

# OHM MEDICAL TRAINING INC.

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## OHM Medical First Responder Course Instructor Resource Kit

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## Instructor Resource

This instructor kit is intended to provide First Responders with the necessary resources to deliver a course. The content within the course has been extracted with permission from the Jones & Bartlett EMR program. The course material has the necessary basic information and skills to equip First Responders with the ability to provide basic care. The material is designed to augment qualified and experienced instructors as a guide to ensure all pertinent First Responder knowledge and skills are taught. The information within the instructor kit has been developed by Jones & Bartlett.

### CASE SCENARIOS FOR PRIORITY ACTION DRILLS

#### Cardiac Arrest Scenarios

The cardiac arrest scenarios for priority action drills are designed to provide the First Responder with an approach to cardiac arrest. It is important that the First Responder follow the process outlined in the Priority Action Drill checklist. The approach for the cardiac arrest scenario must include a Compressions, Airway, Breathing (CAB), framework. This is different from a victim with a pulse. Upon determining a pulseless patient with no rise and fall of the chest, the First Responder begins with compressions. The rationale is to begin interventions aimed at circulating blood. CPR is the priority action to ensure the victim has adequate perfusion. Victims with a pulse require an ABC approach.

#### **Scenario 1:**

A man suddenly collapses while loading plywood onto his cart. The man is gasping and cyanotic in appearance. There are two first responders.

#### **Scenario 2:**

A man complaining of chest pain suddenly collapses in the break room. There are multiple first responders.

#### **Scenario 3:**

A man who is sweating profusely and complaining of dizziness, suddenly collapses. He is unresponsive. The man's chest does not rise and fall.

## A CHILD IN CARDIAC ARREST (TRAUMATIC & NON-TRAUMATIC)

Many cardiac arrests in children stem from respiratory issues. However, some children can have congenital defects that can lead to lethal cardiac dysrhythmias ending in cardiac arrest. Other common causes of cardiac arrest involve asphyxiation, overdoses, and trauma. The approach to all children in cardiac arrest involve the CAB-D method. Upon recognizing a pulseless child, CPR & defibrillation via an AED or ALS monitor is the highest priority. Next, the First Responder must establish an airway to promote effective ventilations (Breathing). Remember, one cannot start with airway and breathing as there is no pump to circulate the oxygen.

### **Scenario 1:**

An 11-year-old girl is playing on top of a snow fort built by her Grandpa. There is a hole at the top of the fort. The young girl sticks her head in the hole and loses her woolen hat. She slides down into the hole to recover the hat but becomes trapped. Her arms and hands are at the side and she is unable to use them. The more the young girl struggles, the more trapped she becomes. After using up her air in the hole, the girl goes unconscious. The First Responder finds her upside in the hole. The First Responder pulls her out by the legs. She is unresponsive. Her eyes are rolled back in her head. There is a trail of frozen blood from her nose. What are your priority actions?

## A CHOKING PATIENT WITH LOSS OF CONSCIOUSNESS (LOC)

Choking scenarios are designed to prepare First Responders to recognize and manage choking. The key learning points for the First Responder include recognition skills. Can the victim speak or cough? Look and listen for obvious signs of obstruction such as a red or cyanotic face. The sound of stridor indicates a foreign body airway obstruction. Instructors can discuss how intra-thoracic pressure with abdominal thrusts can help to dislodge an airway obstruction. Demonstrating abdominal thrusts with the Act-Fast choking device is a great way to teach the technique. Using descriptive analogies such as making a “J” motion with one’s fist under the diaphragm, can assist the First Responder in perfecting the abdominal thrust technique. Remind First Responders that a victim of choking may be embarrassed and try to remove themselves from an area such as a dining room. It is important to follow and assist as required. Discuss how one can create intra-thoracic pressure when she or he is choking, and no one is around to help. Describe running towards a wall and slamming one’s chest against it or using a chair to assist when no one is available. Finally, teach what to do when a choking victim goes into cardiac arrest. Discuss the importance of looking into the mouth and removing a foreign body if it is visible. Remind the First Responder to avoid blind mouth sweeps.

### **Scenario 1:**

A man is laughing at the dinner table while eating steak. He suddenly stops laughing and begins to make obstructive sounds. He appears severely distressed and his face is flushed. Suddenly the man slumps forward onto the table and becomes unresponsive.

### **Scenario 2:**

While eating chips and a hotdog at a ball park, a man stands up and suddenly grabs his throat with both hands. The man then slumps to the ground.

### **Scenario 3:**

A 33-year-old female is out for dinner with her friends. She begins to choke on her meal. She gets up and runs to the bathroom where she slumps to the ground.

### **Scenario # 4**

A 26-year-old is eating popcorn at a movie theater. Suddenly, she begins to let out an obstructive loud shrill. She appears panicked and flushed in the face.

### **Scenario # 5**

A 12-year-old boy was sucking on a 500mg vitamin C tablet when he began to gasp out loud. A high-pitched stridor can be heard. As the boy struggles his facial color changes from red to dusky gray and he suddenly loses consciousness. What are the priority action drills?

## AN INFANT CHOKING

The First Responder instructor must understand the technique for infant choking. It requires five back blows and five chest -thrusts. It is important to look into the infant's mouth to observe for a foreign body after each of the five chest thrusts. The instructor must emphasize using gravity and securing the head by pinching the jaw with the index finger and thumb. It is important to prevent the infant's head and neck from being injured.

A 6-month infant has vomited in the car seat and appears blue. He has a silent cry. What are the immediate actions required?

## DECREASED LEVEL OF CONCIIOUSNESS WITH PULSE AND IN A SEMI-PRONE POSITION

In this scenario the First Responder must know when to protect the airway. The patient with decreased level of consciousness and in a semi-prone position, must be quickly assessed to determine if the airway is compromised. This will direct the First Responder on what position must be used to manage the airway.

### **Scenario 1:**

A 33-year-old male fell from a two-story balcony. He is resting on his side and not moving. There is snoring sounds coming from him. A small amount of blood is noted oozing from his right ear.

### **Scenario 2:**

An intoxicated male driving fast in his golf cart, is thrown from the cart after crashing into a sand-trap. The golf cart went end over end sending the driver into a rock wall on the other side of the sand-trap. The driver is resting on his side and not responding.

### **Scenario 3:**

A warehouse attendant was stacking wooden crates filled with automotive parts. A crate on the shelf above fell onto the attendant's head. The attendant crumpled to the ground landing on his side. He is not responding.

## **RESPIRATORY COMPLICATIONS**

Respiratory issues are common pre-hospital conditions. First Responders must understand the basic approach when responding to victims in respiratory distress. In addition, it is important for First responders to develop a basic of the anatomy and physiological principles related to airway and breathing disorders. First Responder Instructors need to ensure their students can recognize and manage the four types of airway and breathing disorders. There is upper airway obstruction, lower airway obstruction, alveolar-membrane obstruction, and neurogenic breathing disorders. Some examples of each are listed below.

### ***Upper Airway Disorders***

Includes Anaphylaxis or allergic reaction involving swelling that closes the airway off. This airway closure prevents the victim from drawing air into the lungs. At times, the airway can be partially closed due to swelling. A partial airway obstruction victim can manifest with stridor (A shrill high-pitched sound due to airway narrowing). Another example of a partial upper airway obstruction can arise from a foreign body. A foreign body airway obstruction can be caused from food, vomit, facial and neck trauma causing bleeding with clots, swelling from soft tissue injury, and swollen tongue.

### ***Lower Airway Obstruction***

A lower airway obstruction involves the bronchioles. The bronchioles become narrowed due to inflammation. It is this narrowing that produces a wheezing sound. An Asthmatic is a good example of someone with a lower airway obstruction.

### ***Alveolar-membrane obstruction***

An alveolar-membrane obstruction is at the level of the alveoli. The alveoli are the grape-like sacs within the lungs that exhale carbon dioxide from the blood and take up oxygen from the inhalation of air. This process happens within the alveoli. Should the alveoli become inflamed, covered in fluid from a pneumonia, or drowning, the process of removing carbon dioxide and taking up oxygen for the tissues within the body cannot occur. Crackles are a typical sound heard by a victim with an alveolar-membrane obstruction.

### ***Neurogenic Breathing Disorders***

Neurogenic breathing disorders arise from an injury to the head, overdose, or stroke within the brain. The center in the brain involved with regulating the drive to breathe can be affected. It is manifested by irregular breathing patterns, slow respiratory rates, and even absent respirations known as apnea. Neurogenic breathing disorders are

typically quiet without breath sounds. However, an airway obstruction due to a relaxed tongue can cause upper obstructive sounds such as snoring or stridor.

Regardless of the airway issue, recognition and management skills are the most important. Not all airway issues can be managed with just oxygen. It is important to consider positioning in the management of airway issues. Not all patients can be managed in a supine position. Keeping the patient sitting upright allows the diaphragm to drop down providing more lung expansion and gas exchange for the patient. Laying a victim with audible crackles flat, can kill them. Fluid can cover the entire lung-field preventing gas exchange to occur. Allowing the victim to seek out the most comfortable position to assist him or her with breathing, helps. An asthmatic with a lower airway obstruction may require an inhaler known as a bronchodilator to open the breathing tubes. A neurogenic breathing disorder patient such as an overdose, may require assisted ventilations via a bag valve mask. It is the recognition and management skills that will provide a better opportunity for successful outcomes.

The First Responder needs to understand how to apply and administer oxygen, use a pulse oximeter, select the most appropriate position for the right breathing disorder, and use a bag valve mask (BVM). It is also important to know when suctioning is appropriate. Further, there will be times when a First Responder will encounter an unresponsive victim requiring a supine position to manage the airway. The case scenarios are designed to demonstrate the types of obstructive breathing disorders that can be encountered by the First Responder.

### **Scenario 1:**

A young 19-year-old male begins to have trouble breathing while visiting his uncle who smokes. The victim suffers from asthma. He is audibly wheezing and visibly distressed. The asthmatic has his bronchodilator puffer with him. What are your priority actions for this breathing disorder?

### **Scenario 2:**

A 25-year-old male doing jumps with his pedal bike, has landed on his head. He was not wearing his safety gear. The man is unresponsive and making obstructive sounds. He is laying prone. What is your priority action?

**Scenario 3:**

A 68-year-old female is suddenly complaining of shortness of breath. She is in respiratory distress with audible crackles heard. What is your priority action for this victim? Note to instructor: The First Responder must not lay this victim flat. The victim is in congested heart failure and will arrest if laid flat.

**Scenario 4:**

A young male of 22 years old, has eaten a peanut butter cookie. He is now complaining of difficulty breathing. His face is flushed red and he is making a stridor sound. The victim is allergic to peanuts and has an Epinephrine pen. What is your priority action?

**Scenario 5:**

A 40-year-old male was found in the bathroom not breathing. There is tin foil from a cigarette package beside him with brown burnt residue on it. The victim has a slow pulse with no rise and fall of the chest. What is your priority action?

## DEADLY BLEEDS

The First Responder must always be alert for deadly bleeds when responding to a victim. Deadly bleeds can stem from large blood vessels that have been lacerated or punctured due to trauma or other incidents where the integumentary (Skin) is breached. Punctures from sharp objects, projectiles, and crush injuries can damage the skin and underlying blood vessels. Blood vessels can ooze and spurt blood from the lacerated or macerated (crushed) site. It is important for the First Responder to recognize and intervene immediately when a deadly bleed is noticed.

Interventions for deadly bleeds include direct pressure over the site. The use of a tourniquet to can be used to stop or slow down an arterial bleed. Early recognition and immediate intervention saves lives. The First Responder cannot ignore or delay treatment when a deadly bleed is identified. The First Responder must also remember to maintain pressure and add dressings to the wound but do not remove the original dressing. A tourniquet must be applied above the deadly bleed. The time of application must be noted. The color, temperature, sensation, and mobility of the extremity involved must be continuously assessed with the use of a tourniquet. The deadly bleed must be reassessed to ensure the bleeding has stopped or slowed. A second tourniquet can be applied above the original tourniquet should the bleeding continue. It is important to note the amount of blood lost. IT IS VERY IMPORTANT TO ENSURE THE FIRST RESPONDER DOES NOT FIXATE ON THE BLEED AND IGNORE OTHER LIFE-THREATENING ISSUES SUCH AS AIRWAY AND C-SPINE CONCERNS. Treat and move forward in the assessment. Deadly bleeds can be managed by two rescuers. The First Responder can delegate others to manage issues as they are recognized.

### **Scenario 1 :**

A 29-year-old male is wood working. He is using a table saw and slips while pushing a board through the saw. The saw cuts through the right hand to the wrist before the woodworker recognizes he has cut through his hand. Blood is oozing profusely. The victim is pale and sweaty. There is a large pool of blood on the table saw and floor. The victim complains of feeling lightheaded.

### **Scenario 2:**

A young driver has driven his vehicle into a ditch. The corner supporting the windshield has crumpled and penetrated into the left side of the driver's neck. The driver has since moved himself away from the jagged edge. His left side of the neck is spurting bright red blood. The driver's jacket and side window are covered in blood.

**Scenario # 3**

A man operating a bobcat went over a large bump at the construction site and caught his scalp on the hook used to hang his jacket and hat. His scalp was partially exfoliated. Blood from multiple vessels are oozing and spurting from the sites where the scalp has been torn. The patient is pallor, sweaty, and complains of feeling lightheaded.

**Scenario # 4**

A young man is cutting wood with his axe. While lining the wood up on the chopping block with his right foot, he swings down on the axe cutting through his foot. Blood is oozing from his instep. What is your immediate action?

**Scenario # 5**

A knife fight at a local bar has left one person with multiple stab wounds to his forearms. He has clearly lost a lot of blood and is intoxicated.

**Scenario # 6**

You are responding to a head on collision with two vehicles at high speed. The occupant of the first vehicle is clearly deceased due to decapitation of his head. The second vehicle's driver is unconscious and laying on his back in the road. Both legs are bleeding profusely as evidenced by his pants soaked with blood. What are your priority actions?

## VICTIM WITH ABSENT RESPIRATIONS AND A PULSE

These priority action drills are designed to teach the First Responder how to recognize and manage a patient with a pulse who is not breathing. The approach is critical to the survival of the victim. The establishment of airway and breathing is the most important intervention. Without adequate respirations, the patient will arrest. The First Responder must demonstrate competency in the approach and the correct decision to use either a pocket mask or bag valve mask. A checklist approach to ensure a patent airway and effective ventilations must be performed. The checklist includes in this order:

- 1.) Simple airway techniques that include either a jaw thrust or a head tilt and chin lift (depending on mechanism of injury).
- 2.) Insert a basic airway (OPA) if an airway cannot be obtained.
- 3.) Consider an advanced airway if a basic airway does not allow for a patent airway with rise and fall of the chest. An advanced airway must be done by a health care provider with the proper training. It must be within his or her scope of practice.

Note to the instructor. Case scenario # 3 can be used to challenge the First Responder. The case is designed to have multiple challenges and can be used throughout the course. It is a trauma focused case. Deadly bleeds and an

### **Scenario 1 :**

A young adult male is found slumped over in a park, cyanotic in color and with no rise and fall of the chest. The victim has a slow weak, regular pulse. What are your priority actions?

### **Scenario 2:**

A 26-year-old male working on a hydraulic lift has fallen onto his head approximately 3 meters from the ground. He is laying prone and unresponsive. His pulse is 60 beats per minute. His face is mottled blue. He does not appear to be breathing. What are your priority actions?

### **Scenario 3: (A Challenge Case)**

A 23-year-old female has darted across a busy street. The weather is cloudy with rain and visibility is poor. She is struck by a car at high speed and thrown into the air landing twenty feet away onto the side of the road. Upon approaching the victim, an audible obstructive sound is heard. The First Responder observes she is lying supine. There is no rise and fall of the chest. Blood is spurting from a partially amputated right arm. There is dark blood oozing from both ears. Her face appears intact. Her right leg is visibly deformed, and the lower portion of the leg is angled with the foot towards the head. What are your priority actions?