



## **General Instructions**

Welcome to Southern Fox Valley EMS System and our Paramedic System Entry process. Once you have been hired by a system department these are the steps you need to follow:

1. System entry sessions are held at the EMS office on the third Tuesday of every month (*dates are subject to change*) at 9 a.m. Be sure that your EMS Coordinator or Chief has scheduled you for one of these sessions. Please be on time. Plan on being at the testing for at least 2 hours. Appropriate attire must be worn (uniform preferred).
2. Enclosed in your packet is a Prescreen Check-Off Sheet. It is the responsibility of the applicant to assure that all of the information is in the office prior to the prescreen date. You will not be allowed to complete your system entry testing if any items are missing.
3. The prescreen process consists of the following:
  - a. Practical testing of the skills listed on pages 3-4: *Completed and signed off by your department EMS Coordinator prior to prescreen*
  - b. Written cardiac rhythm test on SFVEMSS Protocols.
  - c. Written entrance exam on SFVEMSS policies and protocols.
4. If you have any questions at all about system entry, please contact Ken Snow at [kenneth.snow@nm.org](mailto:kenneth.snow@nm.org) or 630-938-8461.



## **Prescreen Check-off Sheet**

Name: \_\_\_\_\_ Department: \_\_\_\_\_

*The following items **must** be submitted to the EMS office **PRIOR** to scheduling of prescreen:*

- ☐ Copy of active IDPH Paramedic license
- ☐ Copy of current AHA Health Care Provider CPR card
- ☐ Copy of valid Driver's License
- ☐ Letter of Good Standing from current system on EMS System letterhead
- ☐ Verification of current continuing education
- ☐ Copies of any other certifications that you currently hold (ACLS, PALS, PHTLS, ITLS)
- ☐ Skills sign off sheet, signed by Department EMS Coordinator or designee

Forms and all documentation should be uploaded into the Department's ESO PM module personal folder or e-mailed to [kenneth.snow@nm.org](mailto:kenneth.snow@nm.org)

**Southern Fox Valley  
Emergency Medical Services System  
Paramedic System Prescreen  
Skills Check Off Sheet**

This form is to be completed and signed by the Department EMS Coordinator or Chief.  
By signing this form you are stating that the Paramedic listed below has reviewed all of the items listed, is proficient in these skills and ready to be tested into SFV EMS System.

Paramedic Name: \_\_\_\_\_

Department: \_\_\_\_\_

Prescreen Date: \_\_\_\_\_

Chief / EMS Coordinator Signature: \_\_\_\_\_

**POLICY AND PROTOCOL REVIEW DATE COMPLETED:** \_\_\_\_\_

Including but not limited to the following:

- a. Drug Assisted Intubation
- b. Allergic Reaction / Anaphylactic Shock
- c. Asthma / COPD
- d. Acute Coronary Syndrome
- e. Bradycardia with a pulse
- f. Supraventricular Tachycardia
- g. Ventricular Tachycardia with a pulse
- h. Ventricular Fibrillation and pulseless V-Tach
- i. Traumatic Arrest
- j. Dialysis / Chronic Renal Failure
- k. Heart Failure and Pulmonary Edema
- l. PEA and Asystole
- m. Refusals
- n. School Bus Policy
- o. Multiple Patient Release
- p. C- Spine Clearance

**COMPETANT IN THE FOLLOWING SKILLS DATE COMPLETED:** \_\_\_\_\_

- a. Blood sampling
- b. Capnography
- c. Endotracheal intubation (non-trauma patient)
  - a. Adult
  - b. Child
  - c. Infant
- d. IO insertion
- e. I-gel airway

- f. Monitoring OG/NG tubes
- g. Stoma suctioning
- h. Surgical cricothyrotomy
- i. Tourniquet application
- j. Use of hemostatic agents
- k. Vaccine administration

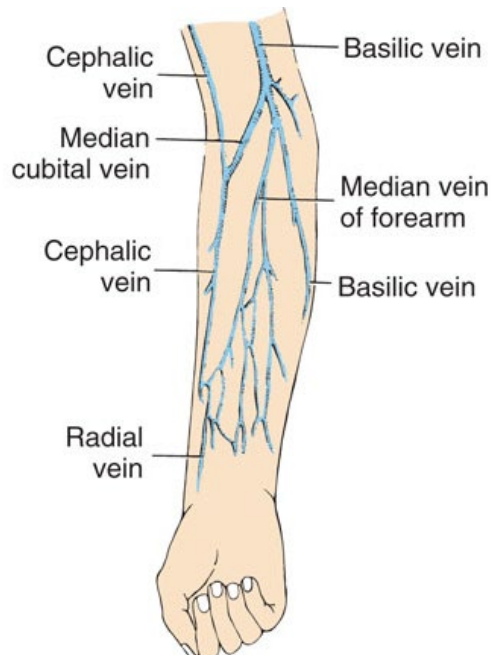
# **Blood Sampling**

## ***Equipment Needed:***

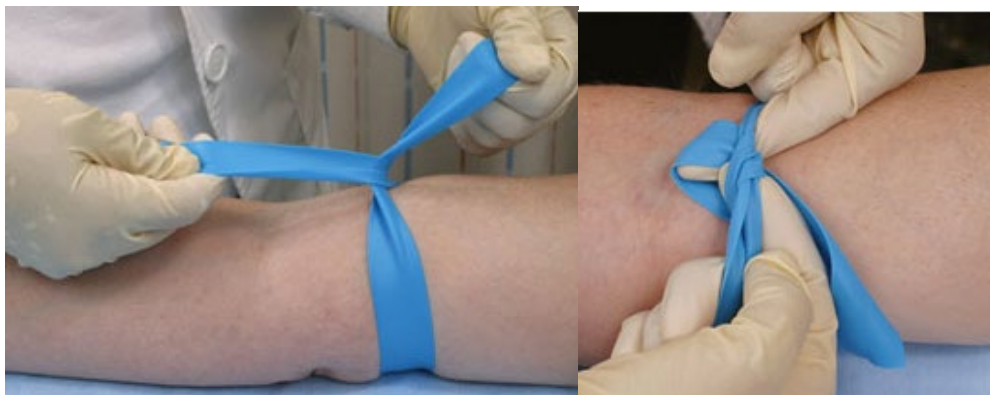
- BSI protection (gloves)
- Alcohol preps
- Single use tourniquet
- Adhesive bandage or sterile 2x2 gauze and tape
- Appropriate size sterile double-ended straight or winged butterfly needle or single needle with collection barrel with sheathed needle.
- Collection barrel with Luer-Loc adapter (used with butterfly needles or double ended straight needles).
- Identification labels or marker to write patient identifiers on tubes.
- Biohazard bag or approved container for specimen delivery
- Vacuum blood tubes
- Sharps container
- Warm compress (optional)

## ***Procedure:***

1. Take standard precautions
2. Assembles all equipment and ensures blood tubes have not expired.
3. Assess patient for previous adverse responses to venipuncture, ability to cooperate during procedure, and for sites contraindicated for venipuncture (mastectomy or lymphatic compromise on side of proposed venipuncture site, tissue injury or infection to site, site on the arm affected by a CVA, site of current or planned hemodialysis access, sign of phlebitis or previous infiltration and arm with IV access.
4. Place a clean cloth or drape under the patient's arm.
5. Support selected arm and extend it to form a straight line from the shoulder to the wrist. You may place a small pillow or towel under the patient's upper arm to help stabilize the extremity and keep it in proper position during the procedure.
6. Identify the best site for venipuncture.
  - Choose a vein that is easily visible without applying a tourniquet; is straight and does not bifurcate to another branch

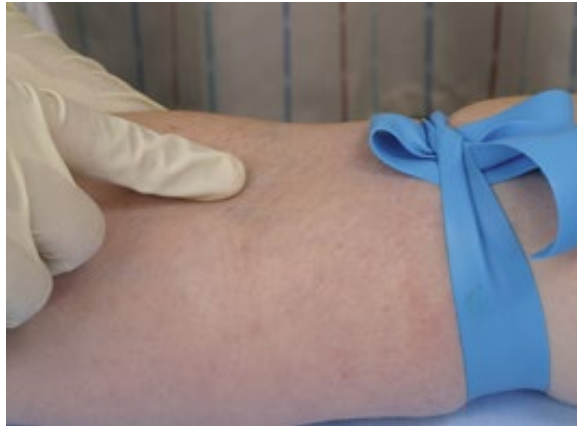


- Apply a single use tourniquet approximately 2-4 inches above the selected venipuncture site.
- Encircle the extremity and pull one end of the tourniquet over the other, looping one end over the other.
  - A tourniquet blocks venous return to the heart from the extremity, causing the veins to dilate for easier assessment.
  - Ensure tourniquet is not so tight that it impedes arterial flow.
  - Do not keep tourniquet on the patient for more than 1 minute (prolonged tourniquet application causes stasis and hemoconcentration)



- Instruct patient to make a gentle fist (facilitates distension of the veins by forcing blood up the distal veins).
- Quickly inspect the vein distal to the tourniquet to confirm selected venipuncture site (do not use a vein on the underside of the wrist).

- Palpate the selected vein with fingers and consider a firm vein that rebounds
  - A healthy vein is elastic and rebounds on palpation
  - A thrombosed vein is rigid, rolls easily, and is difficult to puncture.



- If unable to find an acceptable vein, remove the tourniquet and apply a warm pack over the extremity for a couple of minutes.
    - Warming increases arterial blood flow, making veins more prominent.
  - If unable to find an acceptable vein after reapplying the tourniquet and warming the site, release the tourniquet and do not proceed.
  - Remove tourniquet while preparing equipment
7. Prepare collection equipment using compatible tubes, holders and needles (using incompatible equipment can yield incorrect results through hemolysis, needle disengagement, or inadequate tube filling).
- Choose an appropriate size needle that is small enough to fit in the vein but does not cause hemolysis.
    - Adults: 21G - 23G
    - Children, older adults or patients with small veins: 22G-23G
    - Neonates: 23G
  - Luer-Loc the needle securely to the collection barrel housing a sheathed needle. Keep the needle hub and connection site sterile.



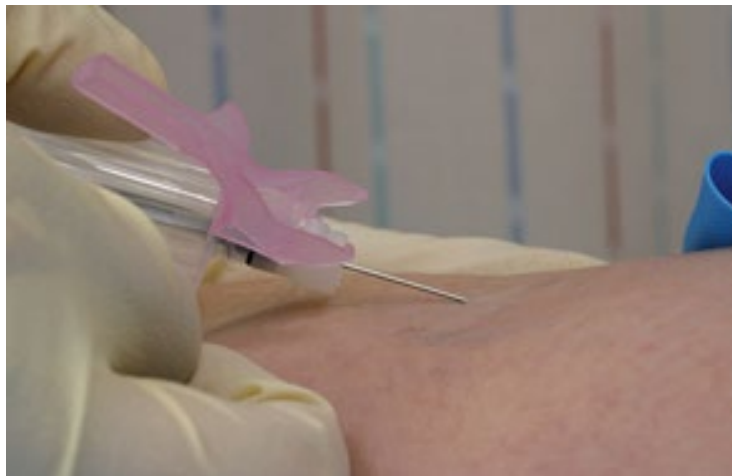
- Rest the proper blood specimen tube inside the collection barrel. Wait to puncture the rubber stopper with the sheathed needle (puncturing the stopper before the needle is in the vein will cause the tube to lose its vacuum).
    - The order of draw is important; collect coagulation studies before collecting specimens that require a tube that contains a clot activator or other additive.
8. Relocate and prepare the selected venipuncture site.
- If the skin is soiled, cleanse it with soap and water and allow the site to dry.
  - Using an alcohol prep, gently cleanse venipuncture site starting in the middle and moving outward in a circular pattern.



- Allow site to dry
  - Do not touch site once you have cleaned it. If you do, you need to re-cleanse the area.
9. Obtain the blood sample.
- Reapply the tourniquet



- Remove the cap from the venipuncture needle, maintaining the needle's sterility.
- Inform the patient that he/she will feel a stick
- Place thumb or forefinger of the non-dominant hand distal to the selected venipuncture site and gently pull and stretch the patient's skin distal to the patient until it is taut and the vein is stabilized.
- Hold the needle and insert at a 30° angle from the patient's arm with the bevel facing upward, just distal to the exact site selected for vein penetration.
  - The smallest and sharpest point of the needle should puncture the skin first to reduce the chance of penetrating the sides of the vein.
  - Keeping the bevel up causes less trauma to the vein.
  - Entering the skin distal to the vein prevents unanticipated vein puncture, which may result in inadequate blood specimen retrieval and hematoma.
- Slowly insert the needle (inserting slowly will help prevent puncture through the opposite side of the vein).



- Grasp the collection barrel firmly and advance the first specimen tube into the sheathed needle inside the barrel so that the needles pierces the tube's rubber top.
  - Pushing the sheathed needle through the rubber top breaks the vacuum, pulling blood into the tube.
  - If you don't have a secure grasp on the collection barrel, when advancing the tube on to the needle you can transverse the vein through the other side of the vessel wall and into the subcutaneous tissue.
- Note the rapid flow of blood into the tube.



- After the specimen tube is filled to the correct level (indicated by markings on the tube), grab the collection barrel firmly and gently pull the tube out.
- Insert and remove additional specimen tubes as needed.
- If the tubes contain additives, gently invert them back and forth two to three times immediately after they are filled with blood. Do not shake.
  - Inverting the tubes ensures that the additives have properly mixed with the blood and prevents erroneous test results.
  - Shaking the specimen may cause lysis of the cells causing erroneous results.
- If the blood is flowing adequately into the tubes, release the tourniquet just before filling the last specimen tube. Wait to release the tourniquet until the last tube is almost full
  - Releasing the tourniquet before filling the last specimen tube reduces bleeding at the venipuncture site when the needle is withdrawn.
- Apply a sterile 2x2 gauze pad over the venipuncture site without applying pressure and quickly but carefully withdraw the needle from the vein, activating safety mechanisms to protect from accidental needle sticks.
- Once the needle is removed immediately apply direct pressure over the site until bleeding has stopped (patient may hold pressure if capable to do so).



10. Immediately discard collection barrel, needle and tubing (if butterfly was used) into a sharps container.
11. Inspect the venipuncture site for bleeding after 2-5 minutes have elapsed.
  - Apply gauze with tape or a bandage.
  - Instruct patient to keep bandage on for 15 minute to one hour.
  - Instruct patient not to bend their arm during this time
12. Re-assess the patient for lightheadedness caused due to the procedure.
13. Prepare the specimens for transport to the laboratory.
  - In the presence of the patient label the specimen
    - Patient's name, date of birth, date of collection, time and initials of person who obtained the specimen should be written on the tube.
  - Place the specimens in a biohazard bag
  - Immediately transport to the laboratory
14. Discard supplies, remove gloves, and perform hand hygiene
15. Document the procedure.



Southern Fox Valley EMS System  
Skill Performance Record

Blood Sampling

Name:

Date:

Performance Standard	Done	Not Done
<b>Preforms Procedure</b>		
Performs hand hygiene and dons gloves		
Assesses patient for risks associated with venipuncture		
Assesses patient for sites contraindicated for venipuncture		
Verbalizes appropriate blood tubes to be used and order in which tubes need to be collected		
Places patient in a supine or reclined position		
Identifies best site for venipuncture		
Properly applies tourniquet		
Prepares collection equipment [ ] tubes [ ] appropriate size needle [ ] compatible holders		
Prepares venipuncture site [ ] Cleanses site using a circular motion working from the middle and moving Outward [ ] Allows area to dry [ ] Does not re-contaminate site		
Properly obtains blood sample		
Immediately discards the collection barrel, needle and tubing into sharps container.		
Inspects venipuncture site for bleeding after 3-5 minutes		
Re-assess patient for any adverse effects due to the blood draw		
Prepares the specimens for the laboratory [ ] Patient's name [ ] Patient's date of birth [ ] Date specimen collected [ ] Time specimen collected [ ] Initials of person obtaining specimen [ ] Places specimens in a bio hazard bag for transport to the lab		
Documents the procedure		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_

## **Capnography**

Capnography may be used as a trending device for ventilation assessment and as an early warning system for changing patient ventilatory status.

### ***Equipment Needed:***

- PPE
- Appropriate monitoring equipment

### ***Pre-Procedure:***

- Don PPE
- Gather equipment
- Explain procedure to patient

### ***Procedure:***

1. Plug in monitor and turn on
2. Calibrate monitor per manufacturer's instructions.
3. Attach airway to sensor cable and attach as close as possible to the ET tube or nasal cannula on patient.
4. Attach on side to the patient and the other to the monitor.
5. Keep the window part of the sensor in the upright position to ensure secretions don't pool into the window area.
6. Assess patient
7. Monitors and correlates ETCO<sub>2</sub> reading
8. Evaluates curve shape (normal is squared off)
9. Records reading (normal 35-45 mmHg)
10. Set alarm limits per monitor instructions
11. Provide proper documentation
12. Continue to monitor patient status and reassess for any changes in O<sub>2</sub> concentration or ventilatory rate



Southern Fox Valley EMS System  
Skill Performance Record

Capnography

Name:

Date:

Performance Standard	Done	Not Done
Takes or verbalizes appropriate BSI		
Explains procedure to patient		
Mainstream [ ] Attach disposable ETCO <sub>2</sub> sensor to cable [ ] Mainstream sensor applied to bag-mask device, or applied to a bag connected to an ETT. Sidestream [ ] Connect tubing port on capnography unit [ ] Sidestream device may be incorporated into special nasal cannula		
Apply device to patient's oxygen delivery system		
Utilizes oxygenation and ventilatory devices in normal fashion		
Monitors ETCO <sub>2</sub> on display screen		
Records reading (normal 35-45 mmHg)		
Evaluates curve shape (normal is squared off)		
Sets alarm parameters to desired limits (minimum/maximum desired ETCO <sub>2</sub> levels)		
Monitors patient status and reassess for any changes in O <sub>2</sub> concentration or ventilatory rate.		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_

## Endotracheal Intubation (non-trauma patient)

### Indications for Endotracheal Intubation

- Respiratory or cardiac arrest
- Unconsciousness or obtusion without gag reflex
- Risk of aspiration
- Obstruction due to foreign bodies, trauma, burns or anaphylaxis
- Respiratory *extremis* due to disease
- Pneumothorax, hemothorax, or hemopneumothorax with respiratory difficulty

### Advantages of Endotracheal Intubation

- It isolates the trachea and permits complete airway control of the airway
- It impedes gastric distention by channeling air directly into the trachea
- It eliminates the need to maintain a mask seal
- It offers a direct route for suctioning of the respiratory passages
- It permits administration of medication **Lidocaine**, **Epinephrine**, **Atropine**, and **Narcan**

### Disadvantages of Endotracheal Intubation

- The technique requires considerable training and experience
- It requires specialized equipment
- It requires direct visualization of the vocal cords
- It bypasses the upper airway's function of warming, filtering, and humidifying the inhaled air

### Complications

- *Equipment malfunction*
- *Teeth breakage and soft-tissue lacerations*
- *Hypoxia*
- *Esophageal intubation*
- *Endobronchial intubation*
- *Tension pneumothorax*

### Adult Orotracheal Intubation (NON-Trauma Patient)

1. Place the patient supine.
2. Have your partner open the airway and hyperventilate the patient with 100 percent oxygen.
3. While your partner is ventilating the patient, prepare your equipment.
4. Position the patient's head
  - a. remove dentures
  - b. place head in sniffing position
  - c. placing towel or sheet under the patient's shoulders may help

5. Have your partner apply Sellick's maneuver
6. Hold laryngoscope in your left hand and insert it gently into the right side of the patient's mouth. With a gentle sweeping action, displace the tongue to the left.
7. Move the blade toward midline.
  - a. Macintosh (curved) blade: distal end placed in vallecula
  - b. Miller (straight) blade: distal end under the epiglottis
8. Lift the laryngoscope handle slightly upward and toward the feet to displace the jaw. Be careful to not put pressure on the teeth. Suction if needed.
9. Adjust laryngoscope until you can visualize the vocal cords. If you cannot see the landmarks, gently withdraw the blade, slowly and slightly, to see if the cords come into view. If not, you may need to gently advance the blade further into the hypopharynx.
10. Keep your left wrist straight and use your left shoulder and arm to continue lifting the mandible and tongue until the glottis is exposed.
11. Advance the ET tube through the right corner of the patient's mouth and gently pass it through the glottic opening until the distal cuff disappears beyond the vocal cords; then advance it another 1 to 2 cm.
12. Hold the tube in place with your hand to prevent displacement; do NOT let it go until it is taped or tied securely in place.
13. Check placement by applying Positube
  - a. if the plunger pulls out easily and stays out, you are in the trachea
  - b. if the plunger is difficult to pull and is 'sucked' back down the barrel, you are in the esophagus – remove the ET tube, hyperventilate and try again.
14. Inflate the distal cuff.
15. Check for proper tube placement
  - a. listen for equal, bilateral breath sounds
  - b. watch for chest rise and fall
  - c. listen over the epigastrium to assure no gastric sounds heard
  - d. look for moisture condensation in exhaled breath in the tube
16. Hyperventilate with 100% oxygen.
17. Secure ETT with commercial tube-holding device. If not available, use tape and be sure to insert an oropharyngeal airway to serve as a bite block.
18. Periodically confirm proper ETT placement.

### Pediatric Intubation

*Updated 04/29/2024*



While the indications, procedures, and precautions for airway management in children are fundamentally the same as in adults, be sure to remember several significant differences.

- the structures are proportionally smaller and more flexible than an adult's
- the tongue is larger in relation to the oropharynx
- the epiglottis is floppy and round
- the glottic opening is higher and more anterior in the neck
- the vocal cords slant upward, toward the back of the head, and are closer to the base of the tongue
- the narrowest part of the airway is the cricoid cartilage, not the glottic opening as in adults

Other points:

- straight laryngoscope blade is preferred for most pediatric patients
- be sure to select an appropriate sized tube – too large a tube can cause tracheal edema and/or damage to the vocal cords
- tubes are uncuffed
- depth of insertion should be 2 to 3 cm below the vocal cords
- infants and small children have greater vagal tone than adults – more likely to participate a vagal response in a pediatric patient; monitor the heart rate and consider atropine 0.02 mg/kg



Southern Fox Valley EMS System  
Skill Performance Record

Endotracheal Intubation

Name:

Date:

Performance Standard	Done	Not Done
Verbalizes indications for endotracheal intubation		
Places the patient supine and directs partner to ventilate the patient while he prepares equipment		
Chooses the appropriate sized equipment		
Positions the patients head		
Gently inserts laryngoscope into patient's mouth		
Visualizes the vocal cords		
Advances the ET tube through the glottic opening until the distal cuff passes the cords		
While holding the tube, checks proper placement [ ] Listens for equal, bilateral breath sounds [ ] Listens over epigastrium to assure no gastric sounds are heard [ ] Observes for condensation in the tube during exhalation [ ] Uses capnography to correlate ETCO2 readings with ventilations [ ] Watches for symmetrical chest rise and fall		
Measures and documents tube at the level at the teeth		
Secures tube with commercial tube holding device or tape		
Verbalizes the need to periodically confirms ET placement		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_

# **IO Infusion**

## **INDICATIONS**

IO infusions may be initiated as a first line intervention on patients in:

- Shock, arrest, impending arrest present
- Profound hypoperfusion
- Altered mental status (GCS 8 or less)
- IV medications needed an IV not established after two attempts
- Total scene time and transport time exceeds 10 minutes
- Need for DAI

If perfusion supports good mental status and the patient is alert, an IO is not advisable.

## **CONTRAINDICATIONS**

- Fractures in the targeted bone considered for IO insertion
- Cellulitis/Infection at the insertion site
- Known bone disorder
- Previous orthopedic procedure
- Pre-existing medical condition (tumor near site, sever PVD)

## **EQUIPMENT NEEDED:**

- EZ-IO needle set (40kg+Blue 25mm, 3-39kg pink-peds 15mm)
- EZ-IO Device
- NS IV solution//tubing
- 10 ml syringe NS
- Tape
- Pressure infuser for IV bag (inflate to 300mmHg)
- Betadine/alcohol swabs
- Extension set or EZ-Connect® tubing

## **PREPARES/ASSESSES PATIENT**

- Supports extremity with towel roll or sand bag
- Positions extremity for procedure
- Measures leg circumference just below insertion site for baseline.
- Selects insertion site; flat plane of anterior-medial tibia, below tibial tuberosity, medial distal tibial or proximal humerus.
- Cleanses site with Betadine/alcohol prep and allows to dry

## **PROCEDURE:**

- Removes needle cover, stabilizes extremity
- Activate driver by depressing the trigger and inserts needle through the skin and sub q tissues at a 90° angle to the bone, using gentle downward pressure until needle tip rest on bone cortex, release trigger.
- In case of driver failure, insert manually using gentle twisting motion
- Continues until entrance into the medullary canal. Verbalizes signs of penetration:
- Sudden cessation of resistance or needle flange touches skin
- Needle securely seated in bone
- Remover driver from needle set

- Removes stylet by rotating counter clockwise (while stabilizing hub with other hand) connect 10ml syringe NS primed EZ-connect tubing, and attempt to aspirate. \*\* does NOT attach syringe directly to IO needle.
- Flush with 10ml saline and observe for swelling.

#### **CONFIRMS PLACEMENT.**

- IO needle firm in bone and able to infuse without extravasation.
- Unable to aspirate blood or marrow is NOT a reliable indicator of non-placement.
- If in doubt, leave needle in place with connecting tubing and syringe attached (ED MD to evaluate placement) & attempt IO on alternate site or IV.

#### **SECURES DEVICE & DOCUMENTS PROCEDURE**

- Removes syringe from EZ- connect and attach IV line and begin appropriate fluid challenge based on protocol
- Secures needle with tape as necessary
- Apply wristband (reminds hospital to remove in 24 hours)
- Frequent reassessment of pressure infuser device
  - Re inflates as needed (300 mmHg).
  - Monitor EZ-IO site and patient condition.
- States the total number of IO attempts that can be made per patient in the field

#### **STATES TWO (2) COMPLICATION OF PERFORMING AN IO PROCEDURE:**

- Penetration of both bone cortices and extravasation of fluid
- Osteomyelitis
- Compartment syndrome
- Growth plate and marrow damage
- Sub Q abscesses
- Needle broken off in bone
- Fat emboli (may be rapidly fatal)



Southern Fox Valley EMS System  
Skill Performance Record

Intraosseous Infusion

Name:

Date:

Performance Standard	Done	Not Done
<b>States the indications for IO infusion:</b> <input type="checkbox"/> Shock, arrest, impending arrest present <input type="checkbox"/> Profound hypo perfusion <input type="checkbox"/> Altered mental status (GCS 8 or less) <input type="checkbox"/> IV/meds needed and IV not established in 2 attempts or 90 seconds <input type="checkbox"/> Total scene time and transport time exceeds 10 minutes <input type="checkbox"/> Need for DAI		
<b>Prepares equipment</b> <input type="checkbox"/> EZ-IO needle set (40kg+Blue 25mm, 3-39kg pink-peds 15mm) <input type="checkbox"/> EZ-IO Device <input type="checkbox"/> NS IV solution//tubing <input type="checkbox"/> 10 ml syringe NS <input type="checkbox"/> Tape <input type="checkbox"/> Pressure infuser for IV bag (inflate to 300mmHg) <input type="checkbox"/> Betadine/alcohol swabs <input type="checkbox"/> Extension set or EZ-Connect® tubing		
<b>States 2 contraindications to the procedure</b> <input type="checkbox"/> Recent fracture of site <input type="checkbox"/> Known bone disorder <input type="checkbox"/> Cellulitis at the site <input type="checkbox"/> Previous orthopedic procedure <input type="checkbox"/> Pre existing medical condition (tumor near site, severe PVD)		
Applies full PPE		
<b>Prepares/assesses patient</b> <input type="checkbox"/> Supports extremity with towel roll or sand bag <input type="checkbox"/> Positions extremity for procedure <input type="checkbox"/> Measures leg circumference just below insertion site for baseline. <input type="checkbox"/> Selects insertion site; flat plane of anterior-medial tibia, below tibial tuberosity, medial distal tibial or proximal humerus. <input type="checkbox"/> Cleanses site with Betadine/alcohol prep and allows to dry		
<b>Performs procedure</b> <input type="checkbox"/> Removes needle cover, stabilizes extremity <input type="checkbox"/> Activate driver by depressing the trigger and inserts needle through the skin and sub q tissues at a 90° angle to the bone, using gentle downward pressure until needle tip rest on bone cortex, release trigger. <input type="checkbox"/> In case of driver failure, insert manually using gentle twisting motion		
Continues until entrance into the medullary canal. Verbalizes signs of penetration: <input type="checkbox"/> Sudden cessation of resistance or needle flange touches skin <input type="checkbox"/> Needle securely seated in bone		

Remover driver from needle set		
Removes stylet by rotating counter clockwise (while stabilizing hub with other hand) connect 10ml syringe NS primed EZ-connect tubing, and attempt to aspirate. ** does NOT attach syringe directly to IO needle.		
Flush with 10ml saline and observe for swelling.		
<b>Confirms placement.</b> <input type="checkbox"/> IO needle firm in bone and able to infuse without extravasation. <input type="checkbox"/> Unable to aspirate blood or marrow is NOT a reliable indicator of non-placement. <input type="checkbox"/> If in doubt, leave needle in place with connecting tubing and syringe attached (ED MD to evaluate placement) & attempt IO on alternate site or IV.		
Removes syringe from EZ- connect and attach IV line and begin appropriate fluid challenge based on protocol		
Secures needle with tape as necessary		
Apply wristband (reminds hospital to remove in 24 hours)		
Frequent reassessment of pressure infuser device <input type="checkbox"/> Re inflates as needed (300 mmHg). <input type="checkbox"/> Monitor EZ-IO site and patient condition.		
States the total number of IO attempts that can be made per patient in the field		
<b>States two (2) complication of performing an IO procedure:</b> <input type="checkbox"/> Penetration of both bone cortices and extravasation of fluid <input type="checkbox"/> Osteomyelitis <input type="checkbox"/> Compartment syndrome <input type="checkbox"/> Growth plate and marrow damage <input type="checkbox"/> Sub Q abscesses <input type="checkbox"/> Needle broken off in bone <input type="checkbox"/> Fat emboli (may be rapidly fatal)		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_

## **Monitoring OG/NG Tubes**

Orogastric and nasogastric tubes are soft, small diameter tubes placed through the mouth (OG) or nose (NG) into the stomach. The tubes provide a route for enteral feeding and oral medication administration.

Although the provider practicing in the Southern Fox Valley EMS System will not be inserting such a device, they do need to know how to properly monitor these devices during patient care and transport.

### ***Equipment Needed:***

- BSI

### ***Indications:***

- Requires short term enteral feeding
- Provides means for medication administration
- Provides means for gastric lavage and/or decompression

### ***Procedure:***

16. Take infection control procedures
17. Avoid lying patient flat if possible. Gastric juices may flow up the tube and can be aspirated into the lungs.
18. Note tube placement by documenting insertion depth during your primary assessment
19. Insure tube is properly secured to avoid movement or dislodgement during transport. Additional taping may be required prior to transport.
20. Ensure end of tube is clamped or properly plugged to avoid drainage of gastric contents.



Southern Fox Valley EMS System  
Skill Performance Record

Monitoring OG/NG Tubes

Name:

Date:

Performance Standard	Done	Not Done
<b>Verbalizes the indications a patient would have a OG/NG tube in place</b> [ ] Requires short term enteral feeding [ ] Provides means for medication administration [ ] Provides means for gastric lavage and/or decompression		
<b>Performs procedure</b> Takes infection control measures		
Avoid lying patient flat if possible. Gastric juices may flow up the tube and can be aspirated into the lungs.		
Notes tube placement by documenting insertion depth during your primary assessment		
Insures tube is properly secured to avoid movement or dislodgement during transport. Additional taping may be required prior to transport.		
Ensures end of tube is clamped or properly plugged to avoid drainage of gastric contents.		
Verbalizes documentation		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_



## **Stoma Suctioning**

Temporary or permanent placement of a tracheostomy tube is often necessary to maintain an open airway. Patients with tracheostomy tubes or stomas should not be intubated orally.

Suctioning of surgical airways is often required to attempt to clear and maintain an open airway.

### ***Equipment Needed:***

- Bottle of sterile water or normal saline.
- Emesis basin
- 5 ML syringe filled with normal saline
- Appropriate sized suction catheter
  - Should be comparable to the stoma size.
- Suction unit with adjustable suction capacity
- Suction tubing

### ***Procedure:***

1. Explain procedure to patient.
2. Apply sterile gloves
3. Using aseptic technique, open suction supplies.
4. Pour some sterile water/ normal saline into basin.
5. Flush suction catheter with saline to lubricate tip and establish patency of suction catheter.
6. Ventilate the patient with 100% oxygen several times
7. Adjust suction to 120 - 150 mmHg for adults; decrease suction to 80 - 100 mmHg for pediatrics
8. Instill normal saline from syringe into the inner cannula of the stoma.



9. Insert the suction catheter into the stoma or tracheostomy opening with the suction off  
(The thumb hole open).
10. Insert the catheter the same length as the obturator

11. Apply suction by occluding the thumb hole while slowly withdrawing the catheter in a twisting motion.



- Suction of a tracheostomy tube should take no longer than 10 seconds for the adult patient and 3-4 seconds for the pediatric patient



12. Re-oxygenate with 100% O<sub>2</sub>

13. Check breath sounds

14. Suctioning can stimulate a cough reflex. Allow the patient to cough. Be prepared to suction or catch secretions from the tracheal opening.



Southern Fox Valley EMS System  
Skill Performance Record

Stoma Suctioning

Name:

Date:

Performance Standard	Done	Not Done
Gathers appropriate supplies: [ ] Sterile water or saline [ ] Emesis basin [ ] 5mL syringe filled with saline [ ] Suction equipment		
Dons appropriate PPE		
Explains procedure to patient		
Uses aseptic technique to handle equipment		
Pours some sterile water or normal saline into emesis basin.		
Pre-oxygenates the patient		
Instills normal saline from syringe into the inner cannula of the stoma.		
Carefully inserts suction catheter into stoma.		
Applies suction while slowly removing catheter with a twisting motion.		
Suctions patient for no longer than 10 seconds at a time.		
Ventilates patient with oxygen		
Reassesses patient		
Clears debris from suction catheter by suctioning up fluid from basin.		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_

# Surgical Cricothyrotomy

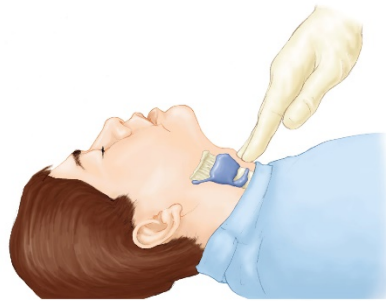
## Indications

Indicated only when airway control is impossible by other available methods. These “difficult airway” situations are caused by:

- Upper airway obstruction by trauma
- Allergic reactions with swelling and angioedema
- Foreign bodies
- Anatomic variations
- Bleeding

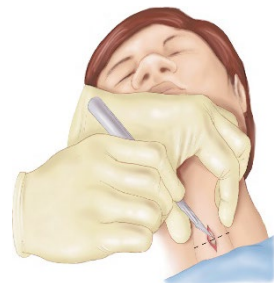
## ***Procedure:***

1. Locate the thyroid cartilage and the cricoid cartilage. Find the cricothyroid membrane between the two cartilages.



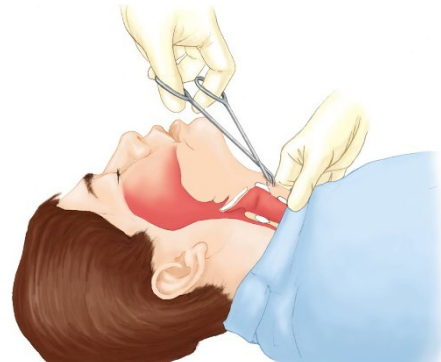
2. Clean the area with iodine-containing solution if time permits, while your partner sets up suction, pulse oximetry, and cardiac monitor.

3. Stabilize the cartilages with one hand, while using a scalpel in the other hand to make a 1 to 2 cm vertical skin incision over the membrane.

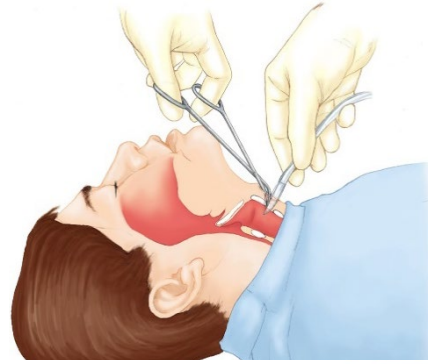


4. Find the cricothyroid membrane again and make a 1 cm incision in the horizontal plane through the membrane, avoiding nearby veins and arteries.

5. Insert a curved hemostat or Kelly forceps into the membrane incision and spread it open.



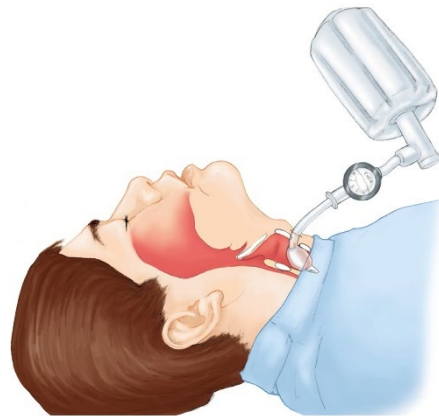
6. Insert a cuffed endotracheal tube (7.0 mm), directing the tube into the trachea.



7. Inflate the cuff and ventilate.



8. Confirm placement with auscultation, end-tidal CO<sub>2</sub> detector, and chest rise.
9. Secure the tube in place.



### **Complications**

- Incorrect tube placement into false passage
- Cricoid and/or thyroid cartilage damage
- Thyroid gland damage
- Severe bleeding
- Laryngeal nerve damage
- Subcutaneous emphysema
- Vocal cord damage
- Infection



Southern Fox Valley EMS System  
Skill Performance Record

Surgical Cricothyrotomy

Name:

Date:

Performance Standard	Done	Not Done
Uses PPE: Gloves, goggles and face shield.		
Verbalizes indications for the procedure: Unsuccessful attempts at airway control via other methods.		
Prepares the patient: Positions patient supine with towel / blanket under shoulder blades unless contraindicated.		
Assesses SpO <sub>2</sub> on room air if available and time allows.		
Attempts to pre-oxygenate patient with 100% O <sub>2</sub> with BVM prior to procedure.		
Prepares suction equipment and suction as necessary.		
Prepares equipment: <input type="checkbox"/> scalpel <input type="checkbox"/> gauze pads <input type="checkbox"/> Kelly forceps <input type="checkbox"/> alcohol / betadine preps <input type="checkbox"/> tube holder <input type="checkbox"/> EIDD <input type="checkbox"/> stethoscope <input type="checkbox"/> sharps container		
Chooses correct size ET tube (one size smaller than ET approach).		
Checks tube cuff integrity by inflation and then deflation while maintaining sterility of tube; leaves syringe attached.		
Lubricates end of the tube (verbalize).		
Performs procedure: Identifies anatomical landmarks <input type="checkbox"/> Palpates thyroid cartilage and cricoid cartilage anteriorly <input type="checkbox"/> Locates membrane.		
Preps the skin with providine-iodine and alcohol swabs.		
While stabilizing the trachea, makes a mid-line vertical incision through the skin over the trachea 1" long. Controls bleeding with gauze pads and suctions as necessary.		
Makes a horizontal incision through the membrane.		
Inserts curved Kelly or spreader through incision and separates the cartilages.		

Removes scalpel and disposes of appropriately.		
Inserts ET tube through the opening until balloon cuff is in trachea and advances approx. 1".		

Assesses tube placement: <input type="checkbox"/> Confirms tube placement with EIDD <input type="checkbox"/> Ventilates and observes chest rise <input type="checkbox"/> Auscultates over epigastrium and both midaxillary lines		
If breath sounds are present bilaterally, inflates cuff with 5 - 10 ml of air. If tube is incorrectly placed, remove and replace tube.		
Ventilates at a rate of 16 - 20 BPM with 100% O <sub>2</sub> .		
Secures tube in place with commercial device or tape.		
Continuing assessment: Reauscultates breath sounds and tube placement..		
Monitors insertion site for bleeding and sub-q emphysema.		

☐ Successful   ☐ Unsuccessful

Evaluator: \_\_\_\_\_





## **Tourniquet Application for Hemorrhage Control**

Although the use of tourniquets has long been controversial because of fears that they can result in unnecessary limb amputations and other problems, studies show that complications from tourniquet use are caused mainly by improper technique and inappropriate tourniquet selection.

The 2015 American Heart Association (AHA) guidelines state that the initial standard of care for the hemostasis of hemorrhage is direct pressure until bleeding has ceased. If this method doesn't provide hemostasis with a limb hemorrhage or if direct pressure isn't feasible, consider a tourniquet. Some research indicates that early application of a tourniquet, before the patient develops shock, strongly increases the patient's chance of survival versus late application of a tourniquet. Patients can exsanguinate from an arterial injury in 60-120 seconds.

- Never apply a tourniquet over a joint.
- Apply tourniquets directly to the skin and tighten until the bleeding stops. Apply an additional tourniquet proximal to the original tourniquet if the bleeding is not controlled by the first tourniquet.
- Clearly document the application time.
- Do not cover a tourniquet with blankets or dressings. All health care providers should be able to see that a tourniquet is in place.

### ***Equipment Needed:***

- PPE (gloves, mask, eye protection, gown)
- Appropriate tourniquet
- Dressing supplies

### ***Procedure:***

1. If time permits, perform hand hygiene before patient contact and don gloves. If situation and time permits, don a gown, mask, and eye protection.
2. Confirm the need for a tourniquet; i.e., continued hemorrhage despite direct pressure or pressure bandage.
3. Remove the patient's clothing or other material from the area where the tourniquet will be placed.

### **Combat Application Tourniquet® (C-A-T®)**

1. Position the tourniquet on the injured limb 2-3 cm proximal to the wound (DO NOT apply over a joint) with plastic backing against the artery. It should be approximately four fingers proximal to joint.
2. Insert the tourniquet strap up through the inside slot of the buckle and pull.
3. Insert the strap down through the outside slot of the buckle.

4. Pull the tourniquet as tight as possible and press the strap back down onto itself.
5. Grab the twist rod and turn it until bleeding has stopped (usually 3-4 twists) and the pulse distal to the tourniquet is no longer felt.
6. Position the twist rod into the clip to lock it, then secure it with the hook-and-loop strap.
7. Time tourniquet applied needs to be documented on the white strap.



<https://youtu.be/x-admML71vg?list=PLlju0PNcKThaxaLJ1mmnZ8FH1spLzbfC0>

### **Completing the Procedure**

1. Reassess bleeding.
  - a. If the bleeding continues, tighten the tourniquet further.
  - b. If bleeding continues after tightening, apply a second tourniquet just proximal to the original tourniquet.
2. Reassess airway, breathing, and circulation (ABCs); vital signs; and oxygen saturation.
3. Monitor for continued bleeding.
4. Prepare for the administration of blood products and patient transfer to the operating room.
5. The tourniquet should remain on the patient until evaluated by the trauma surgeon.
6. Assess, treat, and reassess pain.
7. Discard supplies, remove personal protective equipment (PPE), and perform hand hygiene.
8. Document the procedure in the patient's record.

Author: Hilary L.S. Hawkins, RN, MBA, AEMT, CEN, CPEN, January 2016



Southern Fox Valley EMS System  
Skill Performance Record

Tourniquet Application for Hemorrhage Control

Name:

Date:

Performance Standard	Done	Not Done
If time permitted, performed hand hygiene before patient contact and donned gloves		
Confirmed need for tourniquet		
Removed the patient's clothing or other material from the area where the tourniquet would be placed		
<b>Combat Application Tourniquet (C-A-T)</b>		
Positioned the tourniquet on the injured limb 2-3 cm proximal to the wound and not over a joint.		
Inserted the tourniquet strap up through the inside slot of the buckle and pulled		
Inserted the strap down through the outside slot of the buckle.		
Pulled the tourniquet as tight as possible and pressed the strap back down onto itself.		
Turned the twist rod until bleeding stopped and the pulse distal to the tourniquet was no longer felt.		
Positioned the twist rod into the clip to lock it, then secured it with the hook-and-loop strap.		
<b>Completing the Procedure</b>		
Reassessed bleeding. If indicated, tightened the tourniquet further; if bleeding continued after tightening, applied a second tourniquet just proximal to the original tourniquet.		
Reassessed ABCs, vital signs, and oxygen saturation.		
Monitored for continued bleeding.		
Prepared for the administration of blood products and patient transfer to the operating room.		
Assessed, treated, and reassessed pain		
Discarded supplies, removed PPE, and performed hand hygiene.		
Documented the procedure in the patient's record.		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_

Updated 04/29/2024



### Use of Hemostatic Agents

If you cannot stop severe bleeding with pressure and cannot use a tourniquet, you may use a hemostatic agent such as QuickClot®. When used correctly, hemostatic agents in conjunction with direct pressure can be effective in stopping bleeding from penetration and laceration-type injuries.

Hemostatic agents should not be used in open abdominal or chest wounds. Hemostatic agents are an adjunct to assist in controlling hemorrhage, not a hemorrhage control by itself.

#### **Equipment Needed:**

- PPE
- QuickClot® combat gauze
- Gauze dressings rolls (Kling/Kerlex type)

#### **Procedure:**

1. Don necessary PPE
2. Maintain direct pressure to wound while preparing QuickClot®
3. Open package and remove QuickClot® gauze. Keep empty package to bring to hospital.



4. Pack combat gauze into wound and use it to apply pressure directly over the bleeding source.
  - More than 1 combat gauze may be required.
  - Regardless of the shape of the wound it is important that you pack the wound with QuickClot® gauze using it to apply pressure directly over the source of bleeding.

## Southern Fox Valley EMS System Procedures



- Do not simply cover the wound with the gauze.



5. Continue to apply pressure for 3 minutes or until bleeding stops.
  - The time required for formation of a stable clot will vary depending on several factors.
  - The key is to maintain firm, consistent pressure directly over the bleeding source.



6. It is important to maintain consistent pressure to assist with clot formation.
  - Do not push up or down on the wound or move the gauze unnecessarily.
  - Do not lift the gauze away from the wound to see if the bleeding has stopped.



## Southern Fox Valley EMS System Procedures



### 7. Wrap and tie bandage to maintain pressure.

- Bandage the wound tightly securing the QuickClot® combat gauze in place once bleeding is controlled.
- The bandage should both maintain pressure on the wound and prevent further contamination of the injury site.



### 8. Show/give product removal directions on package to hospital personnel

- Once the bandage is secure, tuck the empty combat gauze package in the outer wrap to alert the receiving medical personnel that QuickClot® gauze has been used.





Southern Fox Valley EMS System  
Skill Performance Record

Hemostatic Agent Application

Name:

Date:

Performance Standard	Done	Not Done
Dons necessary PPE		
Maintains direct pressure over wound while preparing QuickClot®		
Opens package keeping empty package to transport to hospital		
Packs combat gauze into wound		
Applies direct pressure over wound with QuickClot® for a minimum of 3 minutes		
Does not move gauze unnecessarily		
Does not lift gauze away from the wound to check bleeding		
Bandages wound tightly once bleeding is controlled		
Tucks the empty combat gauze package in the outer wrap to alert the receiving medical personnel that QuickClot® gauze has been used.		
Reassess for continued bleeding control.		

☐ Successful    ☐ Unsuccessful    Evaluator: \_\_\_\_\_

## **Vaccine Administration**

### ***Equipment Needed:***

- BSI
- Alcohol Prep
- Proper size needle & syringe
- 2x2
- Band aid
- Vaccine to be given
- Proper VIS (Vaccine Information Sheet)
- Epinephrine and airway management supplies to manage acute vaccine reactions

### ***Procedure:***

21. Take infection control procedures

22. Give a copy of the VIS to patient/guardian prior to vaccine administration allowing them time to read and ask any questions

23. Screen for contraindications and precautions

24. Apply the “Rights of Medication Administration”

- Right patient
- Right vaccine and diluent (when applicable)
- Right time (expiration date & correct age and interval)
- Right dosage
- Right route (including the correct needle gauge , needle length and technique)
- Right site
- Right documentation

25. Select proper equipment

- Syringe: A parenteral vaccine may be delivered in either a 1-mL or 3-mL syringe as long as prescribed dosage is delivered.
- Needle: Needle selection should be based on the prescribed route, size of the individual, and injection technique to ensure vaccine reaches the desired tissue site for optimal immune response to occur.

26. Prepare vaccine

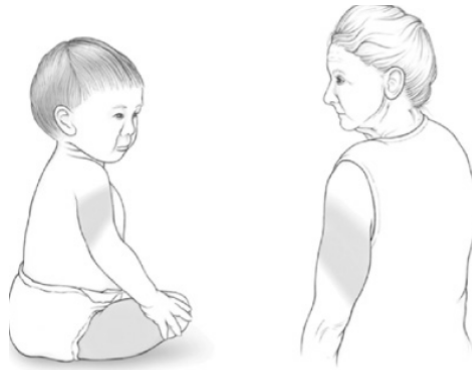
- Prepare vaccine in a clean area, away from any areas where possible contamination may occur.
- Inspect vaccine/diluent vial for damage or contamination
- Check expiration date
- Reconstitute vaccine (if applicable) just before administration



- Agitate vial to thoroughly mix vaccine
- Inspect vaccine for discoloration, precipitate or if it cannot be re-suspended

27. Select the appropriate route and site for administration of vaccine

- Subcutaneous: recommended sites for vaccine administration are (the thigh for infants younger than 12 months of age) and the upper outer triceps of the arm (for person 1 year and older).
  - Follow standard medication administration guidelines for site assessment/ selection and site preparation



- To avoid reaching the muscle, pinch up the fatty tissue, insert needle at a 45° angle and inject vaccine into the tissue



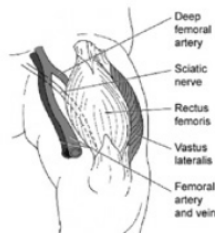
- Withdraw the needle and apply light pressure to the injection site for several seconds with a gauze pad.
- Intramuscular: There are only two routinely recommended IM sites for administration of vaccines, the vastus lateralis muscle (anterolateral thigh) and the deltoid muscle (upper arm). Injection at these sites reduces the chance of involving neural or vascular structures. The preferred site depends on the age of the individual and the degree of muscle development. Because there are no large blood vessels in the recommended sites, aspiration before injection of vaccines (i.e., pulling

back on the syringe plunger after needle insertion but before injection) is not necessary.

- Follow standard administration guidelines
- Avoid injection into subcutaneous tissue, spread the skin of selected site taut between the thumb and forefinger, isolating the muscle. Another technique, acceptable mostly for pediatric and geriatric patients, is to grasp the tissue and “bunch up” the muscle.
- Insert the needle fully into the muscle at a 90° angle and inject the vaccine into the tissue.
- Withdraw the needle and apply light pressure to the injection site for several seconds with a gauze pad.

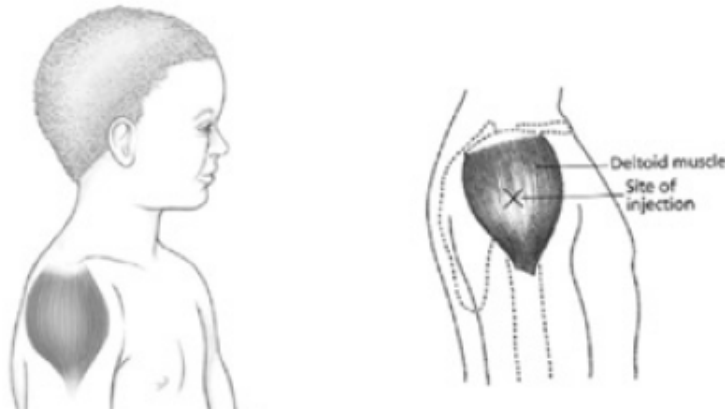


- *Intramuscular – infants 12 months and younger:* recommended site vastus lateralis (anterolateral thigh)
  - Needle gauge – 22-25 gauge
  - Needle length - Neonates and preterm infants: 5/8 inch and only if skin is stretched flat between thumb and forefinger
    - 1 month or older – 1 inch



- *Intramuscular - 1 year through 2 years of age:* recommended site vastus lateralis (anterolateral thigh) is preferred. Deltoid muscle (upper arm) may be used if muscle mass is adequate.
  - Needle gauge – 22-25 gauge

- Needle length – 5/8 – 1
  - 5/8 inch is only adequate for the deltoid muscle and only if skin is stretched flat between thumb and forefinger.



- *Intramuscular - 3 through 18 years of age:* The deltoid muscle is preferred for children aged 3 through 18 years of age.
  - Needle gauge – 22-25 gauge
  - Needle length – 5/8 – 1 inch
    - 5/8 inch is only adequate for the deltoid muscle and only if skin is stretched flat between thumb and forefinger.
    - In general, older children and adolescents require a 1-inch needle
- *Intramuscular adult 19 years and older:* For adults, the deltoid muscle is recommended for routine intramuscular vaccinations. The anterolateral thigh also can be used.
  - Needle gauge – 22-25 gauge

#### 28. Be prepared to manage acute vaccine reactions

- Severe, life-threatening anaphylactic reactions following vaccination are rare. Thorough screening for contraindications and precautions prior to vaccination can often prevent reactions.
- Be familiar with the signs and symptoms of anaphylaxis because they usually begin within minutes of vaccination. These signs and symptoms can include, but are not limited to: flushing, facial edema, urticaria, itching, swelling of the mouth or throat, wheezing, and difficulty breathing
- Epinephrine and equipment for maintaining an airway should be available for immediate use.

#### 29. Documentation

- Date of administration
- Vaccine manufacturer
- Vaccine lot number

- Name and title of person who administered the vaccine and the address of the facility where the permanent record will reside
- Vaccine information statement (VIS)
  - Date printed on VIS
  - Date VIS given to patient or patient guardian



Southern Fox Valley EMS System  
Skill Performance Record

Vaccine Administration

Name:

Date:

Performance Standard	Done	Not Done
Takes or verbalizes body substance isolation precautions		
<b>Prepares / assesses patient</b> [ ] Explains what vaccines will be given [ ] Supply patient/guardian with VIS [ ] Screen for contraindications & precautions		
<b>Prepares appropriate equipment</b> Gathers necessary supplies: [ ] alcohol preps [ ] gauze [ ] proper gauge needle and syringe [ ] band aid [ ] Vaccine to be given [ ] Proper VIS sheet [ ] Epinephrine and airway supplies to manage acute vaccine reactions		
<b>Prepares vaccine</b> [ ] Applies the "rights of medication administration" [ ] Maintains aseptic technique [ ] shakes vaccine vial and/or reconstitutes and mixes using diluent supplied [ ] Inverts vial and draws up correct dose of vaccine [ ] Rechecks vial label		
<b>Vaccine administration</b> [ ] Uses appropriate BSI [ ] Demonstrates knowledge of the appropriate route for given vaccine [ ] Preps the injection site with alcohol prep using a circular motion [ ] Holds the needle an inch from the skin and inserts it quickly at the appropriate angle [ ] Injects vaccine using steady pressure [ ] Withdraws needle at the same angle it was inserted [ ] Applies gentle pressure to injection site using a gauze pad [ ] Properly disposes of needle and syringe and vaccine vial		
<b>Documentation</b> [ ] Fully documents each immunization [ ] Date [ ] Lot number [ ] Manufacturer [ ] injection site [ ] VIS date		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_

Updated 04/29/2024

## 7.1 Recommended insertion technique

**WARNING:** The i-gel is supplied in a protective cradle or cage pack to ensure the device is retained in the correct flexion prior to use and also acts as a base for lubrication. The i-gel must always be separated from the cradle or cage pack prior to insertion. The cradle and cage pack are not introducers and must never be inserted into the patient's mouth.

A proficient user can achieve insertion of the **i-gel** in less than five seconds.

1. Grasp the lubricated **i-gel** firmly along the integral bite block. Position the device so that the **i-gel** cuff outlet is facing towards the chin of the patient (**Figure 22**).
2. The patient should be in the 'sniffing the morning air' position (**Figure 22**) with head extended and neck flexed. The chin should be gently pressed down before proceeding to insert the **i-gel**.
3. Introduce the leading soft tip into the mouth of the patient in a direction towards the hard palate.
4. Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt.



**Figure 22:** Patient in the 'sniffing the morning air' position, just prior to insertion

**WARNING:** Do not apply excessive force on the device during insertion. It is not necessary to insert fingers or thumbs into the patient's mouth during the process of inserting the device. If there is early resistance during insertion, a 'jaw thrust' (**Figure 23**), 'Insertion with deep rotation' (**Figure 24**) or triple manoeuvre is recommended.

5. At this point the tip of the airway should be located into the upper oesophageal opening (**Figure 25a**) and the cuff should be located against the laryngeal framework (**Figure 25b**). The incisors should be resting on the integral bite-block (**Figure 25c**).

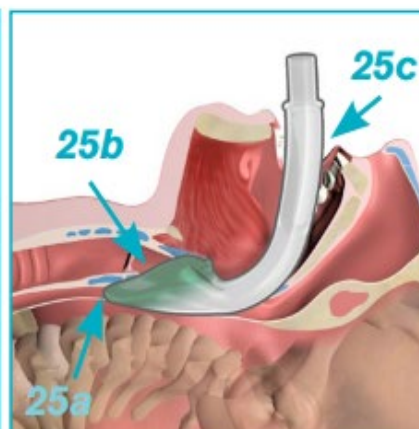
**WARNING:** In order to avoid the possibility of the device moving up out of position prior to being secured in place, it is essential that as soon as insertion has been successfully completed, the i-gel is held in the correct position until and whilst the device is secured in place.



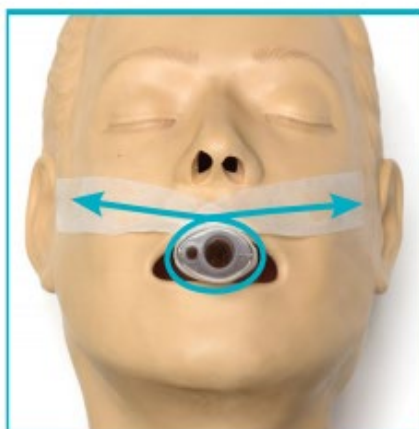
**Figure 23:** Jaw thrust



**Figure 24:** Deep rotation



**Figure 25:** Correct placement of the *i-gel*



**Figure 26:** Fixing of the *i-gel* in place using adhesive tape

6. **i-gel** should be taped down from 'maxilla to maxilla' (**Figure 26**).
7. If required, an appropriate size nasogastric tube may be passed down the gastric channel (see section 11.0 for further details on use of the gastric channel).

**The i-gel should always be used in accordance with recognised airway management practice for supraglottic airway devices.**



Southern Fox Valley EMS System  
Skill Performance Record

**i-gel® supraglottic airway**

Name:

Date:

Performance Standard	Done	Not Done
Takes or verbalizes body substance isolation precautions: Gloves, goggles, facemask		
Opens the airway manually: <ul style="list-style-type: none"><li><input type="checkbox"/> Trauma patient: neutral alignment</li><li><input type="checkbox"/> Non-trauma patient: sniffing position</li></ul>		
Assures patient is pre-oxygenated with 95% FiO <sub>2</sub> for 3 min w/ capnography sensor on BVM		
Prepares equipment: <ul style="list-style-type: none"><li><input type="checkbox"/> Prepare suction equipment</li><li><input type="checkbox"/> Ensure that laryngeal structures are as dry as possible</li></ul>		
Insertion Technique: <ul style="list-style-type: none"><li><input type="checkbox"/> Grasp lubricated i-gel firmly along the integral bite block. Position device so the cuff outlet is facing towards patient's chin.</li><li><input type="checkbox"/> Gently press down on chin to open mouth (no fingers or thumbs in mouth)</li><li><input type="checkbox"/> Introduce leading soft tip into pt.'s mouth in a direction towards hard palate.</li><li><input type="checkbox"/> Glide the device downwards and backwards along the hard palate with a continuous but gentle push until definitive resistance is felt. Sometimes a feel of 'give-way' is felt before end point resistance is met. This is due to the passage of the -gel® bowl through the faucial pillars. Continue to insert device until definitive resistance is felt.</li></ul> <p><i>Do not repeatedly push i-gel® up and down or apply excessive force during insertion. If resistance during insertion, do jaw thrust maneuver or deep rotation For pt. in spine motion restriction, use in-line maneuver.</i></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Teeth incisors should be resting on integral bite-block*.</li></ul>		
Confirms proper position: <ul style="list-style-type: none"><li><input type="checkbox"/> auscultation</li><li><input type="checkbox"/> chest movement</li><li><input type="checkbox"/> ETCO<sub>2</sub> (if available)</li></ul>		
Secures i-gel® commercial device or tape (keep tube midline in mouth)		



<p>Reassess: Frequently to detect displacement and complications (especially after pt. movement or pt. status/condition changes)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lung sounds</li> <li><input type="checkbox"/> ETCO<sub>2</sub></li> <li><input type="checkbox"/> Vital Signs: HR, BP, Respirations every 5 minutes (minimum)</li> <li><input type="checkbox"/> SpO<sub>2</sub> (not in cardiac arrest)</li> </ul> <p>Suctioning:</p> <p>If required, an adequately lubricated, appropriate size NG or suction catheter may be passed down gastric channel</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Place small bolus of lubricant over proximal end of gastric channel prior to inserting suction catheter.</li> <li><input type="checkbox"/> Move catheter in and out slightly while inserting to distribute lubricant.</li> </ul> <p><i>NG insertion in the presence of inadequate levels of sedation can lead to coughing, bucking, excessive salivation, retching, laryngospasm or breath holding</i></p>		
<p>Troubleshooting:</p> <p>Peak airway pressure of ventilation must not exceed 40cm H<sub>2</sub>O in order to prevent barotrauma. If an excessive air leak is detected during PPV, use one or all of the following:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Ventilate with gentle and slow squeezing of the BVM</li> <li><input type="checkbox"/> Limit the peak airway pressure to 15-20cm of H<sub>2</sub>O</li> <li><input type="checkbox"/> Assess the depth of sedation</li> </ul> <p><i>If all of the above fail then change to one size larger i-gel®.</i></p>		
<p>Critical Criteria - Check if occurred during an attempt</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Failure to pre-oxygenate patient prior to insertion</li> <li><input type="checkbox"/> Failure to initiate ventilations within 30 sec after taking BSI precautions or interrupts ventilations for &gt;30 sec at any time</li> <li><input type="checkbox"/> Failure to confirm that patient is being ventilated properly</li> <li><input type="checkbox"/> Failure to ventilate the patient at an appropriate rate</li> <li><input type="checkbox"/> Insertion or use of any adjunct in a manner dangerous to the patient</li> <li><input type="checkbox"/> Failure to manage the patient as a competent paramedic or PHRN</li> <li><input type="checkbox"/> Uses or orders a dangerous or inappropriate intervention</li> </ul>		

☐ Successful      ☐ Unsuccessful

Evaluator: \_\_\_\_\_  
Print and Sign