LESSON

17

MEDICAL EMERGENCIES,

PART 3: SEIZURES, DIABETIC EMERGENCIES AND CEREBRAL VASCULAR ACCIDENTS

Duration

- 02 Periods
- (Lecture-02 Periods)

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. Define seizure.
2. List four steps for the pre-hospital treatment for seizures when arriving while the patient is still having a seizure.
3. List five additional steps for the pre-hospital treatment for seizures to take after the seizure is over.
4. List seven signs and symptoms of hyperglycemia and list three steps for pre-hospital treatment.
5. List nine signs and symptoms of hypoglycemia and describe pre-hospital treatment.
6. List nine signs and symptoms of a cerebral-vascular accident (CVA).

1 Seizures

Definition: A sudden and temporary change in mental status caused by massive electrical discharge in the brain.

Seizures are caused by a _____ Malfunction. If the normal functions of the brain are upset, its electrical activity can become irregular. A seizure can cause a sudden change in a person's sensations, behavior and/or movements. Some seizures involve uncontrolled muscular movements called _____. Having seizures is not a disease in itself, but rather a sign of some underlying defect, injury or disease.

_____

_____

Causes:

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

This lesson will cover three of the more common causes of seizures: **Epilepsy, Fever, and Head Trauma.**

▸ Epilepsy

Epilepsy, an _____ neurological illness, is perhaps the best known as one of the conditions that causes seizures. Some people are born with it and others develop it after a head injury or surgery. Conscientious use of medication allows most epileptics to live normal lives without seizures. Epilepsy can present itself in different forms. Some episodes of convulsions are severe (called *grand mal*) and some convulsions are almost undetectable (called *absent or petit mal*). An epileptic convulsive episode can repeat an indefinite number of times.

▸ Febrile seizure

Fever is a common cause of seizures in children less than _____ years of age. It is the rapid rise in body temperature, rather than the temperature itself, that causes the seizure. The seizure can repeat many times. All children who have suffered a seizure require medical evaluation.

▸ Head trauma

A patient with a brain injury may have a seizure immediately or it might be delayed. A haematoma may form inside the skull, causing increased pressure and resulting in a seizure. It is very important to obtain a thorough patient history to determine whether the patient has fallen or received any type of head trauma.

1

Seizures (Cont.)

Signs and Symptoms of a seizure

The most common type of seizure you will respond to is a **grand mal** (generalized) seizure. There are four phases in this type of seizure:

- **Aura phase:** The patient becomes _____ that the seizure is coming on, usually described as an unusual smell or flash of light, and usually lasting only a second.

- **Tonic phase:** Patient becomes _____ and collapses. All the muscles of the body contract. The body becomes rigid and the patient may stop breathing. May become incontinent.

- **Clonic phase:** The patient convulses violently. May foam at the mouth or drool, and may become cyanotic.

- **Postictal phase:** Begins when convulsions _____ _____. Patient gradually regains consciousness. Headache is common. Patient generally feel tired and weak and may not be fully alert.

A continuous seizure, or two or more seizures without a period of responsiveness is called *status epilepticus.*

This is considered a true medical emergency, and can be fatal. Transport the patient immediately.

Other common signs and symptoms for less severe seizures:

- Temporary loss of concentration or awareness
- Atypical behaviour
- Tingling, stiffening or jerking in one part of the body, which may later spread

Pre-hospital treatment for seizures

Use universal precautions and secure the scene.
If you arrive **while the patient is still having a seizure, begin at Step 1.**

1) Place patient gently on the floor and move any objects that patient might strike.

2) Stay calm and wait. Do not force anything into the patient's mouth. The seizure should be over in a few minutes.

3) Loosen restrictive clothing. Do not restrain patient.

4) Place the patient on his/her side to prevent aspiration.

If you arrive after the seizure is over, begin at Step 5:

5) Assess and monitor airway and breathing.

6) Treat any injuries the patient may have sustained during convulsions.

7) Place the patient in recovery position (only if you do not suspect spinal injury).

8) Administer oxygen if needed.

9) Comfort and reassure the patient.

For febrile seizures in children, lower the patient's temperature using tepid water and a bath sponge or washcloth. Transport the patient.

2

Diabetic Emergencies

Diabetes is an illness caused by deficient production of insulin in the body. Your task as an MFR is not to diagnose or treat diabetes, but rather to _____ and _____ the conditions caused by the improper management of diabetes. These conditions are known as _____ (high blood sugar) and _____ (low blood sugar).

The most common indication that the patient may have either of these conditions is **altered mental status**. Other clues, such as a necklace, bracelet, medication or information provided by others, may also provide vital information.

Some hyperglycemic and hypoglycemic patients may appear to be alcohol-intoxicated. Always suspect a Diabetic problem even in cases that appear to be only alcohol- or drug-related. As we will also see, blood sugar problems are not always related to a diabetic condition.

2

Diabetic Emergencies (Cont.)

2.1 Hyperglycemia

Diabetics may suffer from increased blood sugar, or hyperglycemia. This condition is basically one of too much sugar and too little insulin. Common causes of hyperglycemia include:

- _____
- _____
- _____
- _____

Signs and symptoms of hyperglycemia

- Gradual onset
- _____
- _____
- _____
- _____
- _____
- Intoxicated appearance, staggering, slurred speech _____.

The onset of **severe hyperglycemia** is _____.

In most cases it develops over a period of _____ hours. At first, the patient experiences excessive hunger, thirst, and urination. The Patient appears extremely ill, becoming weaker and worsening as the condition progresses. If left untreated, the patient may die. Even with treatment, recovery is _____, occurring 6 to 12 hours after insulin and intravenous fluid are administered. A hyperglycemic emergency is also called a **diabetic coma**, although the patient is not usually found in a coma.

_____

_____

2

Diabetic Emergencies (Cont.)

Pre-hospital treatment for hyperglycemia

Use universal precautions, secure the scene and alert local EMS. Never give patients who cannot control their airways anything to eat or drink.

1) Perform initial assessment and obtain patient history.

_____

2) Administer glucose per local protocol. When in doubt, give sugar.

_____

3) Reassess and transport the patient.
Position the patient appropriately.

_____

2.2 Hypoglycemia

This condition is consists of _____ blood sugar, and can be the result of one or two conditions. One is too much insulin in the bloodstream. The other is too little sugar in the bloodstream. People with diabetes are not the only ones who can suffer from low blood sugar. Alcoholics, anyone having ingested certain poisons, and people who are ill are also at risk.

_____

_____

_____

Some common causes of low blood sugar are:

- _____
- _____
- _____
- _____
- _____
- _____

2

Diabetic Emergencies
(Cont.)

The onset of severe hypoglycemia is _____.

The most recognized cause of Hypoglycemia is the _____ _____ by a patient with diabetes. After time, diabetes cause visual impairment in patients. This can make it very hard for patients to give themselves the proper amount of insulin. The result is an insulin overdose and hypoglycemia.

_____

_____

_____

Signs and symptoms of hypoglycemia

- Rapid onset of altered mental status
- Intoxicated appearance, staggering, slurred speech
- Atypical behavior
- Combativeness and/or anxiety
- _____
- _____
- _____
- _____
- _____

Pre-hospital treatment for hypoglycemia
Use the same treatment as for hyperglycemia.

COMPARISON CHART

	Hyperglycaemia	Hypoglycaemia
Onset	Gradual, over a period of days	Sudden, within minutes
Causes	• Insulin insufficiency due to failure to take any or enough insulin • Eating too much food that contains or produces sugar • Infection • Stress	• Too much insulin, or inability to adjust to new dosage • Inadequate food intake • Vomiting • Excessive exercise • Emotional excitement

2.4 Cerebral Vascular Accident (CVA)

Definition: A sudden loss of blood supply to the brain.

CVA, commonly known as a "stroke," is also becoming known as "brain attack".

Causes of CVA

- **Cerebral thrombosis:**
  The result of a clot obstructing a cerebral artery, preventing the flow oxygenated blood to a portion of the brain.
- **Cerebral hemorrhage:**
  The result of a cerebral artery breaking, leaving an area of the brain without blood supply. The blood that comes out of this artery creates intracranial pressure to the brain and interferes in the brain's functions.

2

Diabetic Emergencies
(Cont.)

Signs and symptoms of CVA

These vary depending on the location and extent of damage:

- Headache – may be the first and only symptom

  _____

- Fainting (syncope)

  _____

- Altered mental status

  _____

- Tingling or paralysis of the extremities or face

  _____

- Difficulty in speaking

  _____

- Blurred vision

  _____

- Convulsions and/or seizures

  _____

- Unequal pupils

  _____

- Loss of bladder or bowel control

  _____

If any one of these signs or symptoms is present, assume that the patient is having or is about to have a cerebral vascular accident.

The risk of having a CVA increases with age.

2 Diabetic Emergencies (Cont.)

Pre-hospital treatment for CVA

Use universal precautions and secure the scene.

1) Instruct the patient to stop all movement.

2) Place the responsive patient in a comfortable position, usually semi-reclining or sitting.

3) Maintain open airway.

4) Administer oxygen per local protocol. If needed, provide artificial ventilation or CPR.

5) Loosen restrictive clothing.

6) Maintain body temperature as close to normal as possible.

7) Comfort and reassure the patient.

8) Constantly monitor the patient's vital signs.

9) _____

POST-TEST | LESSON 17

Medical Emergencies, Part 3:

Seizures, Diabetic Emergencies and Cerebral Vascular Accidents

1. **Define seizure.**

_____

_____

2. **List four steps for the pre-hospital treatment for seizures when arriving while the patient is still having a seizure.**

1) _____

2) _____

3) _____

4) _____

3. **List steps 5 through 9 for the pre-hospital treatment for seizures to take after the seizure is over.**

5) _____

6) _____

7) _____

8) _____

9) _____

POST-TEST | LESSON 17

Medical Emergencies, Part 3:

Seizures, Diabetic Emergencies and Cerebral Vascular Accidents (Cont.)

4. **List seven signs and symptoms for hyperglycemia and list three steps for pre-hospital treatment.**

   Signs and symptoms

   - _____
   - _____
   - _____
   - _____
   - _____
   - _____
   - _____

   Pre-hospital treatment

   1) _____
   2) _____
   3) _____

5. **List nine signs and symptoms hypoglycemia and describe pre-hospital treatment.**

   Signs and symptoms

   - _____
   - _____
   - _____
   - _____
   - _____
   - _____
   - _____
   - _____
   - _____

   Pre-hospital treatment

   _____

   _____

POST-TEST | LESSON 17

Medical Emergencies, Part 3:

Seizures, Diabetic Emergencies and Cerebral Vascular Accidents (Cont.)

6. **List ten signs and symptoms of a cerebral-vascular accident (CVA).**

Signs and symptoms

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

MFR LESSON 17 EVALUATION

Course Location: _____ **Dates:** _____

Do not write your name on this form. Please complete a copy of this form at the end of every lesson. Your evaluations are very valuable towards improving the course. Please use the ratings below.

1 VERY POOR	2 POOR	3 AVERAGE	4 GOOD	5 EXCELLENT

Please fill in the required information.	**Lesson Number :**	**Lesson Name :**	
	Instructor's Name		
Use a scale from 1 to 5 as described above to rate the various lesson components.	**Lesson Rating (rate 1 to 5)**		
	Content	Instructor	Method
	Workbook	Interaction	
Mark your selection with an "**X**"	**Instruction Level** ☐ Too basic	☐ Appropriate	☐ Too advanced
	Duration ☐ Too short	☐ Appropriate	☐ Too long
	Usefulness Was this lesson useful to you?	☐ Yes	☐ No
Rate from 1 to 5	**Overall Lesson Rating** Taking all the above into consideration, I rate this lesson: _____		
If you need additional space, please use the back of the sheet.	**Comments and Observations**		

Thank you for your help. Your input is valuable.
Please turn in this completed form to the instructor.

LESSON

18

CHILDBIRTH EMERGENCIES

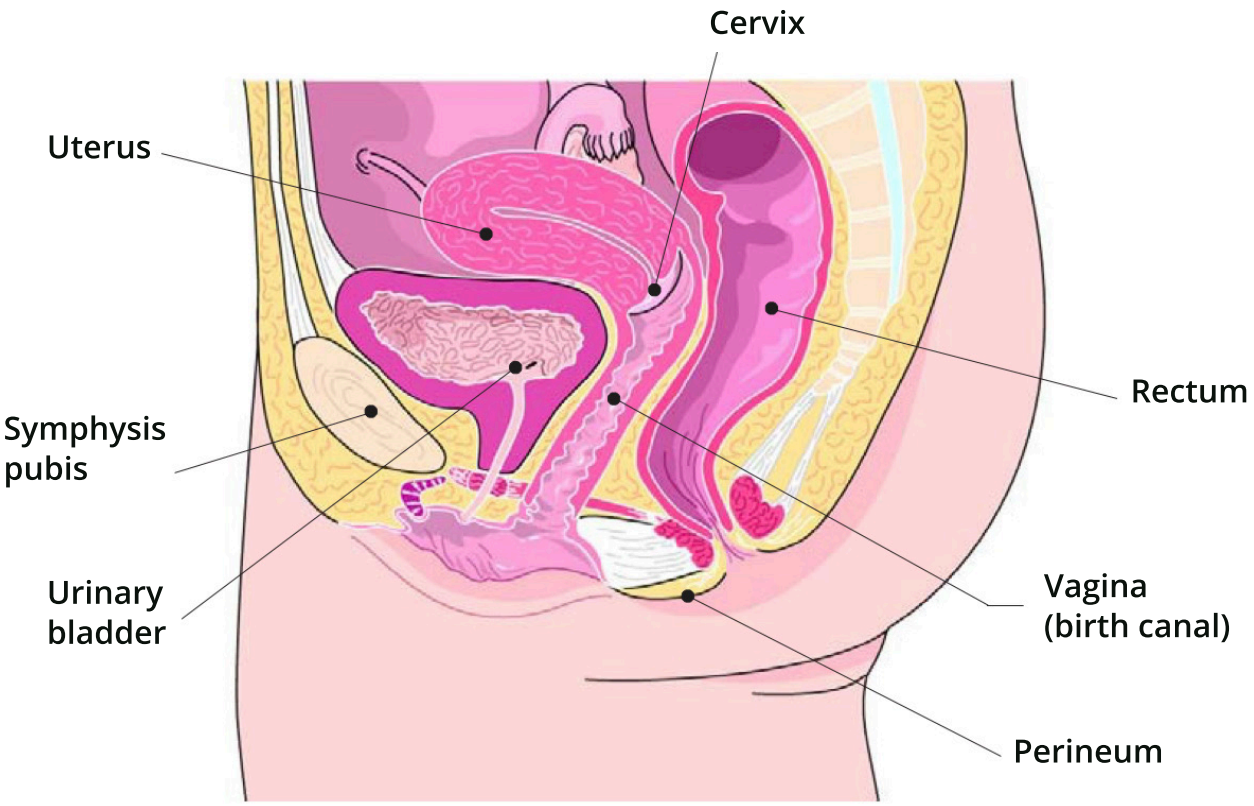
Duration • 09 Periods • (Lecture-03 Periods and Practical- 06 Periods)

LESSON OBJECTIVES

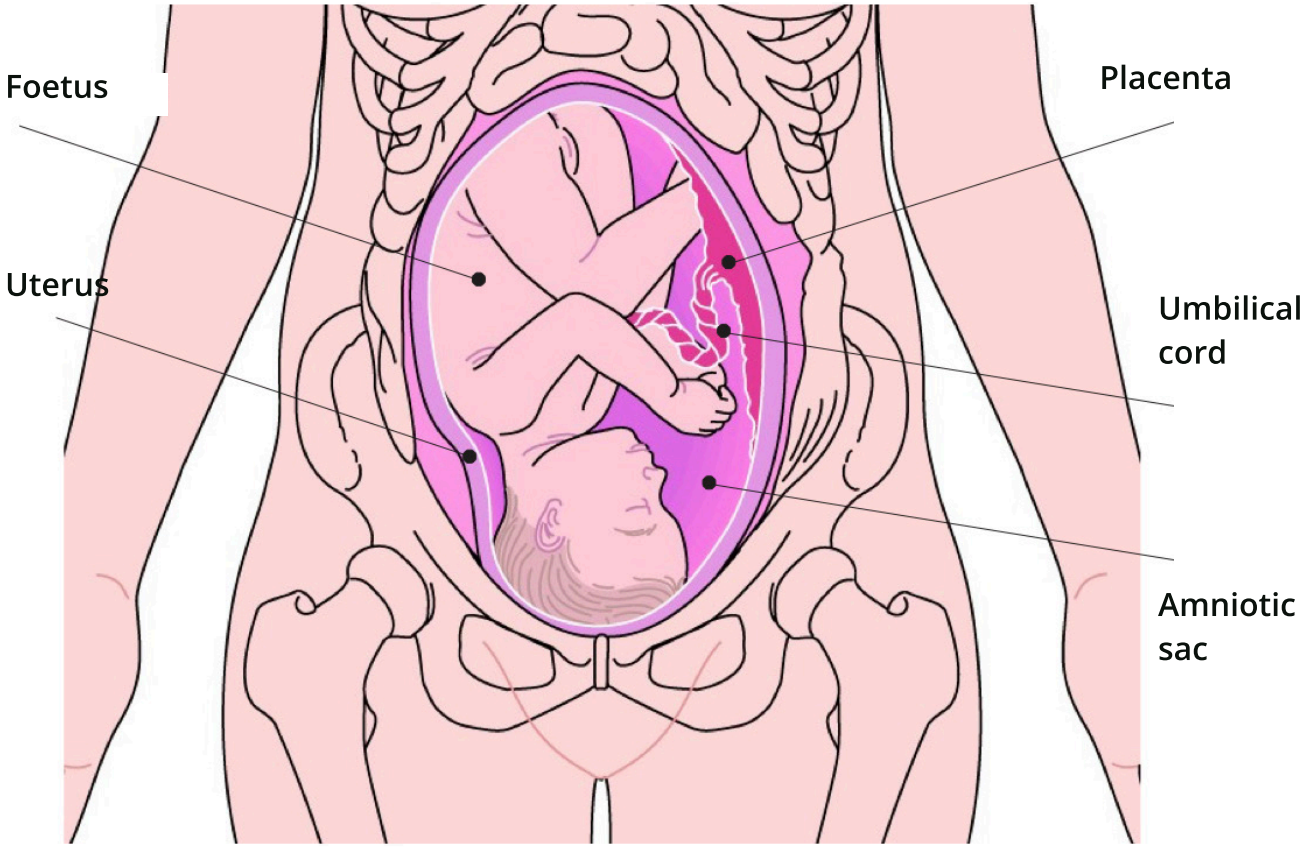
Upon completion of this lesson, you will be able to:

1. List the eight steps for assessment of the mother.
2. List the seven steps for pre-hospital preparation of the mother.
3. List the ten steps for delivery of a baby.
4. List and describe three complications of pregnancy.
5. List and describe six complications of delivery.
6. Demonstrate the pre-hospital treatment for a breech presentation and a wrapped umbilical cord around the neck.

1
Anatomy of Pregnancy



Anatomy of Pregnancy (Cont.)



1

Anatomy of Pregnancy (Cont.)

- **Amniotic sac:** A sac of fluid in which the foetus develops during pregnancy.

- **Cervix:** The neck of the uterus in which the unborn infant passes into the vagina.

- **Foetus:** The unborn developing baby in the uterus.

- **Placenta:** A disk-shaped organ on the inner lining of the uterus. Rich in blood vessels, it supplies nourishment and oxygen to the foetus during pregnancy. It also absorbs waste from the foetus into the mother's bloodstream.

- **Umbilical cord:** An extension of the placenta through which the foetus receives nourishment while in the uterus.

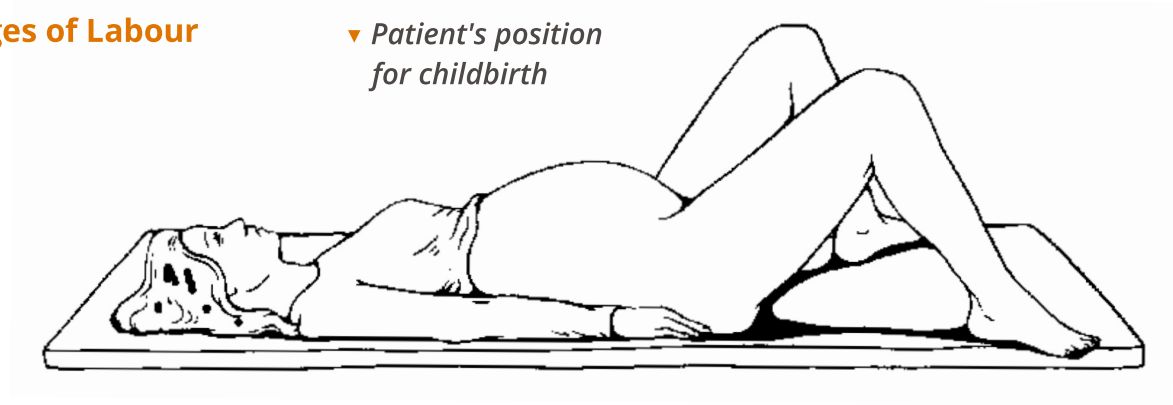
- **Uterus:** The organ that contains the developing foetus or unborn infant. A special arrangement of smooth muscles and blood vessels in the uterus allow for great expansion during pregnancy and forcible contractions during labour and delivery.

- **Vagina:** Channel through which the infant passes to reach the outside.

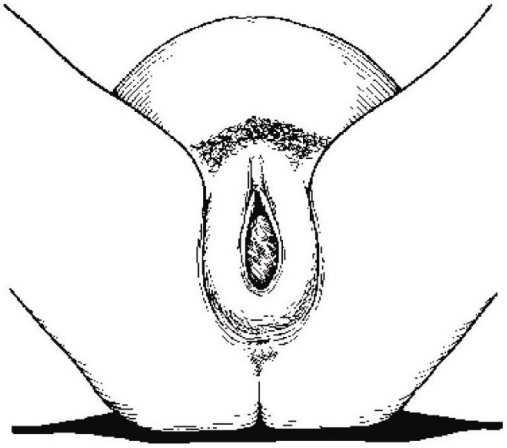
2

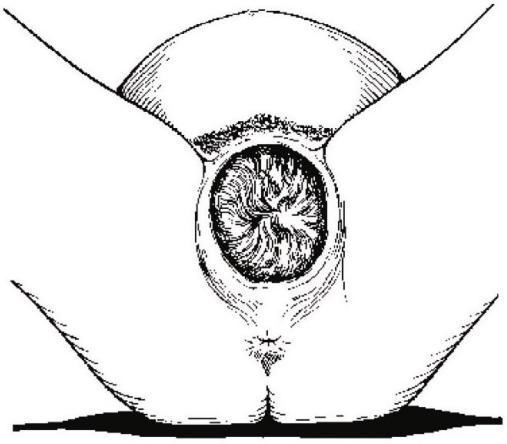
Stages of Labour

▾ *Patient's position for childbirth*



1) **First stage (dilation):**
Begins with the mother's contractions and ends when the infant enters the birth the canal. During this first and longest stage, the cervix becomes fully dilated (expanded).



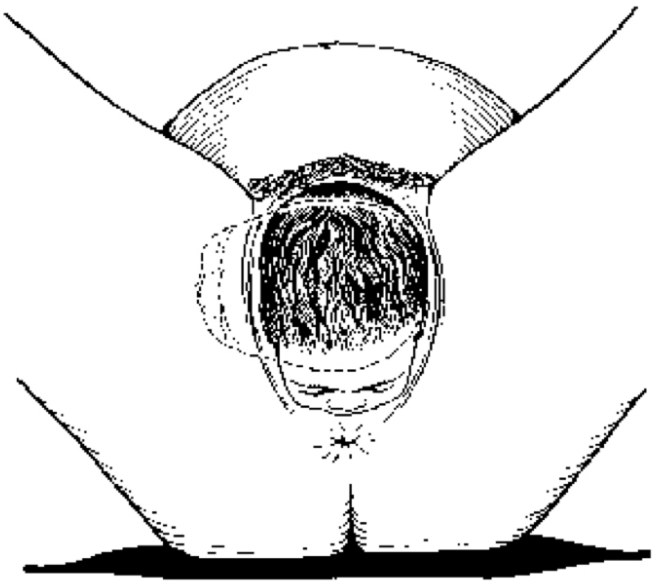


2

Stages of Labour (Cont.)

2) Second stage / expulsion:
Begins the moment the infant moves into the birth canal. When the baby's head appears at the opening of the birth canal, it is called "crowning". The second stage ends with the birth of the infant.

▸ *Second Stage*



3) Third stage (placental):
The placenta separates from the uterine wall. It is usually then spontaneously expelled from the uterus.

3

Assessment of the Mother

Use universal precautions and secure the scene.

1) Conduct initial assessment.

2) Verify prenatal care, get doctor's information, ask about any difficulties with pregnancy, and whether delivery is to be normal. Ask when her due date is.

3) Ask the patient if it is her first pregnancy. If so, the labour process will usually last close to 18 hours. The duration of labour is considerably shorter with each subsequent birth (approximately 2-3 hours).

4) Determine when contractions began and if the amniotic sac (water bag) has ruptured.

5) Ask the patient if she feels any pressure being applied to pelvis or the urge for a bowel movement. Do not allow patient to sit on toilet.

6) Determine the frequency and duration of contractions. Use a gloved hand on the patient's abdomen to feel for the involuntary tightening of the uterine muscles.

3

Assessment of the Mother (Cont.)

7) Visual evaluation: Check for crowning or bulging in the vaginal area. If no crowning, move to next step. If either the head or other part of the body is visible, prepare to deliver at the scene.

8) Determine if delivery will be at the scene or if there is time for transport:

- If contractions are less than 2 minutes apart, prepare to deliver the baby at the scene.
- If contractions are between 2 and 5 minutes apart, make a decision on several factors, such as whether this is the first pregnancy, if the patient feels an urge for a bowel movement, traffic and weather conditions, or other complication.
- If contractions are 5 minutes or more apart, the mother usually has time for transport.

CAUTION: Do not allow the mother to cross or hold her legs together to delay delivery. Death or permanent injury to the infant may result.

4

Pre-hospital Preparation of the Mother

Use universal precautions and secure the scene.
Make sure to use full personal protective equipment.

1) Ensure privacy for the patient (select an appropriate area).

2) Have the mother lie on her back with knees bent and legs spread. Elevate the buttocks. Inspect the vaginal area but do not touch it except during delivery of the baby.

3) Have O.B. (obstetrical) kit ready and opened.

4) Place a sheet or clean towel under the patient's buttocks, another under the vaginal area and another covering the legs and abdomen.

5) Evaluate frequency and duration of contractions.

6) Check for crowning.

7) Comfort and reassure the mother. Encourage her to keep breathing slowly and comfortably. Stress the importance of relaxing between each contraction.

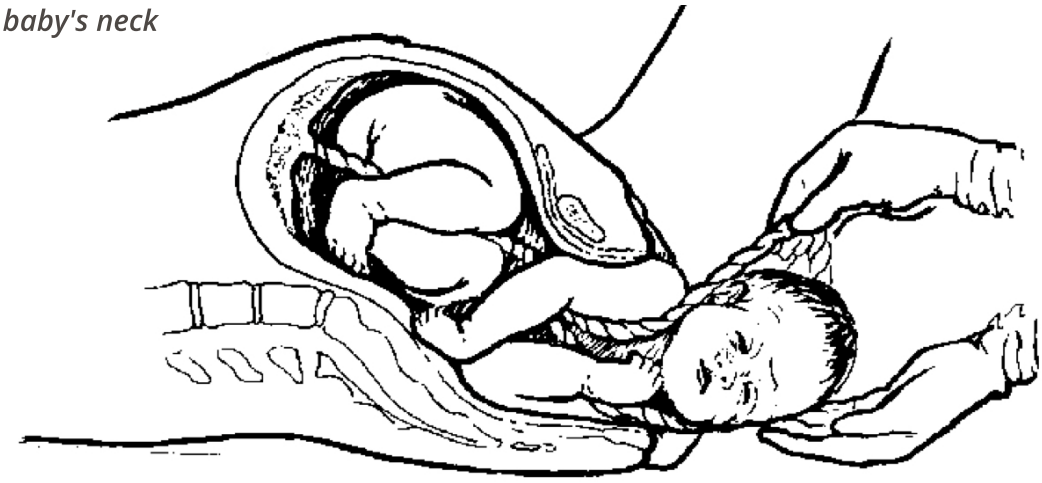
5 Delivery of the Baby

1) Apply very gentle pressure with the palm of your hand to prevent explosive delivery. **Do not pull the infant from the vaginal opening.**

2) If the amniotic sac (water bag) has not broken, **tear it or pinch it open with your fingers** and pull it away from the infant's mouth and head. Do not delay this process. **Never use a sharp instrument!**

3) **If the umbilical cord is wrapped around the newborn's neck**, use two gloved fingers to slip the cord over the head. **Only** if you cannot dislodge the umbilical cord, attach two clamps three inches apart, then cut between the clamps.

▸ *Removing umbilical cord from around baby's neck*



4) **Support the newborn's head.** Wipe the mouth and nose with sterile gauze pads. **Suction the newborn's mouth first, then the nose with a rubber bulb syringe.** Compress the syringe every time **before** inserting it.

5

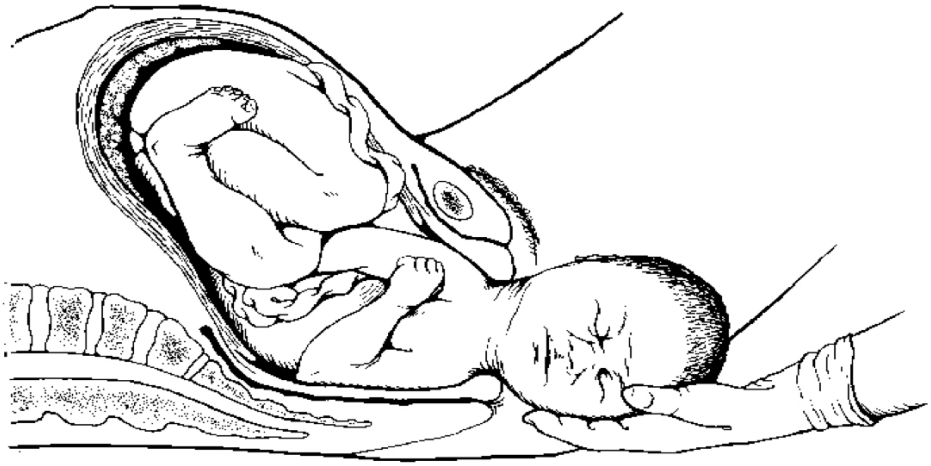
Delivery of the Baby (Cont.)

5) Continue to support the newborn with both hands. **Gently guide the newborn's head downward** to assist the mother in delivering the newborn's upper shoulder. If the lower shoulder is slow to deliver, assist the delivery by gently guiding the newborn's head upward.

_____

_____

▸ *Support the baby's head*

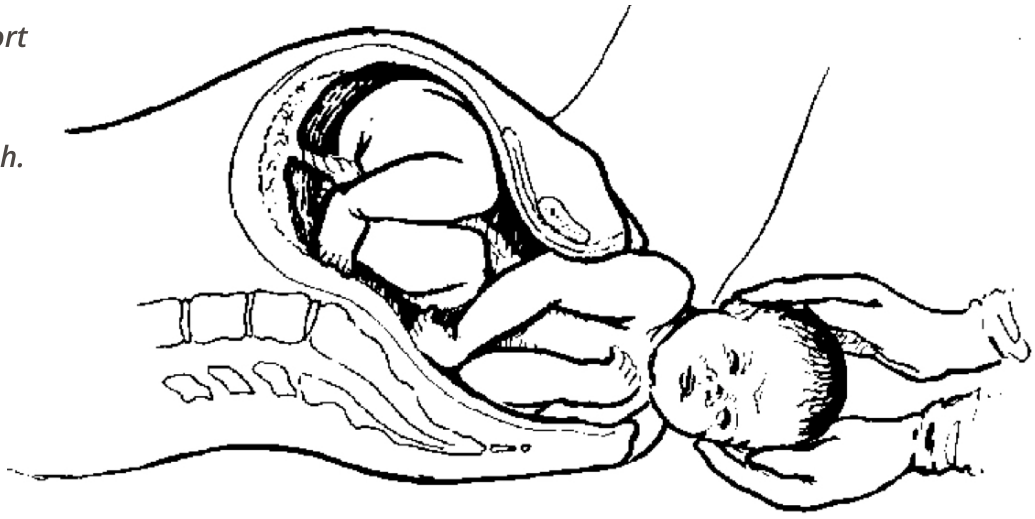


6) Support the newborn throughout the entire process. Grasp the feet as they emerge. **Position the newborn level with the mother's vagina until the umbilical cord is cut**; otherwise the newborn's blood could return to the placenta. The newborn is very slippery — never lift the newborn by the feet. Record exact time of delivery.

_____

_____

▸ *Continue to support the baby through entire process. Do not pull or push.*



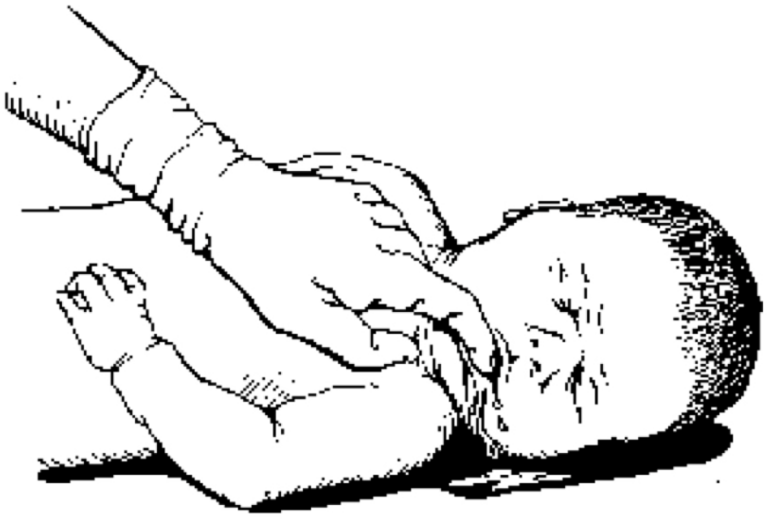
5

Delivery of the Baby
(Cont.)

7) **Position, dry and wrap the baby.** Place the newborn on his/her side with the head slightly lower than the body. Gently dry with clean towels and wrap the baby in clean warm blanket. Only the face should be exposed.

8) **Establish that the baby is breathing.** Suction the baby's mouth and nose again. If not already breathing on its own, encourage breathing by providing tactile stimulation. Do not lift the newborn by its feet or slap its bottom! If required, start artificial ventilation.

▸ *Maintain open airway in the newborn*



▸ *Suction newborn's mouth then its nose*

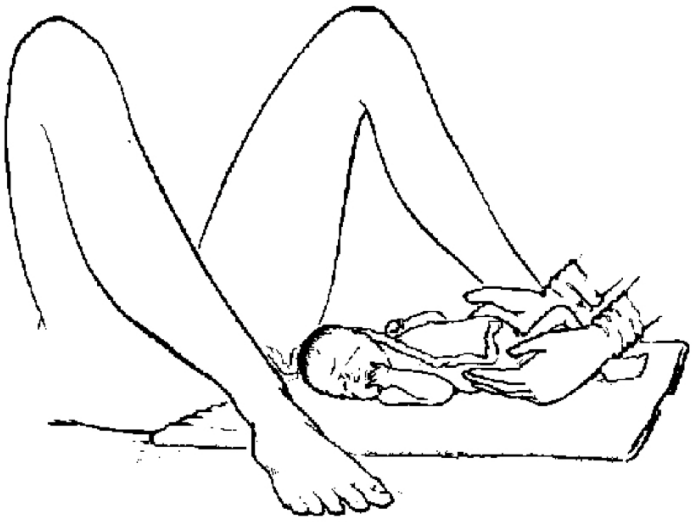
5

Delivery of the Baby
(Cont.)

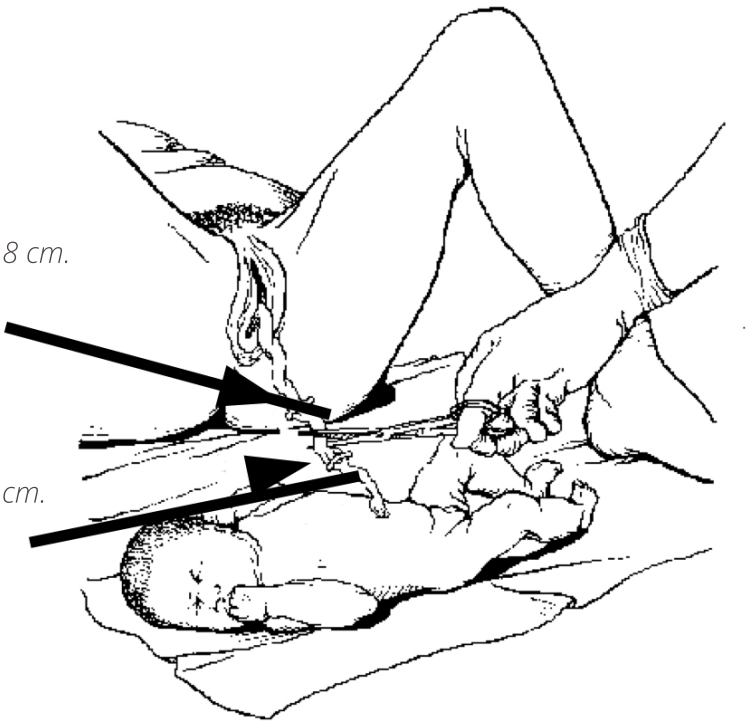
9) **Clamp and cut the umbilical cord when it stops pulsating.** Do not clamp or cut the cord if it is still pulsating. Place two clamps on the umbilical cord, then cut between the clamps using surgical scissors.

10) **Record the date, time and place of birth as noted in step 6.**

- *Newborn's position in preparation for cutting umbilical cord*



- *Cutting the umbilical cord*
  - *Place second clamp 8 cm. from first clamp on newborn's side*
  - *Place first clamp 25 cm. from newborn's umbilicus*



6 Delivery of the Placenta

Keep in mind that you have **two** patients in your care: not only the baby, but the mother as well. Care for the mother includes helping her deliver the placenta, controlling vaginal bleeding, and making her as comfortable as possible. The third stage of labour includes the delivery of the placenta with its section of umbilical cord, membranes of the amniotic sac, and some tissues lining the uterus. All of these together are known as the **afterbirth**.

1) Delivery of placenta will begin with a brief return of labour pains that stopped when the baby was born. You may notice a lengthening of the cord as this occurs.

2) Feel for contractions. Encourage the mother to bear down as the uterus contracts.

3) Slowly and gently guide the placenta from the vagina, but never pull. Save the placenta in a plastic bag and take it to the hospital.

4) Controlling vaginal bleeding after delivery.
   - Place sanitary napkin or towel on vaginal opening. Do not place anything inside vagina.
   - Have the mother lower her legs and keep them together without squeezing. Elevate her feet.
   - Feel the mother's abdomen below the navel until you feel a hard object the size of a grapefruit. This is the mother's uterus. If bleeding appears to be excessive, massage the uterus using circular motions; this will cause the uterus to contract and control bleeding.
   - Consider initiating breast-feeding to stimulate uterine contractions.

5) Conduct ongoing assessment.

7

Complications of Pregnancy

There are several types of pre-delivery emergencies that may arise in the pregnant patient prior to labour or childbirth that are life-threatening to both the mother and the baby. In most cases, definitive treatment is beyond the MFR's level of training and immediate transport is required.

Excessive pre-birth bleeding

One of several conditions that can cause excessive pre-birth bleeding is **placenta previa**, in which the Placenta forms in an abnormal location (low in the uterus and close to or over the cervical opening) that will not allow for a normal delivery. As the cervix dilates during delivery, it causes the placenta to tear.

Another condition is **abruptio placentae**, in which the placenta separates from the uterine wall, either partially or entirely. Either type of complication may occur in the third trimester, and both are potentially life-threatening to the mother and foetus.

Pre-hospital treatment for pre-birth bleeding

1) Place the patient on her left side.

2) Treat for shock. Elevate the patient's legs.

3) Place a sanitary napkin or towel at vagina opening but do not place anything inside the vagina. Replace any blood soaked napkins but do not discard them. All blood soaked items should be taken to hospital for examination.

4) Monitor all vital signs.

Transport the patient.

7

Complications of Pregnancy (Cont.)

Spontaneous Abortion

For a number of reasons, the foetus and placenta may deliver before the 20th week of pregnancy, generally before the baby can live on its own. This occurrence is called an abortion. When it happens naturally it is called a **spontaneous abortion**, or **miscarriage**. An induced abortion results from deliberate termination of the pregnancy, in either a legal or criminal setting.

Signs and symptoms of spontaneous abortion

- Vaginal bleeding, ranging from moderate to severe
- Pain in the lower abdomen, similar to menstrual cramps or first stage labour pain
- Noticeable discharge of tissue from the vagina

Pre-hospital treatment for spontaneous abortion

1) Treat for shock. Provide oxygen per local protocol.

2) Place a sanitary towel or something similar on the opening of the vagina. Do not place anything inside the vagina.

3) Keep all the bloodstained towels and any expelled tissue for examination.

Transport the patient.

7

Complications of Pregnancy (Cont.)

Ectopic Pregnancy

In a normal pregnancy, the fertilized egg will eventually implant on the wall of the uterus. In an ectopic pregnancy, the fertilized egg implants in an oviduct, in the abdominal cavity, or outside the uterus. These areas are not able to contain or support the growing embryo.

Signs and symptoms of ectopic pregnancy

- Acute abdominal pain, usually on one side
- Vaginal spotting or bleeding
- Signs of shock

Pre-hospital treatment for ectopic pregnancy

1) Treat for shock. Provide oxygen per local protocol.

_____

_____

2) Keep all the bloodstained towels and any expelled tissue for examination.

_____

_____

Transport the patient.

8

Complications of Delivery

Although most babies are born without difficulty, complications may also occur during delivery. As with complications of pregnancy, these can also be life-threatening to both the mother and the baby, and in many cases definitive **treatment is beyond the MFR's level of training.**

Unbroken Amniotic Sac

Breech Birth

This type is the most common abnormal delivery. A breech birth involves a buttocks-first or both-feet-first delivery.
In addition, there is an increased risk or a prolapsed umbilical cord. Whenever possible, the mother should be transported to a hospital immediately for birth.

Pre-hospital treatment for breech birth

1) Position and prepare the mother for normal delivery.

2) Allow the buttocks or legs to deliver on their own — **never pull.**

3) Support the baby with the palm of your hand.
The head should follow within **three minutes.**

4) If the head fails to deliver, **maintain infant airway and transport immediately.** Place the middle and index fingers of your gloved hand alongside the infant's face. Your palm should be turned towards the face. Form an airway by pushing the vagina away from the infant's face. With a finger, hold the baby's mouth open a little so that the baby can breathe.

Prolapsed Umbilical Cord

This is a situation in which the umbilical cord presents first (common in breech births) and is squeezed between the vaginal wall and the head of the baby. This may cause oxygen supply to the baby to be totally interrupted. If, upon viewing the vaginal area, you see the umbilical cord presenting, the cord is prolapsed.

Pre-hospital treatment for prolapsed umbilical cord

1) Do not try to push the cord inside the vagina.

2) Position the mother. Have the mother lie down on her back, tilted to the left side (if possible). Elevate her hips, using a pillow or blankets under the buttocks.

3) Provide oxygen if needed.

4) Wrap the exposed cord with a clean moistened towel.

5) Insert a gloved hand into the vagina far enough to gently push on the baby's head (or buttocks), to keep pressure off the cord. You may feel the cord pulsating when the pressure is released. Prepare to stay in this position throughout transport.

Transport the patient immediately.

8

Complications of Delivery (Cont.)

Limb Presentation

A limb presentation is a situation in which a single leg, an arm and a leg together, or an arm and shoulder, present first. This is often accompanied by a prolapsed umbilical cord. Limb presentations cannot be delivered in the pre-hospital setting. Position the mother on her back with pelvis elevated, provide oxygen if needed and transport immediately. If prolapsed cord is present, apply treatment as discussed previously.

Pre-hospital treatment for limb presentation

1) Do not pull on the limb or try to place your gloved hand into the birth canal.

_____

2) Do not try to place the limb back into the vagina.

_____

3) Place the mother in the knee-chest position to help reduce pressure on the fetus and the umbilical cord.

_____

4) Provide oxygen per local protocol and transport immediately.

_____

5) If prolapsed cord is present, apply treatment as discussed previously.

_____

Multiple Births

Twins are delivered the same way as single babies; in fact, since twins are smaller, delivery is often easier. Multiple birth may occur if the mother's abdomen is unusually large before, or remains large after, delivery. If labour contractions continue (usually within 10 minutes) after the first birth, the next delivery may be imminent.

Pre-hospital treatment for multiple births

1) Clamp or tie the cord of the first baby before the second baby is born.

2) The second baby may be born before or after the placenta is delivered.

3) Provide care for the babies, umbilical cords, placenta(s), and the mother as in a normal delivery.

8

Complications of Delivery (Cont.)

Premature Birth

An baby is considered premature when born weighing less than 2.5 kilos (5.5 lbs.) or is born before the 36th week of pregnancy. Since you will probably not be able to weigh the baby, make a determination regarding prematurity based on the mother's information and the baby's appearance. The head of a premature baby is proportionately much larger, and the body is smaller and more reddish than a normal baby. Premature babies are very susceptible to infection.

Pre-hospital treatment for a premature baby

1) Keep the baby warm.

2) Maintain open airway.

3) Watch the umbilical cord for bleeding.

4) Provide oxygen per local protocol.

5) Avoid contamination. Keep the baby away from people and avoid breathing directly onto the baby.

Stillbirth

Sometimes the baby dies in the womb hours, days, or even weeks before birth. Signs of obvious death include blisters, foul odour, skin or tissue deterioration and discoloration, and a softened head. At other times, the baby may be born in cardiac or pulmonary arrest but may survive with resuscitation.

Managing a Stillbirth

- **Do not attempt to revive the baby if it appears to have been dead for an extended period of time.** Offer emotional support for the mother and relatives that might be present.
- A baby born in cardiac or pulmonary arrest should receive basic life support.
- **Do not lie** to the mother regarding the baby's condition, and do not prevent her from seeing the baby.
- **Comply with the mother's religious beliefs** and follow local customs, laws and protocols.

APGAR Scoring System

		Points	One minute	Five minutes
A	**Appearance (skin color)**			
	Blue or pale trunk and extremities	0		
	Pink trunk and blue extremities	1		
	Completely pink	2		
P	**Pulse**			
	Absent	0		
	100 or less	1		
	More than 100	2		
G	**Grimace (Irritability)**			
	No response	0		
	Grimace or whispers	1		
	Actively cries	2		
A	**Activity (Muscle tone)**			
	Flaccid, Limp	0		
	Some flexion of extremities	1		
	Active extremity motion	2		
R	**Respiratory effort**			
	Absent	0		
	Slow and irregular	1		
	Strong cry	2		
	Total Score			

Ideally, scores are taken at one minute and five minutes after birth.

If the neonate is not breathing, DO NOT withhold resuscitation for an APGAR score.

Total score indicates the following:

- **7-10:** Indicates an active and vigorous newborn who requires routine care.
- **4-6:** Indicates a moderately depressed newborn who requires oxygen and stimulation.
- **0-3:** Indicates a severely depressed newborn who requires immediate resuscitation efforts.

Stations 1, 2, 3 and 4

Student Name: _____ **Dates:** _____

Instructions: Check the box showing on which attempt the participant was able to perform the step successfully. UTP indicates unable to perform successfully within four attempts.

Performance Guidelines		Successful on Attempts				UTP
		1	2	3	4	
Station 1	Use of PPE.					
	Normal delivery.					
Station 2	Use PPE					
	Care of the newborn infant.					
Station 3	Use of PPE.					
	Treat prolapsed umbilical cord.					
	Treat breech birth.					
	Treat umbilical cord wrapped around the neck.					
Station 4	Use of PPE.					
	Assess the mother.					

Comments _____

Overall Performance	
Station 1 ☐ Outstanding ☐ Successful ☐ Needs Imp. Instructor:	**Station 2** ☐ Outstanding ☐ Successful ☐ Needs Imp. Instructor:
Station 3 ☐ Outstanding ☐ Successful ☐ Needs Imp. Instructor:	**Station 4** ☐ Outstanding ☐ Successful ☐ Needs Imp. Instructor:

POST-TEST | LESSON 18

Childbirth Emergencies

1. List the eight steps for assessment of the mother.

1) _____

_____

2) _____

_____

3) _____

_____

4) _____

_____

5) _____

_____

6) _____

_____

7) _____

_____

8) _____

_____

2. List the seven steps for pre-hospital treatment of the mother.

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

POST-TEST | LESSON 18

Childbirth Emergencies (Cont.)

3. List the ten steps for delivery of a baby.

1) _____

_____

2) _____

_____

3) _____

_____

4) _____

_____

5) _____

_____

6) _____

_____

7) _____

_____

8) _____

_____

9) _____

_____

10) _____

_____

POST-TEST | LESSON 18

Childbirth Emergencies (Cont.)

4. List and describe three complications of pregnancy.

- _____

_____

- _____

_____

- _____

_____

5. List and describe six complications of delivery.

- _____

_____

- _____

_____

- _____

_____

- _____

_____

- _____

_____

- _____

_____

MFR LESSON 18 EVALUATION

Course Location: _____ **Dates:** _____

Do not write your name on this form. Please complete a copy of this form at the end of every lesson. Your evaluations are very valuable towards improving the course. Please use the ratings below.

1 VERY POOR	2 POOR	3 AVERAGE	4 GOOD	5 EXCELLENT

Please fill in the required information.	**Lesson Number :**	**Lesson Name :**	
	Instructor's Name		
Use a scale from 1 to 5 as described above to rate the various lesson components.	**Lesson Rating (rate 1 to 5)**		
	Content	Instructor	Method
	Workbook	Interaction	
Mark your selection with an "**X**"	**Instruction Level** ☐ Too basic	☐ Appropriate	☐ Too advanced
	Duration ☐ Too short	☐ Appropriate	☐ Too long
	Usefulness Was this lesson useful to you?	☐ Yes	☐ No
Rate from 1 to 5	**Overall Lesson Rating** Taking all the above into consideration, I rate this lesson: _____		
If you need additional space, please use the back of the sheet.	**Comments and Observations**		

Thank you for your help. Your input is valuable. Please turn in this completed form to the instructor.

LESSON

19

LIFTING AND MOVING PATIENTS

Duration • 07 Periods • (Lecture-01 Periods and Practical-06 Periods)

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. List three emergency moves and two non-emergency moves for lifting and moving a patient.
2. Demonstrate the techniques for immobilising and transporting a patient, using a backboard.
3. Name five examples of situations that might require you to make an emergency move with a patient.

1 Background

After you arrive at the scene, a patient may need to be handled or transported. It is very important to act quickly and cautiously at a dangerous scene. If you handle the patient improperly, you may cause further injury.

Each EMS system defines when and how a patient may be moved, generally only if the patient is in immediate danger.

2 Body Mechanics

Definition: Proper use of your body to facilitate lifting and moving, and to prevent injury.

Incorrectly lifting and carrying equipment or patients could cause injury, and potentially end an EMS career or cause lifelong pain. When it comes to lifting, follow these basic rules to prevent injuries:

- **Plan your move** before lifting an object.

- **Use your legs** to lift, not your back.

- Keep the weight of the object as **close to your body** as possible.

2

Body Mechanics
(Cont.)

- **"Stack"** – move your body as a unit. Visualise your shoulders as stacked onto your hips, your hips onto your feet.

_____

- **Reduce the height or distance** you need to move an object.

_____

- **Reposition** and **lift in stages.**

_____

Apply these principles to lifting, pulling, pushing, carrying, moving or reaching for an object. The key to preventing injury is _____ of the spine. Keep a normal, inward curve of the lower back. Keep wrist and knees in normal alignment.

Teamwork is essential. Communicate during a task, clearly and frequently. Use commands that are easy for team members to understand. Verbally coordinate moves from beginning to end.

Proper body mechanics will not protect those who are not physically fit.

A proactive, well-balanced physical fitness program should include training in flexibility, cardiovascular exercise, strength and nutrition. However, these concerns are beyond the scope of this course.

3 Moving Patients

- How soon should you move the patient?
- Must you complete your assessment before moving the patient?
- How much time should you spend on spinal protection?

Answer:
It depends on the circumstances.

Generally, if there is no threat of injury, provide emergency care and then move the patient. If the scene is potentially unsafe or poses an immediate threat, you may have to move the patient.

Patient-moving techniques can be classified as **emergency moves** and **non-emergency moves.**

3.1 Emergency Moves

Make an emergency move only when there is immediate danger to the patient.

Examples of situations which might require you to make an emergency move:

- **Fire or threat of fire** – always considered a great threat to patients and rescuers.

- **Explosion or threat of explosion** (hazardous scene)

- **Inability to protect the patient from hazards at the scene**
  - Unstable building
  - Rolled over car
  - Hostile crowd
  - Hazardous materials (Haz-Mat)
  - Spilled gasoline
  - Extreme weather

- **To gain access to other patients who need care.**

_____

- **When life-saving care cannot be given due to patient's location or position:**
  – Example: A patient in cardiac arrest must be supine on a hard flat surface to perform CPR properly. If patient is sitting on a sofa or is lying in bed, you must make an emergency move.

_____

The greatest danger in making an emergency move is the possibility of _____. Provide as much protection to the spine as possible – pull the patient in the direction of the _____ of the body. Try not to move the head away from the neck and shoulders, and secure the hands and arms.

Moving patients away from a vehicle quickly and safely may be impossible. Move the patient only under the conditions mentioned above.

Types of emergency moves

- Shirt drag

_____

- Shoulder or forearm drag

_____

Other types:

- Sheet drag

_____

- Piggy back carry

_____

- One-rescuer crutch

_____

- Cradle carry

_____

- Firefighter drag

_____

3.2 Non–Emergency Moves

Where there is no immediate threat to life, the patient should be moved only when ready for transport, using a non-emergency move. Complete your on-scene assessment and treat the patient first. Prevent additional injury and try to avoid causing discomfort and pain to the patient.

Non-emergency moves generally require minimal equipment. However, if you suspect spinal injury, provide proper spinal immobilization prior to moving the patient. Often patient-carrying devices can be utilized.

Examples of non-emergency moves:

- **Direct-ground / bed lift:** This move is difficult if the patient weighs more than 80 kilos, is on the ground or other low surface or is uncooperative. Requires at least three people.

- **Extremity lift:** Commonly used to move patients from a chair or bed to a stretcher or the floor. Do not use on patients with extremity injuries.

4

Positioning the Patient

How you position a patient depends on the patient's condition.

Examples:

- Patient showing signs of shock

  _____

- Patient with respiratory problems

  _____

- Patients with abdominal pain generally want to be on one side with legs drawn up

  _____

- A responsive patient, nauseated or vomiting

  _____

- Trauma patients, especially suspected spinal injury patients

  _____

- Place patient in recovery position if unconscious and not contraindicated

  _____

Obviously it is not possible to address every situation. Conditions at the scene and the patient's condition will dictate a good position for the patient.

5

Patient-Carrying Equipment

Such equipment includes stretchers and other devices designed to carry patients safely to their destination. You should become completely familiar with the use of these devices. You should also know the limitations of the equipment. It is very import to regularly maintain and inspect these devices.

Typical equipment used to move patients includes:

- **Wheeled stretchers** – some have a collapsible undercarriage, usually seen in ambulances or transportation units

_____

- **Lightweight portable stretchers** (folding or collapsible)

_____

- **Scoop stretcher**

_____

- **Vest-type extrication devices**

_____

- **Stair chair**

_____

- **Basket stretcher**

_____

- **Flexible stretcher**

_____

- **Draw sheet**

_____

5

Patient-Carrying Equipment (Cont.)

- **Backboards:** These devices are usually made of splinter-resistant wood or synthetic material that will not absorb blood. They usually have handholds or carrying straps. There are two types:
  - **Long backboard:** 6–7 feet long, used for patients found lying down or standing and who must be immobilized.

  - **Short backboard:** 3-4 feet long, used primarily to remove patients from vehicles when neck or spinal injuries are suspected. The backboard is slid between the patient's back and the seat. Once secured to the short board and wearing a rigid cervical collar, the patient can be removed from his sitting position in the vehicle to a supine position on the long board. Vest-type devices are often used as a short backboard.

Stations 1, 2, 3 and 4

Student Name: _____ **Dates:** _____

Instructions: Check the box showing on which attempt the participant was able to perform the step successfully. UTP indicates unable to perform successfully within four attempts.

Performance Guidelines		Successful on Attempts				UTP
		1	2	3	4	
Station 1	Use of PPE.					
	Blanket drag					
	Shoulder or forearm drag					
	Direct ground lift					
	Extremity lift					
Station 2	Use PPE					
	Remove a patie nt from an automobile using a long backboard					
Station 3	Use PPE					
	Strapping a patient to a long backboard					
Station 4	Use of PPE.					
	Removing a patient from an automobile using a short backboard					

Comments _____

Overall Performance	
Station 1 ☐ Outstanding ☐ Successful ☐ Needs Imp. Instructor:	**Station 2** ☐ Outstanding ☐ Successful ☐ Needs Imp. Instructor:
Station 3 ☐ Outstanding ☐ Successful ☐ Needs Imp. Instructor:	**Station 4** ☐ Outstanding ☐ Successful ☐ Needs Imp. Instructor:

POST-TEST | LESSON 19

Lifting and Moving Patients

1. List three emergency moves and two non-emergency moves for lifting and moving a patient.

   Emergency Moves:

   _____

   _____

   _____

   Non-Emergency Moves:

   _____

   _____

   _____

2. Name five examples of situations that might require you to make an emergency move with a patient.

   _____

   _____

   _____

   _____

   _____

MFR LESSON 19 EVALUATION

Course Location: _____ **Dates:** _____

Do not write your name on this form. Please complete a copy of this form at the end of every lesson. Your evaluations are very valuable towards improving the course.
Please use the ratings below.

1 VERY POOR	2 POOR	3 AVERAGE	4 GOOD	5 EXCELLENT

Please fill in the required information.	**Lesson Number :**	**Lesson Name :**	
	Instructor's Name		
Use a scale from 1 to 5 as described above to rate the various lesson components.	**Lesson Rating (rate 1 to 5)**		
	Content	Instructor	Method
	Workbook	Interaction	
Mark your selection with an "**X**"	**Instruction Level** ☐ Too basic	☐ Appropriate	☐ Too advanced
	Duration ☐ Too short	☐ Appropriate	☐ Too long
	Usefulness Was this lesson useful to you?	☐ Yes	☐ No
Rate from 1 to 5	**Overall Lesson Rating** Taking all the above into consideration, I rate this lesson: _____		
If you need additional space, please use the back of the sheet.	**Comments and Observations**		

Thank you for your help. Your input is valuable.
Please turn in this completed form to the instructor.

LESSON

20

REPORT WRITING AND PREPARATION FOR THE NEXT CALL

Duration • 02 Periods • (Lecture-02 Periods)

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. Demonstrate how to record information about the patient's condition and treatment given on the prescribed form.
2. List five steps to decontaminate the transport vehicle.
3. List four steps decontaminate the stretcher.
4. List three steps to decontaminate instruments.
5. List the three items for personal decontamination.

1 Report Writing

Documentation is extremely important and may be legally required for patient care rendered by the MFR. A properly completed written report not only provides all the pertinent facts, it also provides them in a logical order.

Pre-hospital Treatment Report

A pre-hospital treatment report is used for all the following reasons:

- **To transfer patient information from one person to another.** Your report is turned over to the personnel who transport your patient. They will, in turn, give it to the hospital staff who use it to learn the patient's history, including the condition in which he/she was found, what emergency care was provided, and how the patient responded to that care.

- **To provide legal documentation.** A written report prepared at the scene of an emergency may be used as an official record. If you provide care at the scene of an injury or act of violence, for example, your report may become evidence in the court proceedings.

Report Writing (Cont.)

- **To document the care you provided.** This is important for official reasons, as well. Unfortunately, patients and their families sometimes sue first responders and other EMS professionals. Accurate documentation can be one of your best defences against legal or official action.

_____

_____

_____

- **To improve your EMS system.** Research is performed in many different areas of your EMS system. It is used to improve such factors as response time and the effectiveness of certain procedures. Accurate reports are vital to that research.

_____

_____

_____

Always take official report forms to document the patient's information and gather data in the standard format.

You should record the following basic data:

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

2

Decontamination of the Unit, Equipment, and Personnel

2.1 Transport Unit (Ambulance or other)

After completing a call, the transport unit should be prepared to be available to respond to the next call.

Complete these steps:

1) Dispose of all contaminated supplies (bandages, dressings, disposable materials) in a sealed plastic bag.

2) Collect all contaminated reusable equipment and seal them in another plastic bag.

3) Clean the floor, walls and ceiling with soap and water. They may be contaminated with blood, vomitus, faecal matter, dust, mud, etc.

4) Disinfect surfaces with a solution of water and 10 percent bleach. This solution may be harmful to bright metal surfaces.

5) Air out the ambulance.

2.2 Decontamination of the stretcher

1) Remove the contaminated sheet.

_____

2) Clean and disinfect the stretcher mattress.

_____

3) Turn the mattress.

_____

4) Place a clean sheet on the mattress.

_____

2.3 Decontamination of instruments

1) Scrub contaminated instruments to eliminate any _____, then wash them with soap and water.

_____

2) Soak instruments in a 10% bleach and water solution for _____ minutes, then dry them off.

_____

3) Replace instruments and any medication on the unit.

_____

3

Personal Decontamination

Make sure to decontaminate the following three items after every incident:

- **Hands:** Thoroughly wash hands in soap and water.

  Pay close attention to the _____.

  _____

  _____

- **Clothes:** Change out of any contaminated clothing and immediately wash separately from other linens. Keep a spare change of clothes available.

  _____

  _____

- **Shoes:** Wipe shoes clean. Wash off all bodily fluids with a 10% bleach solution.

  _____

  _____

FINAL REPORT FORMAT (SAMPLE)

INCIDENT INFORMATION

Incident No.:	Date:

Crew Member Names:

1. _____ 3. _____

2. _____ 4. _____

Patient _____ of _____ Unit No. _____ Station No. _____

Received Call (time) : _____ Contact with Patient (time) : _____

Dispatched (time) : _____ Alerted Hospital (time) : _____

En-route (time) : _____ Transport Patient (time) : _____

Arrival on Scene : _____ Arrival at Destination (time) - Hospital: _____

Incident Address : _____

_____

Nature of the Call : _____

Other agencies involved : _____

Agency transporting patient : _____

PATIENT INFORMATION

Last Name: _____ First Name: _____

Incident Address _____

_____

Identification Card No.: _____ Date of birth: _____ / _____ / _____

Sex (circle one) : M F Age: _____ Estimated weight: _____

VITAL SIGNS BASELINE

Airway: _____ Respiration: _____

Temperature: _____ Skin Color: _____

Skin: _____ Pupils: _____

Palpable Pulses	Time: _____
Radial: _____	Pulse: _____
Carotid: _____	Respiratory Rate: _____
Other: _____	Blood Pressure: _____

HISTORY

Medical History : _____

_____

Chief Complaints : _____

_____

Allergies : _____

_____

Medications/Treatment : _____

_____

VITAL SIGNS

Time	Pulse	Resp.	Blood Pres.	Comments

NARRATIVE

_____

_____

_____

_____

_____

PATIENT REFUSAL OF TREATMENT

_____

Patient's Signature

_____ _____

Witness 1 Signature Witness 2 Signature

MFR Officer in Charge

_____ _____

Printed Name Signature

POST-TEST | LESSON 20

Report Writing and Preparation for the Next Call

1. List five steps to decontaminate the transport vehicle.

2. List four steps decontaminate the stretcher.

3. List three steps to decontaminate instruments.

4. List the three items for personal decontamination.

MFR LESSON 20 EVALUATION

Course Location: _____ **Dates:** _____

Do not write your name on this form. Please complete a copy of this form at the end of every lesson. Your evaluations are very valuable towards improving the course. Please use the ratings below.

1 VERY POOR	2 POOR	3 AVERAGE	4 GOOD	5 EXCELLENT

Please fill in the required information.	**Lesson Number :**	**Lesson Name :**	
	Instructor's Name		
Use a scale from 1 to 5 as described above to rate the various lesson components.	**Lesson Rating (rate 1 to 5)**		
	Content	Instructor	Method
	Workbook	Interaction	
Mark your selection with an "**X**"	**Instruction Level** ☐ Too basic	☐ Appropriate	☐ Too advanced
	Duration ☐ Too short	☐ Appropriate	☐ Too long
	Usefulness Was this lesson useful to you?	☐ Yes	☐ No
Rate from 1 to 5	**Overall Lesson Rating** Taking all the above into consideration, I rate this lesson: _____		
If you need additional space, please use the back of the sheet.	**Comments and Observations**		

Thank you for your help. Your input is valuable. Please turn in this completed form to the instructor.

LESSON

21

TRIAGE AND MULTIPLE CASUALTY INCIDENTS

Duration • 04 Periods • (Lecture-02 Periods and Practical-02 Periods)

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. Define an Incident Command System.
2. List the five functional sectors of the Incident Command System.
3. Define triage.
4. List the four categories of triage with their associated colours and briefly explain each category.
5. List the three benchmarks of the S.T.A.R.T. system of triage.
6. Correctly triage a simulated multiple casualty incident.

1 Incident Command System (ICS)

Definition:
A flexible system for managing people and resources

One widely used plan for handling a multiple casualty incident is the **Incident Command System**. It provides a framework for all types of incidents. The ICS provides a command structure through which to manage multiple-casualty incidents.

In the incident command system one component or part of the system will take care of triage, treatment, and transportation of the victims. This is common in many systems used to deal with multiple casualty incidents. The method shown below is a good way to divide or organize an incident to deal with triage, treatment, and transportation of the victims.

EMS Sector Functions

- **Triage Sector** – provides patient assessment, tagging, and removal of patients to a designated treatment area

- **Treatment Sector** – sets up a treatment area

- **Transportation Sector** – arranges for ambulances and tracks patients

- **Staging Sector** – releases and distributes resources when they are needed

- **Safety Officer** – maintains scene safety

Medical First Responder's Role

As an MFR, find out what your EMS system requires you to do in the first crucial minutes of an MCI. Your major goals are then to:

1) Establish command.

2) Assess the scene.

3) Request additional resources.

4) Begin triage.

1 Incident Command System (ICS) – Cont.

Scene Assessment

Note that once you identify an incident as an MCI, you must resist the urge to take part in providing treatment. During your scene assessment, identify the following:

- _____
- _____
- _____
- _____
- _____
- _____
- _____

Make an initial scene report to EMS dispatch. Keep it brief. Give all information necessary for other rescuers to react to the MCI appropriately.

2 Triage

Definition: The process of sorting patients to determine the order in which they will receive care.

Triage is a French word meaning "pick" or "sort". It is a process of classifying sick and injured patients in a mass casualty incident. In triage, the most critical but salvageable patients are treated and transported first. It is your goal to afford the greatest number of people the greatest chance of survival.

_____

_____

_____

_____

2.1 S.T.A.R.T. Method of Triage

S.T.A.R.T., which stands for **"Simple Triage and Rapid Treatment"**, is a very successful program. There are four S.T.A.R.T. categories:

- **Priority 1-RED:** Highest priority, assigned to patients with critical conditions such as:

_____

_____

_____

- **Priority 2-YELLOW:** Second priority or delayed care category. Assigned to patients with conditions such as:

_____

_____

_____

- **Priority 3-GREEN:** Lowest priority or delayed-care category. Assigned to patients who are not seriously injured, need minimal care, and can wait for treatment without getting worse. This includes patients with:

_____

_____

_____

- **Priority 0-BLACK:** Assigned to the dead or fatally injured. Includes injuries incompatible with life (see Lesson 6).

_____

_____

_____

2 Triage (Cont.)

2.2 Triage ribbons and tags

After patients are assessed and sorted, they must be tagged for _____. Triage ribbons and tags come in a variety of sizes, shapes and colours.

Once a patient is given a tag, **do not remove it**. If a patient changes status before being treated, draw a bold line through the original tag, note the time and put a new tag on the patient.

3 The S.T.A.R.T. System

In the S.T.A.R.T. system, first tell all patients who are able to walk to move unassisted to a specified area. Assign these patients, called the "walking wounded," a **Priority 3-Green** (delayed care). Then turn your attention to the patients unable to walk. Begin triage with an initial assessment using the following benchmarks (you can use **"RPM"** as a memory aid):

- **Respirations:**
  - If breathing is faster than 30 or less than 11 respirations per minute, assign **Priority 1-Red.**
  - If the patient is not breathing, make one attempt to open the airway and clear foreign matter from the mouth. If unassisted breathing resumes, assign **Priority 1-Red**. If breathing does not resume, assign **Priority 0-Black**.
  - If breathing is less than 30 breaths per minute, perform perfusion assessment.

3

The S.T.A.R.T. System (Cont.)

▸ Perfusion:

- Assess capillary refill. More than 2 seconds indicates inadequate perfusion – assign **Priority 1 -Red**. Control all major hemorrhaging.

- If capillary refill is less than 2 seconds, perform mental status assessment.

- In cases of poor lighting, check radial pulse. Absent pulse indicates blood pressure below 80 mmHg and inadequate perfusion.

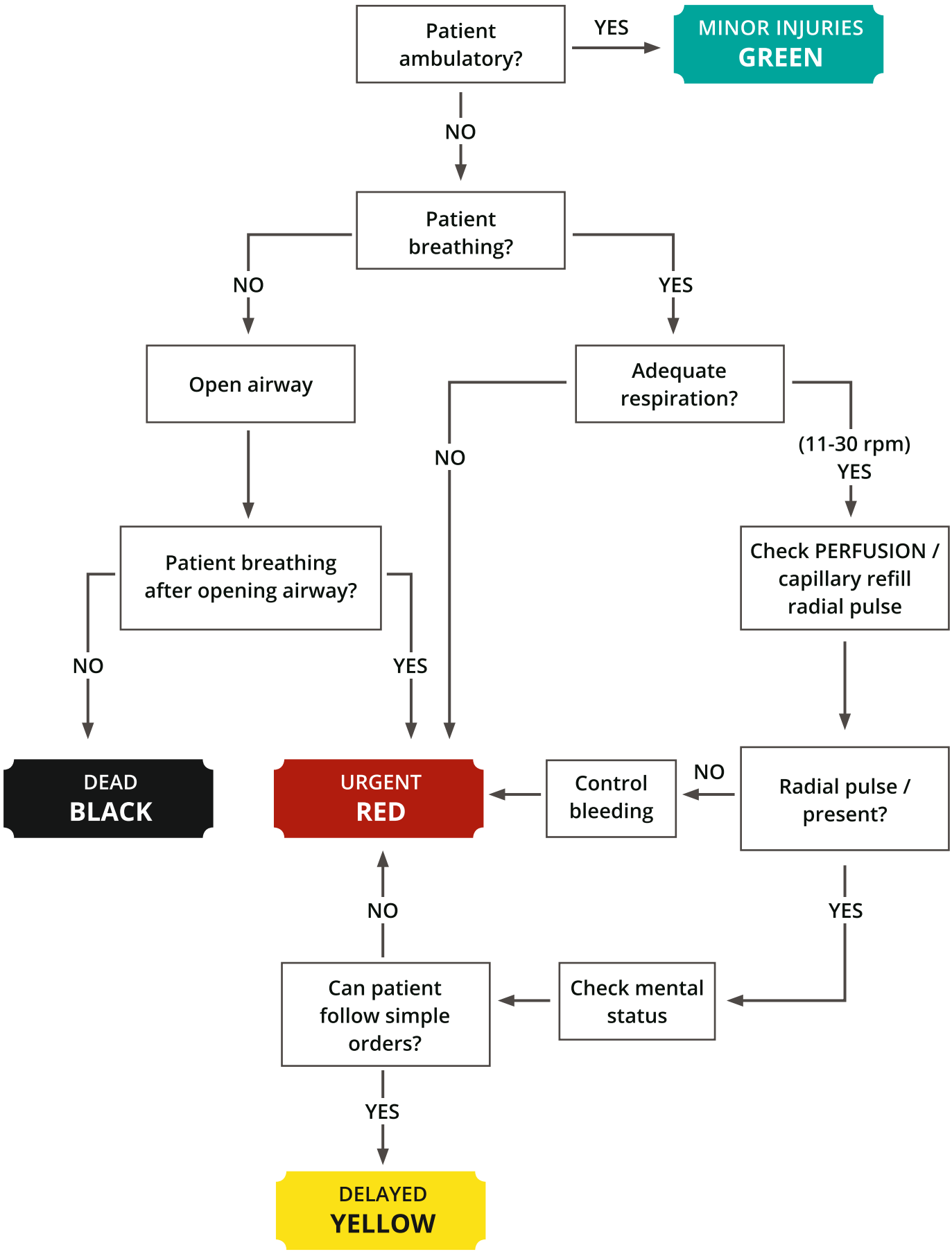
▸ Mental Status (ability to follow simple commands):

- If patient is unable to respond to simple commands such as "close your eyes," assign **Priority 1-Red**.

- If the patient is able to respond, assign **Priority 2 -YELLOW**.

Once you have tagged to a patient, your assessment ends. Proceed to the next patient.

S.T.A.R.T. FLOWCHART



POST-TEST | LESSON 21

Triage and Multiple Casualty Incidents

1. Define an Incident Command System.

_____

_____

_____

2. List the five functions of the EMS sector of the Incident Command System.

- _____
- _____
- _____
- _____
- _____

3. Define triage.

_____

_____

_____

POST-TEST | LESSON 21

Triage and Multiple Casualty Incidents (Cont.)

4. List the four categories of triage with their associated colours and briefly explain each category.

   - _____
   - _____
   - _____
   - _____

5. List the three benchmarks of the S.T.A.R.T. system of triage.

   - _____
   - _____
   - _____

MFR LESSON 21 EVALUATION

Course Location: _____ **Dates:** _____

Do not write your name on this form. Please complete a copy of this form at the end of every lesson. Your evaluations are very valuable towards improving the course. Please use the ratings below.

1 VERY POOR	2 POOR	3 AVERAGE	4 GOOD	5 EXCELLENT

Please fill in the required information.	**Lesson Number :**	**Lesson Name :**	
	Instructor's Name		
Use a scale from 1 to 5 as described above to rate the various lesson components.	**Lesson Rating (rate 1 to 5)**		
	Content	Instructor	Method
	Workbook	Interaction	
Mark your selection with an "**X**"	**Instruction Level** ☐ Too basic	☐ Appropriate	☐ Too advanced
	Duration ☐ Too short	☐ Appropriate	☐ Too long
	Usefulness Was this lesson useful to you?	☐ Yes	☐ No
Rate from 1 to 5	**Overall Lesson Rating** Taking all the above into consideration, I rate this lesson: _____		
If you need additional space, please use the back of the sheet.	**Comments and Observations**		

Thank you for your help. Your input is valuable. Please turn in this completed form to the instructor.

LESSON

22

COURSE REVIEW

LESSON OBJECTIVES

1. To answer questions and resolve issues that were recorded in the “File” by participants.
2. To review the most important practical procedures that were demonstrated and practiced throughout the course.
3. To outline what is expected in the Final Practical Evaluation and answer any questions regarding the Evaluation.

Note any issues or questions you have about the MFR course.

MFR LESSON 22 EVALUATION

Course Location: _____ **Dates:** _____

Do not write your name on this form. Please complete a copy of this form at the end of every lesson. Your evaluations are very valuable towards improving the course. Please use the ratings below.

1 VERY POOR	2 POOR	3 AVERAGE	4 GOOD	5 EXCELLENT

Please fill in the required information.	**Lesson Number :**	**Lesson Name :**	
	Instructor's Name		
Use a scale from 1 to 5 as described above to rate the various lesson components.	**Lesson Rating (rate 1 to 5)**		
	Content	Instructor	Method
	Workbook	Interaction	
Mark your selection with an "**X**"	**Instruction Level** ☐ Too basic	☐ Appropriate	☐ Too advanced
	Duration ☐ Too short	☐ Appropriate	☐ Too long
	Usefulness Was this lesson useful to you?	☐ Yes	☐ No
Rate from 1 to 5	**Overall Lesson Rating** Taking all the above into consideration, I rate this lesson: _____		
If you need additional space, please use the back of the sheet.	**Comments and Observations**		

Thank you for your help. Your input is valuable. Please turn in this completed form to the instructor.

LESSON

23

FINAL PRACTICAL EVALUATION

Duration • 09 Periods

LESSON OBJECTIVES

Objectives for the Final Practical Evaluation are identified as course performance objectives in Lesson 1.

Final Practical Evaluation

Overview

You are being provided copies of the score forms (following pages) which the instructors will use to score your performance during the Final Practical Evaluation. By reading these forms you will know exactly what steps you will be expected to complete in order to pass the Final Practical Evaluation successfully. There will be no surprises. You will only be tested on subject matter and skills you have learned and practiced throughout the Medical First Responder Course.

1. The practical evaluation consists of three stations with simulated situations, as follows:

   Station 1: Trauma Situation – 100 points (80 pts. to pass)

   Station 2: Medical Emergency – 50 points (40 pts. to pass)

   Station 3: Labour and Delivery – 50 points (40 pts. to pass)

2. The evaluation will proceed in the following manner:
   a) You will be isolated and will be unable to see the stations until you are called.
   b) When called, you will be required to complete all three stations consecutively.
   c) If you do not reach the minimum score in a given final practical station, you will have a second chance to perform the station satisfactorily. If you are unable to achieve a passing score on the second attempt, you will qualify to receive only a Certificate of Attendance for the course and you will not receive a Certificate of Completion.
   d) After completing the three stations, you will be isolated from the others who have not yet begun. (It is acceptable, when you are finished, to watch the stations, provided that you do not interfere or interact with those completing the stations.)

3. You must review the performance objectives of every station to make sure you achieve them all.

Final Practical Evaluation

Station 1: Trauma Score Form

Participant's Name: _____ **Date:** _____

Initial Assessment	Points	Completed
Secure the scene	3	☐
Personal protection (universal precautions)	3	☐
State of consciousness (ask and shake)	3	☐
Airways – maintain open airway considering condition of neck	5	☐
Breathing – evaluate respirations (look, listen, feel)	5	☐
Circulation: Check carotid pulse	5	☐
Control critical bleeding	3	☐
Apply cervical collar (proper size and placement)	5	☐
Administer oxygen	5	☐
Identify need for immediate transport or perform physical exam	3	☐
Physical Exam	**Points**	**Completed**
Interview: Patient	2	☐
Witnesses	2	☐
Vital signs: RPM	2	☐
PPM	2	☐
BP	2	☐
Skin temperature	2	☐
Head: Inspect and palpate head and ears	2	☐
Assess eyes	2	☐
Assess mouth and nose	2	☐
Neck: Assess/palpate (can be done before immobilizing)	2	☐
Thorax: Assess/palpate	2	☐
Abdomen: Assess/palpate	2	☐
Pelvis: Assess/palpate	2	☐

Final Practical Evaluation

Station 1: Trauma Score Form (Cont.)

Participant's Name: _____ **Dates:** _____

Physical Exam	Points	Completed
Lower extremities: Assess/palpate	2	☐
Distal pulses	2	☐
Sensation/motor function	2	☐
Upper extremities: Assess/palpate	2	☐
Distal pulses	2	☐
Sensation/motor function	2	☐
Rotation: Observe/palpate dorsal region	2	☐
Pre-Hospital Treatment	**Points**	**Completed**
Fractures: Correct immobilization device	5	☐
Correct application	5	☐
Correct position	2	☐
Shock: Maintain body heat	2	☐
Emotional support	3	☐
Indicate when ready to transport patient	3	☐
Total Points Possible:	**100**	
Minimum passing score: 80 points	**Score:** _____	

Instructor's Name: _____

Instructor's Signature: _____

(Write comments on reverse and mark here ☐)

Final Practical Evaluation

Station 2: Medical Score Form

Participant's Name: _____ **Dates:** _____

	Points	Completed
Secure the scene	4	☐
Personal protection: Universal precautions	4	☐
State of consciousness (shake and call)	3	☐
Initial assessment:		
Patient airway	5	☐
Breathing	5	☐
Circulation	5	☐
Condition	1	☐
Physical exam	5	☐
Interview:		
Patient	2	☐
Family	2	☐
Witnesses	2	☐
General impression (MFR's impression)	4	☐
Administer oxygen	3	☐
Explain appropriate treatment to instructor	3	☐
Preparation for transport	1	☐
Indicate when ready to transport patient	1	☐
Total Points Possible:	**50**	
Minimum passing score: 40 points	**Score:** _____	

Instructor's Name: _____

Instructor's Signature: _____

(Write comments on reverse and mark here ☐)

Final Practical Evaluation

Station 3: Childbirth Score Form

Participant's Name: _____ **Dates:** _____

	Points	Completed
Secure the scene	4	☐
Personal protection: Universal precautions	4	☐
Initial assessment:		
State of consciousness	1	☐
Patient airway	5	☐
Breathing	5	☐
Circulation	5	☐
Condition	1	☐
Patient interview	3	☐
Childbirth		
Prepare patient area	1	☐
Prepare newborn area	1	☐
Patient position	1	☐
Hold/support newborn	5	☐
Initial assessment (newborn)	5	☐
Manage umbilical cord	5	☐
Manage placenta	1	☐
Preparation for transport	2	☐
Indicate when ready to transport patient	1	☐
Total Points Possible:	**50**	
Minimum passing score: 40 points	**Score:** _____	

Instructor's Name: _____

Instructor's Signature: _____

(Write comments on reverse and mark here ☐)