Arizona Peace Officer Standards and Training
Basic Curriculum Lesson Plan

LESSON TITLE: FIRST AID - MEDICAL 8.1

SUBJECT:	First Aid (Medical)
AZ POST DESIGNATION:	8.1.15 and 8.1.17
HOURS:	1.5
COURSE CONTENT:	Medical emergencies and treatments: Diabetic emergencies, seizure disorders, stroke and childbirth.
PERFORMANCE OBJECTIVES:	Upon completion of this course of instruction, students using notes, handouts and other support materials as references, within the allotted time, will:

8.1.15 Give written, verbal or visual descriptions of persons suffering from the following medical conditions, identify the signs, symptoms, appropriate treatment steps and appropriate management procedures for treatment:

A. Diabetic emergencies.

B. Seizure disorders.

C. Stroke.

8.1.17 Identify the signs of an impending childbirth and the procedures for assisting with both of the following:

A. Normal deliveries.

B. Abnormal deliveries.

1. High-risk factors.

2. Breech deliveries.

3. Prolapsed cord.

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REVIEWED – REVISED:	Sgt. Bill Wright – ALEA Course Revision 2001	DATE: January 2001
REVIEWED – REVISED:	SME Committee	DATE: October 2003
REVIEWED – **REVISED:**	Officer Tim Taylor, SME Chairman	DATE: February 2004
REVIEWED – **REVISED:**	First Aid SME Group	DATE: November 2017
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AZ POST – APPROVAL:	Don Yennie	DATE: November 2017
AZ POST – APPROVAL:	Lori Wait	DATE: March 2022
INSTRUCTOR REFERENCES:		
CLASS LEVEL:	Student	
TRAINING AIDS:		
INSTRUCTIONAL STRATEGY:	Lecture and class discussion.	
SUCCESS CRITERIA:	70% or higher on a written, multiple-choice examination.	
COMPUTER FILE NAME:	Medical	
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I. INTRODUCTION

A. Instructor – (self) introduction.

B. Preview of performance objectives.

II. STROKE P. O. 8.1.15D

A. Definition.

1. In a stroke, part of the brain has been damaged due to a rupture of an artery or blockage of an artery by a blood clot or atherosclerosis. (A “Heart Attack” in the brain.)

B. Signs.

1. Headache.

2. Altered states of consciousness.

3. Numbness or paralysis. (Usually seen on one side of the body.)

4. Convulsions.

5. Difficulty breathing.

6. Unequal pupils.

7. F.A.S.T. Test.

a. Facial Droop.

b. Arm Drift.

c. Speech.

d. Time.

C. Emergency care.

1. Monitor vitals.

2. Be prepared to do CPR.

3. Keep the patient at rest.

4. Protect paralyzed parts.

5. Keep the head slightly elevated, but allow for drainage from the mouth.

6. Place the patient in a recovery position if there are fluids in the mouth, but not on the affected side.

7. Do not give anything by mouth.

8. The patient's mind is usually still clear so be careful what you are saying. Always address the patient and treat him/her respectfully.

III. DIABETES P. O. 8.1.15B

A. Definition.

1. A condition, in which the body is unable to use sugar normally, caused by either too little or too much insulin.

B. Diabetic coma/hyperglycemia.

1. Too little insulin, too much sugar.

2. A sweet, fruity odor on the breath. Do not confuse this with the odor of alcoholic beverages.

3. Dehydrated; dry, warm skin. (Increased urination and thirst.)

4. Rapid, weak pulse.

5. Air hunger.

6. Varying degrees of consciousness.

7. Gradual process over a period of days.

C. Insulin shock/hypoglycemia.

1. Too much insulin, too little sugar.

2. Pale, moist skin.

3. Full, rapid pulse.

4. Normal breathing.

5. Dizziness/headaches.

6. Seizures/coma.

7. Rapid onset.

8. Can be confused as a very aggressive person.

D. Emergency care.

1. Activate EMS.

2. Keep the patient at rest.

3. Ask the patient if he/she is a diabetic.

4. Assist the patient in obtaining medication or food, unless he/she is unconscious, then do not give fluids or food.

5. If the patient is unconscious, monitor his/her vital signs and be prepared to do CPR. (Look for a Medical alert bracelet but remember not all diabetics will wear them.)

6. If the patient is conscious, provide a sugary liquid.

IV. SEIZURES P. O. 8.1.15C

A. Causes:

1. Drug or alcohol abuse.

2. Brain tumors/brain defects.

3. Infection/fever.

4. Trauma to the head.

5. Stroke.

6. Hypoglycemia.

7. Lack of oxygen to the brain.

8. Epilepsy.

B. Signs and symptoms:

1. Sudden loss of consciousness or the patient may move to the ground.

2. The patient may stop breathing.

3. The patient may go into convulsions, jerking all parts of the body and stiffening arms and legs.

4. The patient usually awakens very tired and confused.

5. The patient is often embarrassed, especially if there has been a loss of bladder control.

C. Emergency care.

1. Activate EMS.

2. Place the patient on the floor. Try to keep the patient from the view of the general public. Protect his/her dignity.

3. Loosen restrictive clothing. Pad the area behind the patient's head.

4. DO NOT try to restrain the patient; just keep him/ her from striking objects. Move objects that may be around the patient.

5. After a seizure, protect the patient's airway and place the patient in the recovery position, if necessary.

6. Do not force the patient's mouth open or put in a bite block.

7. After the patient awakens, ask him/her if he/she has had seizures before; people with a seizure history know what to do. You may assist him/her in getting food or medication.

8. The patient may refuse medical treatment.

9. One (1) seizure right after another is a life-threatening emergency.

10. Be prepared to do CPR.

D. Mental exercise:

1. You are behind a vehicle that is weaving and driving very slowly. After you stop the vehicle, you smell a sweet odor (like day-old beer) coming from the driver's breath. The driver does not remember where he was going or where he was. During FST's, he

stumbles and falls. The driver says that he has not had anything to drink, but he is very thirsty.

2. What additional questions should you ask? (Do you have a medical condition? Look for a medical alert bracelet or necklace.)

3. What other resources might you ask for? (Call for EMS)

4. What medical treatment would you do for this person? (Monitor vitals, help him/her take medications or food.)

V. CHILDBIRTH P. O. 8.1.17

A. Pregnancy. (Gestation is when the sperm fertilizes the egg.)

1. Term: Is 37-42 weeks gestation.

2. Pre-term: Is less than 37 weeks gestation.

3. Post-term: Is greater than 42 weeks gestation.

4. Age of Viability: Is 24-25 weeks gestation.

5. Miscarriage: Frequently occurs at six (6), 12 and 18-20 weeks gestation.

B. Timing contraction cycles.

1. Start timing the cycle from the beginning of the contraction until the next contraction begins.

2. When contractions are three (3) minutes or less apart, prepare for delivery.

VI. NORMAL DELIVERY P. O. 8.1.17A

A. Practical precautions.

1. Universal precautions: Gloves, masks, gowns, eye protection, etc.

2. Very high risk of contamination for officers assisting with deliveries, due to large amounts of blood and body fluids.

B. Preparation.

1. Activate EMS.

2. Introduce yourself and explain that you are there to help assist in the delivery.

3. Supplies needed:

   a. Gloves – you can also use rubber kitchen gloves if they are clean.

   b. If you are at a patient's residence, get the plastic shower curtain. Place it on the floor or bed for protection (you can also use clean garbage bags). Cover it with newspapers (this will help absorb the blood), then place clean towels over the newspaper. This will be placed under the mother's buttocks.

   c. Have plenty of extra clean towels to wrap the baby in and to clean the mother with.

   d. Have at least two (2) plastic bags with ties to place the placenta in.

4. Do <u>not</u> let the mother use the bathroom. As the baby comes down the birth canal, the mother will have a natural urge to move her bowels. If she moves her bowels during delivery, cover it up with towels to keep the baby from coming into contact with it.

C. Positioning the mother.

1. Assure privacy.

2. Have the mother lie down on her back. Her knees should be bent, her feet flat and her legs spread wide apart.

3. Place towels, shower curtain, etc., under her buttocks.

4. Explain what is to be done. Examine the vaginal area to see if the baby's head is crowning. (Crowning: when the top of the head can be seen at the vaginal opening.)

D. Normal delivery.

1. Use universal precautions. Wash hands and put on sterile gloves, mask, eye protection and gown, if available. (A clean, large trash bag makes a good gown.

2. Place one (1) hand below the baby's head as it is delivered. Spread your fingers evenly around the baby's head. Support the baby's head, but avoid applying pressure to the soft areas of the skull. Use your other hand to help cradle the baby's head. DO NOT PULL ON THE BABY! The baby will be very slippery as it is delivered. (Show childbirth video.)

3. If the umbilical cord is wrapped around the baby's neck, tell the mother to stop pushing, gently loosen the cord and attempt to slide it over the baby's head.

4. If the "bag of waters" does not break, puncture the membrane. Do not delay this process. Tear the bag with your fingers, if needed. Pull the membranes away from the baby's mouth and nose.

5. Most babies are born face down and then begin to rotate to the right or left. The upper shoulder (usually with some delay) delivers next, followed quickly by the lower shoulder. You should continue to support the baby throughout this process. If you can gently guide the baby's head downward, you will assist the mother in delivering the baby's upper shoulder.

6. Once the baby's feet are born, lay the baby down between the mother's legs on its side with its head slightly lowered. This is done to allow blood, fluids and mucus to drain from the mouth and nose. Immediately suction/clear the baby's mouth and nose. (Don't raise the baby above the mother until the umbilical cord is cut or tied.)

VII. CARING FOR THE NEWBORN

A. Clear the airway.

1. Bulb syringe – if available, clear the baby's nose and mouth. Squeeze the bulb syringe, place it in the baby's mouth and release it to suction. Clear the bulb syringe away from the baby. Be careful not to push the syringe too far into the baby's mouth. This may injure the back of the mouth.

2. Gauze pads, wash cloths – use if a bulb syringe is not available. Wipe the baby's nose and mouth.

B. Check breathing.

1. Look, listen and feel.

2. If the baby is not breathing, suction/clear the nose and mouth again. Stimulate the baby by flicking the soles of the feet or rubbing the baby's neck.

3. If no response, begin rescue breathing and/or CPR as needed.

4. A newborn should have a:

a. Breathing rate between 30-60 breaths per minute. If < 30, begin rescue breathing.

b. Pulse rate between 100-160 beats per minute. If < 60, begin CPR. Remember to check a newborn's pulse at the brachial artery. (Demonstrate)

C. Clamp or tie the umbilical cord.

D. In a normal delivery, there is no need for you to cut the cord or clamp it. Wait for trained personnel who will have the proper equipment to handle the situation.

E. Keep the infant warm – wrap the baby in towels, blankets, sheets, etc. Make sure the baby's head is covered.

F. RECORD THE TIME OF DELIVERY.

VIII. CARING FOR THE MOTHER

A. Delivery of the placenta (afterbirth).

1. This is usually delivered within 20-30 minutes after the baby is delivered.

2. Never pull on the umbilical cord to assist in the delivery of the placenta. This could cause tearing and lead to a fatal hemorrhage.

3. If you have not cut the cord, double bag the placenta and place it at the same level as the baby to reduce any backflow of blood from the baby.

B. Control vaginal bleeding.

1. Place sanitary napkins, diapers, clean towels, etc., over the mother's vaginal opening. DO NOT place anything in the vagina. If the mother experiences excessive bleeding after the delivery, treat her for shock. Encourage breast feeding to reduce bleeding.

2. Have the mother lower her legs and keep them together (she does not have to "squeeze" her legs together). Elevate her feet.

IX. ABNORMAL DELIVERY/COMPLICATIONS P. O. 8.1.17B2

A. Breech birth.

1. The buttocks or feet are delivered first. If the head does not deliver in three (3) minutes of the buttocks and trunk, you must:

a. Create an airway for the baby since its oxygen flow through the umbilical cord has been shut off. Tell the mother what you must do and why. Insert your hand into the vagina with your palm towards the baby's face. Form a "V" by placing one (1) finger on each side of the baby's nose. Push the wall of the birth canal away from the baby's face. If you cannot complete this process, then try to place one (1) finger into the baby's mouth and push away the birth canal with your other finger. ***INSTRUCTOR NOTE:*** *This part is complex and a diagram would be*

helpful.

b. Maintain the airway – once you have provided an airway for the baby, you must keep this airway open. DO NOT PULL ON THE BABY. Allow delivery to take place, maintaining support for the baby's body and head.

c. Allow three (3) minutes for delivery, after you have established an airway. If delivery of the head does not take place, EMS transport to a medical facility is critical! Consider rapid transport via helicopter or ambulance.

d. In very rare cases, only an arm or leg appears in the birth canal. This situation cannot be delivered in the field. Consider rapid transport to a medical facility via helicopter or ambulance.

B. Prolapsed cord. **P. O. 8.1.17B3**

1. When the umbilical cord is born first, this is known as a prolapsed cord.

2. DO NOT try to push the cord back into the birth canal.

3. Place the mother on her back and prop her hips up with pillows, blankets, etc. This helps take pressure off the cord. The baby may press the cord and cut off its own circulation. Cover the cord with a moist dressing or towel.

4. Immediate transportation to a medical facility via helicopter or ambulance is critical!

C. Excessive bleeding pre-birth.

1. If a woman in labor begins to have excessive bleeding from her vagina, you should:

a. Activate EMS.

b. Treat her for shock. Do not hold the patient's legs together.

c. Place sanitary napkins or any sterile, clean pad or cloth over the opening of the vagina. Do not place anything in the vagina.

d. Save any blood-soaked items and all bodily tissues that are passed for examination by a physician.

e. Immediate transportation to a medical facility via helicopter or ambulance is critical!

D. Multiple births.

1. Labor contractions will start again shortly after the birth of the first child. The process for assisting the mother remains the same.

2. It is recommended that you tie or clamp the cord of the first child before the second child is born.

3. Record the order of the births.

E. Premature births.

1. Indications:

a. Less than five and one-half (5½) pounds birth weight or delivered before eight (8) months.

b. The mother tells you it was born early.

2. Care.

a. The same as a normal newborn.

b. Keep the infant warm.

F. Miscarriage (spontaneous abortion).

1. A fetus delivered before it can survive on its own.

2. Signs and symptoms:

a. Bright to dark red vaginal bleeding.

b. Cramping and/or low abdominal pain that may be intermittent or constant.

c. May pass clots or tissue.

3. Treatment:

a. Activate EMS.

b. Treat for SHOCK.

c. Place a sanitary napkin or other clean pad over the opening to the vagina. DO NOT place anything into the vagina.

d. Save all blood-soaked pads and any bodily tissues that are passed and send them to the hospital with the patient to be examined by a physician.

e. Provide emotional support.

G. Stillborn.

1. Provide resuscitation measures, if appropriate. Remember, the age of viability is around 24-25 weeks gestation.

2. Activate EMS. If the baby is viable, consider immediate transportation via helicopter or ambulance.

3. Do not resuscitate if the baby has died hours before birth. These babies will have an unpleasant odor and have no signs of life.

4. Comfort the parents and provide emotional support.

H. Supine Hypotensive Syndrome.

1. When lying down, pregnant women may develop low blood pressure.

2. Treatment:

a. Activate EMS.

b. Assess and **place** all women who appear to be pregnant (greater than 20 weeks) on their left side.

c. Failure to displace the uterus can cause fetal hypoxia (lack of oxygen) and distress.

I. Trauma in the pregnant patient.

1. You need to determine how many months the woman is pregnant (which trimester).

2. Recognize the potential risk that what you may do to save the mother's life could hurt the fetus.

3. Look at the mechanism of injury, it will help guide what actions you take.

4. Your treatment should be guided towards keeping the mother alive, since the fetus depends on her.

5. If you suspect significant potential of neck or back injury, do a full c-spine with the

following precautions:

a. If you do not suspect trauma to the lower back or pelvis, you can place a wedge under her right hip and still do a c-spine on her neck and head.

b. If the mother has difficulty breathing while lying flat, you may need to sit her up while doing the c-spine.

J. Mental exercise:

1. You are directing traffic at the scene of an accident. The roadway is closed while a big wreck is cleared. A long line of traffic is waiting to get through.

2. A man runs up to you and says that his wife is in the car and is giving birth. He directs you back to a car that is also stopped in traffic. A very pregnant woman tells you that they were on their way to the hospital when they got stuck in traffic. Her water broke about 30 minutes ago and she is not in active contractions.

a. What do you want to do first? (Call EMS)

b. What questions do you want to ask? (Is this your first pregnancy? Medical problems, etc.)

c. What interventions would you take? (Monitor vitals, lay patients down, etc.)

d. What would you do if the birth was imminent? (Put the patient in the birth position and collect what you need for delivery.)

X. CONCLUSION

A. Review of performance objectives.

B. Final questions and answers.

C. Instructor closing comment(s).