

**UEMSA Field Protocols**

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**Medical Oversight Provided by**

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Date

UEMSA

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# Airway Maintenance

Date of Origin: 10/3/2017

## **UEMSA must call 9-1-1 (Advance Life Support - ALS) if:**

- The mental status of the patient is not baseline (i.e., **Alert and Oriented X4**)
- The patient has a diminished level of consciousness.
- The patient has difficulty swallowing (Dysphagia).
- The patient has an upper airway obstruction.
- The patient is unable to maintain their own airway

## **Indications for Head Tilt/Chin Lift**

- Snoring respirations
- Patient unable to maintain airway
- Unresponsive
- Patient is apneic and receiving ventilatory assistance via BVM

## **Contraindications**

- Head or neck injury

## **Procedure for Head Tilt/ Chin Lift**

- 1.) Place the heel of one hand on the forehead and the fingertips of your other hand under the lower margin of the chin.
- 2.) Tilt head back and pull up on the chin to lift it forward

## **Indications for Jaw Thrust**

- Patient has a head or neck injury and exhibits the following:
- Snoring respirations
- Patient unable to maintain airway
- Unresponsive
- Patient is apneic and receiving ventilatory assistance via BVM

## **Contraindications for Jaw Thrust**

Significant maxillofacial trauma

## **Procedure for Jaw Thrust**

1. Place thumbs on both of patients cheeks or the heels of both hands on the side of the forehead
2. Place other fingers under the angle of the mandible
3. Push down on the thumbs or the heels of your hands and up with fingers on the mandible.

## **Indication for use of suction**

- Patient shows evidence of significant maxillofacial trauma with oral secretions.
- Patient is postictal with fluid drainage from mouth.
- Patient begins vomiting while unresponsive or on backboard.
- Patient has tracheostomy and needs regular suctioning.
- Audible Gurgling respirations.

## **Procedure for Suctioning (Yankauer Suction Tip)**

\*UEMSA personnel must be a licensed EMR or higher to perform intervention

1. Take appropriate BSI precautions
2. Turn on portable suction
3. Assure presence of mechanical suction by testing tip on your gloved hand (adjust strength by pulling or pushing white knob)

4. Insert Yankauer Suction tip without creating suction (do not advance tip further than you can see).
5. Provide suction for no longer than 15 seconds for adults, no longer than 10 seconds for pediatric patients, and no longer than 5 seconds for infants
6. Suction on the way out in a clockwise motion.

### **Procedure for Suctioning (French Tip)**

\*UEMSA personnel must be a licensed EMR or higher to perform intervention

1. Take appropriate BSI precautions
2. Measure appropriate length to use by measuring from corner of mouth or nose to earlobe
3. Turn on portable suction
4. Assure presence of mechanical suction by testing tip on gloved hand (adjust strength by pulling or pushing white knob)
5. Provide suction Provide suction for no longer than 15 seconds for adults, no longer than 10 seconds for pediatric patients, and no longer than 5 seconds for infants
6. Suction on the way out in a clockwise motion.

### **Procedure for Neonatal Suctioning (Bulb Syringe)**

\*UEMSA personnel must be a licensed EMR or higher to perform intervention

1. Take appropriate BSI precautions.
2. Depress the bulb before insertion.
3. Slowly release bulb while removing from nose/mouth.
4. Post-delivery, suction neonate mouth first and then nose using bulb syringe.

### **Indications for Oropharyngeal Airway (OPA)**

- Patient is unresponsive.
- Patient is unable to maintain their own airway.
- Patient is apneic and receiving ventilatory assistance via BVM.

### **Contraindications for OPA**

- Patient has an intact gag reflex.

### **Procedure for OPA Insertion**

\*UEMSA personnel must be a licensed EMR or higher to perform intervention

1. Take proper BSI precautions
2. Select appropriate size by measuring the OPA with the flange at the corner of the mouth and the tip at the angle of the mandible. Open airway using head tilt/ chin lift or jaw thrust if appropriate
3. Open the patients' mouth with the cross-finger technique.
4. Insert OPA upside down into patients mouth (without pushing tongue back) so the tip of the OPA is facing the roof of the patients mouth
5. Upon insertion rotate the OPA 180 degrees. Upon full insertion the flange will rest against the lips/teeth positioning the OPA in the posterior aspect of the pharynx.
6. Alternatively, insert the OPA straight in using a tongue blade to hold the tongue down and forward.
7. If the patient begins to retch/gag, remove OPA, and place patient in left lateral recumbent position, and have suction unit on standby.

### **Indications for Nasopharyngeal Airway (NPA)**

Patient is unresponsive.

Patient is unable to maintain their own airway.

Patient is apneic and receiving ventilatory assistance via BVM.

### **Contraindications for NPA**

- Patient shows evidence of a severe head injury.
- A history of fractured nasal bones/nasal surgery or deviated septum.

### **Procedure for NPA Insertion**

\*UEMSA personnel must be a licensed EMR or higher to perform intervention

1. Take proper BSI precautions
2. Select appropriate size by measuring the outer diameter of the NPA with the inner aperture of the nares. Alternatively, match NPA size to the smallest finger.
3. Select the proper length by measuring the NPA from the tip of the nose to the earlobe
4. Lubricate the NPA prior to insertion with a water base lubricant.
5. Insert directly back gently along the floor of the nasopharynx perpendicular to the plane of the face using slight rotation if needed. Try the other nostril if you meet resistance.
6. When completely inserted, the flange rests against the nostril.

### **Airway Safety Precautions**

- \*All **bloody** specimens should be considered hazardous and handled with appropriate BSI and precautions.
- \*All materials that contact blood samples must be discarded in an appropriate biohazard container.
- \*UEMSA personnel must wear appropriate BSI equipment at all times

### **Signs & Symptoms of Airway compromise**

- Snoring and or gurgling respirations
- Unable to speak or phonate
- Stridor, wheezing or grunting
- Tachypnea or Bradypnea (Hypoventilation)
- Tachycardia
- Changes in consciousness, stupor
- Increased respiratory effort (nasal flaring, retractions, accessory muscles in the neck, abdominal muscles to assist breathing)
- Changes in skin color – pale, cool to cyanotic (late)

## **Diabetic Emergencies**

Date of Origin: 6/3/2017

**UEMSA must call 9-1-1 (Advance Life Support - ALS) if:**

- The mental status of the patient is not baseline (**Alert and Oriented X4**) (**A&O X4**)
- The patient has a diminished level of consciousness
- The patient has a blood glucose of less than 40
- The patient's blood glucose is high and symptomatic (or presents with other priority ALS symptoms)
- The patient is having slow, rapid, or irregular breathing
- The patient has abnormal **vitals and/or Airway, Breathing or Circulation** (ABC's)

### **Indications for use of Glucometer:**

- The patient is **NOT** alert and oriented to baseline.
- The patient is symptomatic of hypoglycemia or hyperglycemia

- There are indications of alcohol or drug use

**Procedure for Administration of Glucose Check:**

- \*UEMSA personnel must be a licensed EMT-B or higher to perform a blood glucose check.
1. Universal **Body Substance Isolation (BSI)** precautions will be observed at all times.
  2. Materials to be used:
    - Tru Metrix glucometer
    - Tru Metrix test strips
    - Sterile lancet
    - Alcohol wipe
  3. Check date on test strip to ensure that all materials are not expired
  4. Insert test strip into the port located on the Tru Metrix glucometer
  5. Sterilize skin site with an alcohol prep wipe and lance the fingertip or similarly appropriate capillary blood site to allow a drop to form.
  6. Touch the edge of the test strip to the blood droplet.
  7. Allow the blood to be drawn into the test strip until you hear an audible beep.
    - \*If this does not occur discard the test strip into a biohazard container and repeat with a new testing strip.
  8. The result should appear on the glucometer and should be recorded with the current time by UEMSA personnel.
    - \*Values of low (“LO”) and High (“HI”) require a repeat test to confirm.
  9. **Discard all used test strips into a biohazard bag, and lancets into sharps container.**
    - \*UEMSA will only use approved glucometers and lancets for blood glucose checks.
    - \*All uses of a glucometer necessitate the creation of a full patient care report.

**Safety Precautions:**

- \*Do not use test strips after date of expiration.
- \*All blood specimens should be considered hazardous and handled with appropriate BSI and precautions.
- \*All materials that contact blood samples must be discarded in an appropriate biohazard container.
- \*UEMSA personnel must wear appropriate BSI equipment at all times.
- \* **Do not dispose of lancets in gloves, or any other place which would conceal its presence**

**Symptoms of Diabetic Problems:**

- A change in the patient’s baseline mental status
- A decrease in the patient’s baseline level of consciousness
- Exhibiting abnormal behavior
- The patient presents with cool, diaphoretic skin (hypoglycemia)
- The patient presents with warm, dry skin; fruity acetone breath; rapid respirations (hyperglycemia)
- -Patients exhibiting any symptoms of diabetic problems should receive a cognitive and physical exam including but not limited to:
  - ABC’s, vital signs, mental status (A&O) questions, Fast exam, and a rapid physical exam.

**If indicated, UEMSA will administer oral glucose to a patient if the following conditions are met:**

- The patient has a blood glucose level <40 mg/dl
- The patient is capable of following verbal commands

- The patient can secure their own airway

## Difficulty Breathing

Date of Origin: 6/3/2017

### UEMSA must call 9-1-1 Advanced Life Support (ALS) if:

- The mental status of the patient is not baseline (**Alert and Oriented X4**) (A&O X4)
- The patient has a diminished level of consciousness
- The patient is having slow, rapid or irregular breathing
- The patient has abnormal **vitals and/or Airway, Breathing or Circulation** (ABC's)

### Indications for Oxygen:

- Airway, Breathing or Circulation abnormalities
- Poor general impression
- Symptomatic hyper/hypoglycemia
- The patient was/is unconscious or had near syncope
- The patient experienced heat stroke/exhaustion, or hypothermia
- Hypoxia or anticipated hypoxia,
- Cardiac Arrest
- Chest pain
- Shock or anticipated shock
- Dyspnea/acute shortness of breath
- Anaphylaxis

### Caution:

- In patients with **COPD** (known history of emphysema or chronic bronchitis) use high-flow oxygen with caution and monitor for suppression of hypoxic drive or sleepiness with patient's on O2 flow rates greater than 2 liters/min with nasal cannula, or 4 liters/min. with Venturi mask. However, if patient is in distress do not withhold oxygen treatment.

### Procedure for Administration of Oxygen:

#### I. \*UEMSA personnel must be a licensed EMR or higher to administer oxygen

1. Universal BSI precautions will be observed at all times
2. Materials to be used:
  - Oxygen Cylinder
  - Oxygen Regulator (with O-ring)
  - Oxygen Wrench
  - Appropriate delivery system
3. Turn the cylinder valve off and on quickly with the cylinder wrench to clear or "crack" the valve on the oxygen tank
4. Assembles the regulator to the oxygen tank and close the needle valve.
5. Open the oxygen tank valve **slowly** with the cylinder wrench until pressure maximizes.
6. Check pressure; and check tank for leaks
7. Attach appropriate delivery system to port and open the needle valve to the desired flow.

#### II. For Nasal Cannula: (2-6 LPM)

1. Hold **nasal cannula** in proper position with prongs curving downward
2. Place cannula prongs into nares
3. Wrap tubing over and behind ears
4. Adjust plastic slide under chin until cannula fits snugly

5. Turn oxygen regulator to appropriate rate

### **III. For Non-Rebreather (NRB) (10-15 LPM)**

1. Turn oxygen regulator to appropriate rate
2. Pre-fill reservoir bag by occluding the on one-way valve between the mask and the oxygen reservoir bag
3. Allow bag to fill 3/4<sup>th</sup>'s or 2/3's of the way
4. Attach mask to patients face by pulling on rubber band, placing it behind the patients head
5. Ensure mask fits snugly by adjusting nose clips, and rubber band

### **IV. For Bag-Valve-Mask (BVM) (15-25 LPM)**

1. Turn oxygen regulator to appropriate rate
2. Allow reservoir bag to fill
3. Open airway using appropriate maneuver (Head-tilt, or Jaw-thrust)
4. Check for any obstructions (fluids, foreign bodies), and suction as necessary
5. **Incert NPA/OPA**
6. Place BVM on face, and create seal using C-E grip

#### **Safety Precautions:**

- UEMSA personnel must wear appropriate BSI equipment at all times (Face Shield while bagging)
- **Don't** use expired equipment
- All material which come into contact with the patient's bodily fluids, must be discarded in **biohazard container or bag.**

#### **Symptoms of Difficulty Breathing:**

- Adventitial breath sounds such as wheezing or rhonchi or rales
- A change in the patient's baseline mental status or decreased level of consciousness.
- Exhibiting abnormal behavior
- Dyspnea/acute shortness of breath
- Patient speaks in 1-2 word sentences
- Low SPo2 (used in conjunction with other signs and symptoms. DO NOT administer oxygen if the only evidence is low SPo2).

#### **UEMSA personal will be required to administer oxygen to a patient in any of the following circumstances:**

- Hypoxia or anticipated hypoxia
- Cardiac Arrest
- Chest pain
- Dyspnea/Acute shortness of breath
- Shock or anticipated shock.