

Answers to Assessment in Action and Points to Ponder

Section 7: Operations

Chapter 35: Ambulance Operations

Assessment in Action

1. C. Type III

The Type III ambulances fit this description. Type I has a separate module and Type II are vans. Type IV is not described in the text.

2. D. Don't use sirens. There isn't a life-threatening situation on this call.

Sirens are overused in EMS. This call does not involve a life-threatening situation and should be responded to in a safe manner for the crew and the civilian traffic. Public use of EMS as a primary care provider is increasing and must be dealt with safely.

3. A. in a straight line.

Braking in a straight line is the safest way to operate an ambulance. Most ambulances are heavy and exerting the force forward is optimal. Turning away from the object in front of you could cause a rollover. Performing other tasks such as turning on a siren is distracting and unsafe. You should not shift into another gear suddenly while driving, regardless of the type of vehicle being driven.

4. B. Slow down gradually without jamming brakes

When the vehicle starts to hydroplane, the safest response is to slow down gradually without jamming or locking the brakes.

5. B. After you give a verbal report and leave a written copy at the hospital

EMS personnel are sometimes quick to forget that the receiving facility must have a written copy of clinical chart as well as verbal report to complete transfer of patient.

6. B. You are asking for the right of way.

Although using the lights and sirens allows you certain privileges, asking for the right away best defines the action. Using lights and sirens does not give EMS personnel the right to drive aggressively. You should be driving defensively.

7. D. In left-hand lane in front of the scene

In this scenario, parking in the left-hand lane in front of the scene is safest. However, each scene must be evaluated and have the ambulance park in the safest area. Behind the engine, next to the scene, and on the right hand shoulder would not be safe because you are exposed to oncoming traffic.

8. A. On a long backboard

Placing the patient on a long backboard provides a hard surface for chest compressions and also makes transferring and moving the patient easier.

9. It is not uncommon for EMS personnel to use emergency lights without the siren in certain situations, such as in nonpopulated places and during runs in the middle of the night, but the law clearly states that both lights and siren must be used as a method of warning to other traffic and pedestrians.

10. It is important to place equipment that is necessary in the first 5 minutes of an emergency scene. This list could vary greatly from department to department, but should always include airway devices and various bandages that would help control severe bleeding.

Points to Ponder

Air crews use the mnemonic ETE (estimated time en route) instead of ETA (estimated time of arrival). The landing zone should be 50' x 50' during the day, but it is good practice to try and make all landing zones at least 100' x 100'. The size needed depends on the aircraft responding. Some aircraft needs larger landing zones. The surface of the landing zone is also important. If landing on asphalt is not possible, use a hard surface with little or no loose debris. A landing zone with loose dirt or snow will cause the aircraft to "white out" and landing will not be possible. When the helicopter makes contact with fire rescue for landing zone information. fire rescue personnel should be ready to relay the size of the landing zone and the surface of the landing zone. It will also be helpful to note any overhead obstructions such as wires, trees, and poles. Use direction when describing obstructions. (for example: I have a pole with a wire on it on the northwest side of the landing zone.) It is also useful to the pilot if you can relay which way the wind is blowing. A helicopter is more easily controlled with its nose into the wind. Inform the medical staff whether the extrication is extended and whether the patient has any airway problems. With an extended extrication, the crew may shut down the aircraft to save fuel. If the patient has airway problems, the medical crew can have paralytic medication and airway adjuncts ready for quick treatment. Save the rest of your verbal report until the helicopter lands.

Chapter 36: Gaining Access

Assessment in Action

1. A. Performing a scene size-up

The priority of the first vehicle on scene is to perform a scene size-up and determine what resources are needed.

2. D. All of the above

All of the above resources will be needed at a minimum. The HazMat team will contain the fuel spill. Law enforcement will handle traffic and crowd control. The fire department will handle fire hazards and extrication.

3. C. Performing an initial assessment

Once you make safe entry into the vehicle your first priority is to perform your initial assessment, which includes LOC and ABCs.

4. B. applying an occlusive dressing and monitoring.

The proper treatment would be to apply an occlusive dressing taped on three sides.

5. D. perform a rapid extrication.

It is not pragmatic to perform CPR on a patient who is sitting or inside of a vehicle. It would be proper to perform rapid extrication keeping the c-spine in line as best as safely possible.

6. C. Have an EMS provider explain that you must approve his assistance with medical control and that he must follow your protocols and ride in with the patient.

Once in a while an off-duty medical person will offer help at a scene. Most of the time a “no thank you” response or assigning a minor task will be sufficient. Occasionally, however, a health care provider will be more persistent in offering to deliver care. The most challenging providers are physicians. Usually they will decline further involvement when they realize their responsibility in dealing with the scene.

7. The patient in respiratory arrest would be your highest priority and the patient who is walking around confused would be your lowest priority.

8. In a mass-casualty situation, the cardiac arrest patient would require great resources but there would be little potential for positive outcome. Therefore, Patient 3 would be transported last.

9. Because a cardiac arrest patient does not have a good potential for a positive outcome, Patient 3 would not be resuscitated.

Points to Ponder

This scenario has several emergencies happening at once. First, you need to assess the scene and request additional resources to respond immediately. It would be appropriate to have the fire department engine, rescue, and HazMat companies respond. Law enforcement will be needed to handle traffic concerns and to keep parents from interrupting the scene. They will also be needed to keep people out of the HazMat zone. Additional ambulances will be needed to help treat and transport patients. It would also be appropriate to have social workers from nearby schools and/or hospital to help the parents and students with immediate concerns. The best way to gain access to the school bus would be to open the back emergency door. If the door does not open, extrication through the up-facing windows would be next. Once fluid is found to be leaking, the scene must be considered HazMat. Clearing the hot zone as quickly and safely as possible while the HazMat team identifies and contains the leak is appropriate. The parents present a unique scenario. Place the children with minor or no injuries in a green zone and have the parents wait in that zone. The uninjured children may be released to the parents. It is important to try and identify the parents of children who are being transported to direct them to the appropriate hospital.

Chapter 37: Special Operations

Assessment in Action

1. C. in keeping bystanders back.

The only role of an EMT-B who is not specially trained in hazardous materials should be to help other agencies keep bystanders safe and away from any potential hazard. The top priority for the first responder after scene safety in a HazMat incident is scene isolation. Patient decontamination and assessment of the quantity of a given agent is the responsibility of the Hazardous Materials Team.

2. C. upwind and at least 100'.

EMT-B safety is of utmost importance. The perimeter should be upwind at a bare minimum of 100'. However, a safe perimeter may be much farther than this, and depends on the substance, environment, containment and training. EMT-Bs should always follow local protocols, stay at least 100' and ideally farther, and await the HazMat team. In a hilly area, staging should occur uphill as well as upwind.

3. D. All of the above

All of the above should carry the warning signs, labels, or placards. Unfortunately, identifying materials can still be difficult. The laws and regulations that cover labeling of packages and transport vehicles can be misleading because in most cases the package or tank must contain a certain amount of hazardous material before a placard is required.

4. C. decontamination.

Disinfecting is the killing of pathogenic agents by directly applying a chemical made for that purpose to a surface. Sterilization is a process, such as heat, that removes all microbial contamination. Contamination is the presence of infectious organisms on or in objects such as water, food, wounds, needles, or a patient's body.

5. B. 4

There are four recognized protection levels: A, B, C, and D.

6. A. Level A

Level A is being used here. It is the highest protection level available. Level B is the next highest level of protection and requires nonencapsulated protective clothing along with a breathing device such as an SCBA along with eye protection. Level C protection, like Level B, requires the use of nonpermeable clothing and eye protection. In addition, face masks that filter all inhaled outside air must be used. The lowest level of protection is Level D, which consists of regular work clothing that affords minimal protection.

7. B. airway and breathing problems.

Most serious injuries and deaths can usually be attributed to airway and breathing compromise. The most prevalent route of entry is by inhalation of chemical gases and vapors. These gases and vapors may have profound effects on breathing. Burns can be caused by acids or base chemicals but rarely are life-threatening.

8. Level 4 toxicity level includes materials that are so hazardous that minimal contact will cause death.

9. For Level 4 substances, you need specialized gear that is designed for protection against that particular hazard. Special HazMat gear including a Level A suit with fully enclosed SCBA should be used when dealing with Level 4 toxicity.

Points to Ponder

On the basis of the information that you gathered, you should consider this to be a HazMat event. The incident is in a chemistry lab, which indicates that chemicals are probably being used. You now have more than one patient, which increases your index of suspicion that this is a HazMat event. You should immediately evacuate the area and notify additional resources such as the fire department and HazMat team. You may want to ascertain what type of chemicals were being used from students or from direct observation. You will also want to find out what type of ventilation system is in place and if it is working properly.

Chapter 38: Response to Terrorism and Weapons of Mass Destruction*Assessment in Action*

1. D. explosives.

International and domestic terrorists are no longer limited to conventional weapons. There is concern that chemical, biological, and radiological agents are weapons of choice. Explosives have been used before World War I to cause mass casualties; however, it should be noted that terrorists have used explosive and incendiary devices as a means of intimidation for many years and still these devices are their choice of weapons.

2. D. all of the above.

Weapons of mass destruction (WMDs) are devices or agents that will bring about mass disability, death, and damage to infrastructure. When WMD agents are utilized their primary goal is to bring about chaos and instill fear in others.

3. C. international terrorism.

Terrorism is the unlawful use of force or violence by individuals or groups against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof to further political, social, or religious objective. Terrorism committed by terrorists from the host country is called domestic terrorism. Terrorism committed by terrorists outside of the terrorist's host country is called international terrorism. It is also called cross-border terrorism. Domsday cults may engage in terrorist activities. Al Qaeda is a terrorist organization.

4. B. Elevated

The Department of Homeland Security (DHS) has devised a color-coded threat level system that is used to communicate with public safety officials and the public at-large through a threat-based, color-coded system so that protective measures can be implemented to reduce the likelihood or

impact of an attack. The color red indicates the most severe threat level, orange is high, yellow is elevated, blue is guarded, and green is low.

5. C. bacterial agents.

All of the agents except bacteria are chemical agents. Bacteria is a primary biological agent that is used in terrorism. Biological agents are organisms that cause disease.

6. B. Radiological weapon

When dealing with nuclear/radiological weapons and fallout, time, distance, and shielding are the most important factors in staying safe. Radioactivity in fallout weakens rapidly in the first few hours after an explosion. This weakening is called decay. After about 7 hours, fallout loses about 90% of its strength. The more distance that is between you and the fallout, the less amount of exposure you will receive. The same goes when having adequate shielding. The heavier, dense material, such as a thick wall, concrete, or brick, the less amount of fallout you will receive.

7. D. All of the above

Chemical agents can be produced as liquids, powders, or vapor. Chemical agents can be produced in a number of forms, depending on the desired route of exposure and dissemination techniques used.

8. As an EMT-B you are trained to provide quality, compassionate medical care to those in need of assistance; however, in this scenario you have become a potential patient yourself by overlooking scene safety. As a provider you should suspect a WMD incident. This also has the potential to become an MCI event as well.

9. You should be concerned with the potential effects that the agent may have on you and your partner. You should also be concerned with potential secondary devices. As a provider who has been exposed, you need to take care of yourself first. You should have also notified other potential public safety officials of the incident so they do not become victims as well.

Points to Ponder

No matter where the incident occurs there is always concern regarding where you should stage. Is the triage area far enough from the incident location? The location also depends on weather and topographical factors. Terrorists usually research the surrounding areas to calculate where they should place secondary devices. Areas of concern include potential areas of IC location, staging location, and triage location. This WMD incident is also a MCI. Based on the number of patients

and the lack of resources at this scene you determine that this is most likely going to be a MCI. You will want to know what agent has been used. You will also want to know the amount of agent that was utilized and how it was disseminated. This will aid in making appropriate PPE decisions, staging location decisions, and treatment decisions.