The Emergency Medical Services System; EMT’s and Litigation; Well-Being of the EMT; Scene Safety; Lifting & Moving (Class 1)

The Emergency Medical Services System

- 911
  - Dispatchers now provide treatment coaching to callers
- First Responders
  - First on scene; first to begin definitive care
  - Can be any level of training
  - May include law enforcement, fire departments, etc.
- Ambulance Transport
  - Levels of training
    - EMT-Basic
    - EMT-Intermediate
    - EMT-Paramedic
  - Must be at least one Basic EMT
  - Ideally Paramedic staffed
- Primary Hospitals
  - Nurses, physicians, etc.
  - Emergency Departments
- Tertiary/Specialty Hospitals/Departments
  - Trauma centers
  - Burn centers
  - Pediatric centers
  - Other specialty centers

Establishment and Control of the Emergency Medical Services System

- Tennessee Legislature
  - EMS Act of 1972
    - Original empowering legislation
  - EMS Act of 1983
    - Current statute
    - Established standards for EMS providers
    - Established EMS Board
- EMS Board
  - Thirteen members
  - Various health care/EMS/fire backgrounds
    - One (1) paramedic instructor from an accredited paramedic program licensed in this state
  - The Board promulgates regulations
- Governor
  - Appoints Commissioner of Health
  - Oversees the Tennessee Department of Health, Division of Emergency Medical
Services
  • Appoints Director of EMS
    - Donna Tidwell
  • Director of EMS supervises local Consultant
    - O'Neal Ellis
  • The Department of Health enforces both the EMS Act of 1983 and the Regulations promulgated by the EMS Board
    - The Courts
      • Discussed later in this lecture
  • All of the foregoing, taken collectively, define the qualifications and expectations of Basic EMTs in Tennessee

• Roles and Responsibilities of the Basic EMT
  - Maintain vehicle and equipment readiness.
  - Ensure safety of the EMS crew, the patient, and bystanders at the scene.
  - Operate the emergency vehicle.
  - Assess the patient.
  - Provide emergency care.
  - Safely lift and move the patient.
  - Prepare oral and written reports.
  - Safely transport the patient.
  - Transfer patient care.
  - Perform record keeping and data collection.
  - Serve as the patient's advocate.
  - Provide emotional support to the patient, relatives, and others at the scene.
  - Integrate the EMS service with other emergency and nonemergency services.
  - Resolve emergency incidents.
  - Maintain medical and legal standards.
  - Provide administrative support.
  - Enhance professional development.
  - Develop and maintain community relations.

• Professional Attributes
  - Appearance
    • Neat
    • Clean
    • Positive image
  - Maintains up-to-date knowledge and skills
    • Continuing education
    • Refresher courses
  - Puts patient's needs as a priority without endangering self.
  - Maintains current knowledge of local, state, and national issues affecting EMS.
  - A calm and reassuring personality.
  - Leadership ability.
  - Good judgment.
  - Good moral character.
- Stability and adaptability.
- Ability to listen.
- Resourcefulness and ability to improvise.
- Cooperativeness.

- Quality Improvement (also known as Continuous Quality Improvement or CQI)
  - Definition - a system of internal/external reviews and audits of all aspects of an EMS system so as to identify those aspects needing improvement to assure that the public receives the highest quality of prehospital care.
  - The role of the EMT-Basic in quality improvement
    - Documentation
    - Run reviews and audits (utmost honesty required)
    - Gathering feedback from patients and hospital staff
    - Conducting preventative maintenance
    - Continuing education
    - Skill maintenance

- Medical Direction/Control
  - A physician responsible for the clinical and patient care aspects of an EMS system.
  - Every ambulance service/rescue squad must have physician medical direction.
  - Types of medical direction/control
    - On-line
      - Telephone
      - Radio
    - Off-line
      - Protocols
      - Standing orders
  - The relationship of the Basic EMT to medical direction
    - Designated agent of the physician
    - Care rendered is considered an extension of the medical director's authority
    - Care rendered by EMT’s without medical control is essentially practicing medicine without a license

The EMT and Litigation

- Courts
  - Enforce statutes and in some instances regulations
  - Create and enforce “common law”
    - Court made
    - Theory of “precedent”
- Parties to suit
  - Plaintiff (person who is allegedly injured by another’s wrongdoing)
  - Defendant (the alleged wrongdoer)
    - Who can be a defendant?
    - Always responsible for your own acts
• Supervisors are responsible for those that they supervise
• Employers are responsible for employees

Battery
- Harmful or offensive contact
- Technical battery
- Also known as malfeasance

Consent
- Means of avoiding battery/technical battery
- Three types
  • Express
  • Implied
  • Involuntary

Express
- Adults
  • Saying “yes”, nodding head in agreement, signing a document permitting treatment
- Minors
  • Generally, a child can neither refuse nor consent to treatment
  • Only parent or legal guardian may consent
  • Exceptions
    - Married
    - Emancipated
    - Living independently
    - Military
    - Rule of Sevens
      » Age 0 to 7 (incompetent)
      » Age 7 to 14 (rebuttable presumption of incompetence)
      » Age 14 and older (rebuttable presumption of competence, e.g. the “mature minor”)

Implied
- Adults
  • Unconsciousness
  • Decreased level of consciousness
  • Cannot weight the risks and benefits
  • If uncertain, probably best to choose technical battery over abandonment
- Minors
  • TCA 63-6-222
  • Common law

Involuntary
- Adult and juvenile
  • TCA 33-6-103 (review behavioral emergency lecture from last semester)
• Revocation of consent
  - Competent patient may revoke at any time
    • Decision is binding even if loses consciousness later
  - Incompetent patient
    • Cannot revoke
    • May continue to treat
    • Be as certain as possible that patient is incompetent
    • If uncertain, probably best to choose technical battery over abandonment
• Revocation or refusal procedure
  • Review AMA form and process from last semester

• Abandonment
  - Leaving a patient after assuming a duty to treat
  - Turning the patient over to personnel less qualified than you

• Negligence
  - Failure to perform a legally imposed duty
  - Elements
    • Duty of due care
      - Paid EMTs are "on duty"
      - Voluntary assumption of duty
      - Good Samaritan Law
    • Breach of duty
      - Conduct falling short of that expected from the "reasonable EMT"
      - Higher standard than layperson
      - Good faith doesn't count
    • Other names for breach
      » Nonfeasance (failure to perform required act)
      » Misfeasance (incorrect performance of a required act)

• Negligence (cont.)
  • Causation
    - Defendant's conduct must be true cause of plaintiff's injury
  • Damages
    - Plaintiff must be actually harmed
    - Three types of damages
      » General (pain and suffering)
      » Special (lost wages)
      » Punitive (designed to punish the defendant for egregious conduct)

• Advance Directives
  - Patient has the right to refuse resuscitative efforts.
    • POST form (see handout)
    • Do Not Resuscitate (DNR) orders
• Living wills
  – Review your service's protocols relative to DNR orders and advance directives.
  – When in doubt or when written orders are not present, you should usually begin
    resuscitation efforts.

• Patient Confidentiality
  – Essentially all information you collect is deemed by federal law ("HIPAA") to be
    confidential information
  • Patient history gained through interview
  • Assessment findings
  • Treatment rendered
  – Releasing or discussing confidential information
    • Requires a written release form signed by the patient.
    • THIS INCLUDES DISCUSSIONS WITH YOUR FRIENDS, SPOUSES, CO-WORKERS
      UNLESS PART OF CQI OR OTHER FORMAL FUNCTIONS
  – When a release is not required
    • Other health care providers need to know information to continue care.
    • State law requires reporting incidents such as rape, abuse or gun shot wounds.
    • Third party payment billing forms
    • Legal subpoena

• Special Situations
  – Potential Crime Scene/Evidence Preservation
    • Dispatch should notify police personnel
  • Responsibility of the Basic EMT
    – Emergency care of the patient is the EMT’s priority.
    – Do not disturb any item at the scene unless emergency care requires it or it poses
      potential harm to you or others.
    – When moving items, do so only in a manner that best preserves evidence if it can
      be moved safely.
    – Observe and document anything unusual at the scene.
    – If possible, do not cut through holes in clothing from gunshot wounds or
      stabblings.
  – Special Reporting Situations
    • Child and elder abuse

The Well-Being of the EMT

• Emotional Aspects of Emergency Care
  – Stressful situations
    • Examples of situations that may produce a stress response
      – Mass casualty situations
      – Infant and child trauma
      – Amputations
      – Infant/child/elder/spouse abuse
      – Death/injury of co-worker or other public safety personnel
• Death and dying of a patient
  • The EMT will experience personal stress as well as encounter patients and bystanders in severe stress.

• Stress management
  – Recognize warning signs
    • Irritability to co-workers, family, friends
    • Inability to concentrate
    • Difficulty sleeping/nighmares
    • Anxiety
    • Indecisiveness
    • Guilt
    • Loss of appetite
    • Loss of interest in sexual activities
    • Isolation
    • Loss of interest in work
  – Life-style changes
    • Helpful for "job burnout"
    • Change diet
      – Reduce sugar, caffeine and alcohol intake
      – Avoid fatty foods
      – Increase carbohydrates
    • Exercise
    • Practice relaxation techniques, meditation, visual imagery

• Stress management (Cont.)
  – Balance work, recreation, family, health, etc.
  – EMS personnel and their family's and friends' responses
    • Lack of understanding
    • Fear of separation and being ignored
    • On-call situations cause stress
    • Can't plan activities
    • Frustration caused by wanting to share
  – Work environment changes
    • Request work shifts allowing for more time to relax with family and friends.
    • Request a rotation of duty assignment to a less busy area.
  – Seek/refer professional help (CISD)

• Critical Incident Stress Debriefing (CISD)
  – A team of peer counselors and mental health professionals who help emergency care workers deal with critical incident stress.
  – Meeting is held within 24 to 72 hours of a major incident.
    • Open discussion of feelings, fears, and reactions
    • Not an investigation or interrogation
    • All information is confidential
    • CISD leaders and mental health personnel evaluate the information and offer
suggestions on overcoming the stress.
- Designed to accelerate the normal recovery process after experiencing a critical incident.
  • Works well because feelings are ventilated quickly.
  • Debriefing environment is non-threatening.
- How to access local CISD system.
  • 333-5400 and ask for Glenn Faught.
  • Be sure to state that you are calling for CISD help.

- Comprehensive critical incident stress management includes:
  • Pre-incident stress education
  • On-scene peer support
  • One-on-one support
  • Disaster support services
  • Defusings
  • CISD
  • Follow up services
  • Spouse/family support
  • Community outreach programs
  • Other health and welfare programs such as wellness programs

Scene Safety

- Transmittable Infectious Diseases
  - Hepatitis
    • Viral organism
    • Spread through contact with infected body fluids and feces
    • Most common bloodborne infection
    • Common among IV drug users
    • Types A, B, C & D
    • Immunization available for Hepatitis B - GET IT!!
    • No immunization for other forms
    • Use perfect standard precautions
  - Acquired Immune Deficiency Syndrome (AIDS)
    • Viral organism (Human Immunodeficiency Virus (HIV))
    • Spread through contact with infected body fluids
    • Less likely to contract than Hepatitis
    • Immunization not currently available but may be available in the next five years
    • Use perfect standard precautions
  - Tuberculosis
    • Bacterial organism
    • Very dangerous airborne and contact transmitted disease due to evolution of drug-resistant forms
    • Use perfect standard precautions PLUS surgical mask on patient PLUS HEPA or N-95 respirator on EMT
  - Severe Acute Respiratory Syndrome (SARS)
• Viral organism
• Airborne and contact transmission
• Use perfect standard precautions PLUS surgical mask on patient PLUS surgical mask or N-95 respirator on EMT
• Change of uniform is preferred.

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• Standard Precautions (Body Substance Isolation or “BSI”)
  - HAND WASHING
  - Eye protection
    • If prescription eyeglasses are worn, then removable side shields should be applied to them.
    • Goggles are NOT required.
  - Gloves (vinyl or latex)
    • Needed for contact with blood or bloody body fluids.
    • Should be changed between contact with different patients.
  - Gloves (utility) - needed for cleaning vehicles and equipment
  - Gowns
    • Needed for large splash situations such as with field delivery and major trauma.
    • Change of uniform is preferred.
  - Masks
    • Surgical type for possible blood splatter (worn by care provider)
    • High Efficiency Particulate Air (HEPA) respirator if patient suspected for or diagnosed with tuberculosis (worn by care provider)
    • Airborne disease - surgical type mask (worn by patient)

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• Suggested Immunizations and Testing
  - Tetanus prophylaxis
  - Hepatitis B vaccine
  - Verification of immune status with respect to commonly transmitted contagious diseases
  - Periodic tuberculin purified protein derivative (PPD) testing

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• Hazardous materials
  - Identify possible hazards
    • Binoculars
    • Placards
    • *The Emergency Response Handbook*, published by the United States Department of Transportation
  - Protective clothing
    • Hazardous material suits
    • Self Contained Breathing Apparatus
  - Review information from last semester
Rescue
- Identify and reduce potential life threats.
  - Electricity
  - Fire
  - Explosion
  - Hazardous materials
- Protective clothing
  - Turnout gear
  - Puncture-proof gloves
  - Helmet
  - Eye wear
- Dispatch rescue teams for extensive/heavy rescue.

Violence
- Scene should always be controlled by law enforcement before EMT provides patient care.
  - Perpetrator of the crime
  - Victim(s)
  - Bystanders
  - Family members
- Behavior at crime scene.
  - Do not disturb the scene unless required for medical care or safety.
  - Maintain chain of evidence.

Lifting & Moving Patients

Body Mechanics/Safety Precautions
- Know the amount of weight to be lifted
- Use legs, not back, to lift while keeping back in locked-in position.
  - Strongest muscles are thigh muscles
  - Avoids disadvantageous lever
- Have feet positioned properly.
  - Approximately shoulder-width apart
- Keep weight as close to body as possible.
- Ensure enough help available. Use an even number of people to lift so that balance is maintained.
  - Know or find out the weight limitations of equipment being used.
  - Know what to do with patients who exceed weight limitations of equipment.
- Using power-lift or squat lift position, keeping back locked into normal curvature.
  - The power-lift position is useful for individuals with weak knees or thighs. The feet are a comfortable distance apart. The back is tight and the abdominal muscles lock the back in a slight inward curve. Straddle the object. Keep feet flat. Distribute weight to balls of feet or just behind them. Stand by making sure the back is locked in and the upper body comes up before the hips.
- Use power grip.
• The palm and fingers come into complete contact with the object and all fingers are bent at the same angles. The power-grip should always be used in lifting. This allows for maximum force to be developed. Hands should be at least 10 inches apart.
  - Avoid bending at the waist.
  - Lift without twisting.
  - Communicate clearly and frequently with partner.

Carrying
  - Whenever possible, don’t carry; transport patients on devices that can be rolled.
  - Guidelines for carrying
    • Know or find out the weight to be lifted.
    • Know limitations of the crew's abilities.
    • Work in a coordinated manner and communicate with partners.
    • Keep the weight as close to the body as possible.
    • Keep back in a locked-in position and refrain from twisting.
    • Flex at the hips, not the waist; bend at the knees.
    • Do not hyperextend the back (do not lean back from the waist).
  - Correct carrying procedure
    • Use correct lifting techniques to lift the stretcher.
    • Partners should have similar strength and height.
  - One-handed carrying technique
    • Pick up and carry with the back in the locked-in position.
    • Avoid leaning to either side to compensate for the imbalance.
  - Correct carrying procedure on stairs
    • When possible, use a stair chair instead of a stretcher.
    • Keep back in locked-in position.
    • Flex at the hips, not the waist; bend at the knees.
    • Keep weight and arms as close to the body as possible.

Reaching
  - Guidelines for reaching
    • Keep back in locked-in position.
    • When reaching overhead, avoid hyperextended position.
    • Avoid twisting the back while reaching.
  - Application of reaching techniques
    • Avoid reaching more than 15 - 20 inches in front of the body.
    • Avoid situations where prolonged (more than a minute) strenuous effort is needed in order to avoid injury.
  - Correct reaching for log rolls
    • Keep back straight while leaning over patient.
    • Lean from the hips.
    • Use shoulder muscles to help with roll.

Pushing and pulling guidelines
  - Push, rather than pull, whenever possible.
- Keep back locked-in.
- Keep line of pull through center of body by bending knees.
- Keep weight close to the body.
- Push from the area between the waist and shoulder.
- If weight is below waist level, use kneeling position.
- Avoid pushing or pulling from an overhead position if possible.
- Keep elbows bent with arms close to the sides.

• General Considerations for Moving Patients
  - In general, a patient should be moved immediately (emergency move) only when:
    • There is an immediate danger to the patient if not moved.
      - Fire or danger of fire.
      - Explosives or other hazardous materials.
      - Inability to protect the patient from other hazards at the scene.
      - Inability to gain access to other patients in a vehicle who need life-saving care.
    • Life-saving care cannot be given because of the patient's location or position, e.g., a cardiac arrest patient sitting in a chair or lying on a bed.
  - A patient should be moved quickly (urgent move) when there is immediate threat to life.
    • Altered mental status
    • Inadequate breathing
    • Shock (hypoperfusion)
  - If there is no threat to life, the patient should be moved when ready for transportation (non-urgent move).

• Emergency moves
  - The greatest danger in moving a patient quickly is the possibility of aggravating a spine injury.
  - In an emergency, every effort should be made to pull the patient in the direction of the long axis of the body to provide as much protection to the spine as possible.
  - It is impossible to remove a patient from a vehicle quickly and at the same time provide as much protection to the spine as can be accomplished with an interim immobilization device.
  - If the patient is on the floor or ground, he can be moved by:
    • Pulling on the patient's clothing in the neck and shoulder area.
    • Putting the patient on a blanket and dragging the blanket.
    • Putting the EMT's hands under the patient's armpits (from the back), grasping the patient's forearms and dragging the patient.

• Urgent moves
  - Rapid extrication of patient sitting in vehicle
    • One EMT-Basic gets behind patient and brings cervical spine into neutral in-line position and provides manual immobilization.
    • A second EMT-Basic applies cervical immobilization device as the third EMT-Basic first places long backboard near the door and then moves to the passenger seat.
    • The second EMT-Basic supports the thorax as the third EMT-Basic frees the patient's legs from the pedals.
• At the direction of the second EMT-Basic, he and the third EMT-Basic rotate the patient in several short, coordinated moves until the patient's back is in the open doorway and his feet are on the passenger seat.

• Since the first EMT-Basic usually cannot support the patient's head any longer, another available EMT-Basic or a bystander supports the patient's head as the first EMT-Basic gets out of the vehicle and takes support of the head outside of the vehicle.

• The end of the long backboard is placed on the seat next to the patient's buttocks. Assistants support the other end of the board as the first EMT-Basic and the second EMT-Basic lower the patient onto it.

• The second EMT-Basic and the third EMT-Basic slide the patient into the proper position on the board in short, coordinated moves.

• Several variations of the technique are possible, including assistance from bystanders. Must be accomplished without compromise to the spine.

Direct ground lift (no suspected spine injury)
- Two or three rescuers line up on one side of the patient.
- Rescuers kneel on one knee (preferably the same for all rescuers).
- The patient's arms are placed on his chest if possible.
- The rescuer at the head places one arm under the patient's neck and shoulder and cradles the patient's head. He places his other arm under the patient's lower back.
- The second rescuer places one arm under the patient's knees and one arm above the buttocks.
- If a third rescuer is available, he should place both arms under the waist and the other two rescuers slide their arms either up to the mid-back or down to the buttocks as appropriate.
- On signal, the rescuers lift the patient to their knees and roll the patient in toward their chests.
- On signal, the rescuers stand and move the patient to the stretcher.
- To lower the patient, the steps are reversed.

Extremity lift (no suspected extremity injuries)
- One rescuer kneels at the patient's head and one kneels at the patient's side by his knees.
- The rescuer at the head places one hand under each of the patient's shoulders while the rescuer at the foot grasps the patient's wrists.
- The rescuer at the head slips his hands under the patient's arms and grasps the patient's wrists.
- The rescuer at the patient's foot slips his hands under the patient's knees.
- Both rescuers move up to a crouching position.
- The rescuers stand up simultaneously and move with the patient to a stretcher.

Transfer of supine patient from bed to stretcher using direct carry
- Position cot perpendicular to bed with head end of cot at foot of bed.
- Prepare cot by unbuckling straps and removing other items.
- Both rescuers stand between bed and stretcher, facing patient.
- First rescuer slides arm under patient's neck and cups patient's shoulder.
- Second rescuer slides hand under hip and lifts slightly.
- First rescuer slides other arm under patient's back.
- Second rescuer places arms underneath hips and calves.
- Rescuers slide patient to edge of bed.
- Patient is lifted/curled toward the rescuers' chests.
- Rescuers rotate and place patient gently onto cot.

Transfer of supine patient from bed to stretcher using draw sheet method
- Loosen bottom sheet of bed.
- Position cot next to bed.
- Prepare cot: Adjust height, lower rails, unbuckle straps.
- Reach across cot and grasp sheet firmly at patient's head, chest, hips and knees.
- Slide patient gently onto cot.

Types of stretchers/cots
- Wheeled stretcher
  - Most commonly used device
  - Rolling
    - Restricted to smooth terrain.
    - Foot end should be pulled.
    - One person must guide the stretcher at head.
- Carrying
  - Two rescuers
    » Preferable in narrow spaces, but requires more strength.
    » Easily unbalanced.
    » Rescuers should face each other from opposite ends of stretcher.
  - Four rescuers
    » One rescuer at each corner.
    » More stability and requires less strength.
    » Safer over rough terrain.
- Loading into ambulance
  - Use sufficient lifting power.
  - Load hanging stretchers before wheeled stretchers.
  - Follow manufacturer's directions.
- Portable stretcher
- Stair chair
- Backboards
  - Long
    - Traditional wooden device
    - Manufactured varieties
  - Short
    - Traditional wooden device
    - Vest type device
- Scoop or orthopedic stretcher
- Maintenance - follow manufacturer's directions for inspection, cleaning, repair and upkeep.
• Ensure all cots and patients secured before moving ambulance.

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