

Emergency

Care and Transportation of the Sick and Injured



Section 7: Operations

35: Ambulance Operations

Cognitive Objectives (1 of 4)

- 7-1.1 Discuss the medical and nonmedical equipment needed to respond to a call.
- 7-1.2 List the phases of an ambulance call.
- 7-1.3 Describe the general provision of state laws relating to the operation of the ambulance and privileges in any or all of the following areas:
 - speed
 - warning lights
 - sirens
 - right-of-way
 - parking
 - turning

Cognitive Objectives (2 of 4)

- 7-1.4 List factors that contribute to unsafe driving conditions.
- 7-1.5 Describe the considerations that should be given to:
 - request for escorts
 - following an escort vehicle
 - intersections
- 7-1.6 Discuss “Due Regard for Safety of All Others” while operating an emergency vehicle.

Cognitive Objectives (3 of 4)

- 7-1.7 State what information is essential in order to respond to a call.
- 7-1.8 Discuss various situations that may affect response to a call.
- 7-1.9 Differentiate between the various methods of moving a patient to the unit based upon injury or illness.
- 7-1.10 Apply the components of the essential patient information in a written report.

Cognitive Objectives (4 of 4)

- 7-1.11 Summarize the importance of preparing the unit for the next response.
- 7-1.12 Identify what is essential for the completion of a call.
- 7-1.13 Distinguish among the terms cleaning, disinfection, high-level disinfection, and sterilization.
- 7-1.14 Describe how to clean and disinfect items following patient care.

Affective Objectives

- 7-1.15 Explain the rationale for appropriate reporting of patient information.
- 7-1.16 Explain the rationale for having the unit prepared to respond.
 - There are no psychomotor objectives for this chapter.

Additional Objectives*

Cognitive

1. Discuss the elements that dictate the use of lights and siren to the scene and to the hospital.

*This is a noncurriculum objective.

Ambulance Operations

- Emphasis on rapid response places the EMT-B in great danger while driving to calls.
- EMT-Bs should know:
 - How to equip and maintain an ambulance
 - Techniques for the safe operation of an ambulance
 - How to work safely with air ambulances

Emergency Vehicle Design

- Ambulance
 - Vehicle used for treating and transporting patients who need emergency medical care
 - Most ambulances follow federal specifications (KKK-A-1822C, 1990)

Type I



Type II



Type III



Phases of an Ambulance Call

- Preparation
- Dispatch
- En route
- Arrival at scene
- Patient transfer
- En route to receiving facility
- At the receiving facility
- En route to station
- Postrun

Preparation Phase

- Medical equipment and supplies check
- Personal safety equipment
- Equipment for work areas
- Preplanning and navigation
- Extrication equipment
- Daily inspections

Medical Equipment

- Airway and ventilation devices
- Suction unit
- Oxygen delivery
- CPR equipment
- Basic wound care
- Splinting supplies
- Childbirth supplies
- AED
- Patient transfer equipment
- Medications
- Jump kit

Personal Safety Equipment

- Face shields
- Gowns, shoe covers, caps
- Turnout gear
- Helmets with face shields or safety goggles
- Safety shoes or boots

Equipment for Work Areas

- Warning devices that flash intermittently or have reflectors
- Two high-intensity halogen flashlights
- Fire extinguisher
- Hard hats or helmets with face shields
- Portable floodlights

Other Preparations

- Preplanning and navigation
 - Carry detailed maps and directions.
 - Be familiar with local area.
- Extrication equipment
 - Equipment needed for simple, light extrication

Personnel

- Every ambulance must be staffed with at least one EMT-B in the patient compartment during patient transport.
- Two EMTs are strongly recommended.
- Some services may operate with a non-EMT driver.

Inspections and Safety Precautions

- Being fully prepared means inspecting the ambulance and equipment daily.
- Check medical equipment and supplies at least daily.
- Review standard traffic safety rules and regulations.
- Make sure seat belts work and that oxygen tanks are secured.

Dispatch Phase

- The dispatcher should gather minimum information.
 - Nature of the call
 - Name, person, location, and call-back number
 - Location of the patient(s)
 - Number of patients and idea of the severity of their conditions
 - Special problems or other pertinent information

En Route to the Scene

- Fasten your seat belt.
- Confirm response and location.
- Prepare for arrival.
- Decide what equipment to take initially.

Arrival at the Scene

- Scene safety
- Safe parking
- Traffic control



Scene Size-up

- Look for safety hazards.
- Evaluate need for additional units.
- Determine MOI/NOI.
- Evaluate spinal precautions.
- Follow BSI precautions.

Safe Parking and Traffic Control

- Park away from hazards and out of flow of traffic.
- Do not block other responding EMS vehicles.
- Place appropriate warning devices on both sides of the accident.

Transfer Phase

- Provide lifesaving treatment.
- Package patient for transport.
- Be sure to secure the patient with at least three straps across the body.

Transport Phase

- Inform dispatch when you are ready to leave the scene.
- Report the number of patients and the name of receiving hospital.
- Conduct ongoing assessments.
- Contact medical control.
 - Report number of patients
 - Nature of problems

Delivery Phase

- Report arrival to dispatch.
- Give report to staff.
- Physically transfer the patient.
- Complete written report.
- Leave a copy with an appropriate staff member.

En Route to the Station

- Inform dispatch whether or not you are in service and where you are going.
- Clean and disinfect the ambulance and any equipment used.
- Restock supplies.



Postrun Phase

- Complete and file any additional written reports.
- Inform dispatch of your status, location, and availability.
- Clean and restock the ambulance.

Defensive Driving

- 6,000 ambulances involved in crashes every year
- 300 fatalities between 1991 and 2001
- Properly operating the ambulance is as important as taking care of patients.



Driver Characteristics

- Physical fitness
 - Effects of medication
 - Fatigue
- Emotional fitness
 - Maturity and stability
 - Proper attitude
- Your actions will be scrutinized.

Safe Driving Practices

- Speed does not save lives; good care does.
- Seat belts must be worn.
- Learn how your vehicle accelerates, corners, sways, and stops.

Driver Anticipation

- Anticipate the actions of other motorists and pedestrians.
- Assume actions of other drivers will cause a collision.
- Use of PA system may add to confusion.

Cushion of Safety

- Keep safe following distance.
- Watch for tailgaters.
- Be aware of blind spots.
- Use a spotter when backing up.



Excessive Speed

- Speeding is unnecessary if patient is properly assessed and stabilized.
- Decreases reaction time
- Increases stopping time and distance

Vehicle Size and Cornering

- Vehicle length and width are critical factors in maneuvering.
- Vehicle size and weight greatly influence braking and stopping distances.
- Always be aware of your position on the roadway.
- Take corners at the speed that will put you in the proper road position as you exit the curve.

Weather and Road Conditions

- Be alert to changing conditions.
- Decrease speed and increase distance in poor conditions.
 - Hydroplaning
 - Water on roadway
 - Decreased visibility
 - Ice and slippery surfaces

Laws and Regulations

- Vary from state to state
- EMS drivers have certain limited privileges.
- These privileges do not lessen drivers' liability.

Warning Lights and Sirens

- Must be responding to an emergency
- Use both audible and visual devices.
- Operate with due regard.

Right-of-Way Privileges

- You must not endanger people or property under any circumstances.
- Know your local right-of-way privileges.
- Exercise them only when necessary for the patient's well-being.

Escorts and Intersection Hazards

- Use of escorts
 - A dangerous practice
 - Follow escorts at a safe distance.
- Intersection hazards
 - Most common place for collisions
 - Even on urgent calls, come to a momentary stop at the light.

Air Ambulances

- Fixed wing
 - Interhospital transfers
- Rotary-wing
 - Used for shorter distances



Medivac Operations

- Become familiar with local capabilities.
- Calling for a medivac
 - Ground transport would take too long.
 - Spinal cord injuries, amputations, burns, diving emergencies, venomous bites
- Notify your dispatcher first.

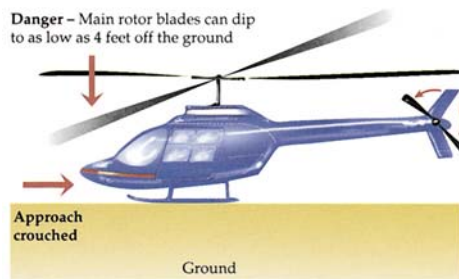
Establishing a Landing Zone

- Area should be hard or grassy level surface that measures 100' x 100' (recommended)
- Clear area of loose debris and survey for overhead or tall hazards.
- Mark landing site with weighted cones or headlights.

Safety Precautions

- Do nothing near the helicopter and only go to where the crew or pilot directs you.
- Keep a safe distance away from the aircraft.
- Stay away from the tail rotor.
- Never approach the helicopter from the rear.

Danger – Main rotor blades can dip to as low as 4 feet off the ground



Special Considerations

- Nighttime landings
 - Considerably more dangerous than daytime operations
- Landing on uneven ground
 - Main rotor blade will be closer to the ground on uphill side.
- Hazardous materials incidents
 - Land zone should be upwind and uphill.

Landing on Uneven Ground

