements and revises an action plan

    b. Communicates accurately and concisely while listening and encouraging feedback

    c. Receives, processes, verifies, and prioritizes information

    d. Reconciles incongruent information

    e. Demonstrates confidence, compassion, maturity, and command presence

    f. Demonstrates a role of authority for the group and scene

    g. Maintains accountability for team's actions/outcomes

    h. Assesses situation and resources and modifies accordingly

    i. Maintains situational awareness

    j. Utilizes appreciative inquiry/ inquiry/advocacy when miscommunication or potential errors occur

    k. Uses closed-loop communication

    l. Reports progress on tasks

    m. Performs tasks accurately and in a timely manner

    n. Addresses safety concerns and is safety conscious at all times

    o. Treats all team members as equals and with equal level of respect, regardless of rank or experience level

VI. Characteristics of effective team members

    a. Communicates accurately and concisely while listening and accepting feedback

    b. Demonstrates followership–is receptive to leadership

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