



# SPEMS SKILLS PROFICIENCY CRITERIA

## Paramedic



The following skills are required at the Paramedic Level:

1. Air-Qsp3G Device
2. IV
3. Endotracheal Intubation
4. Adult EZ IO
5. Pedi EZ IO
6. Pleural Decompression
7. Defibrillation
8. Needle cricothyrotomy
9. Surgical cricothyrotomy

The following criteria will be used for all SPEMS Protocol required skills proficiency evaluations at the Paramedic Level.

### Air-Qsp3G Airway Device

1. Assures proper pre-oxygenation
  - Ventilates at 10-12 breaths per minute for adult or 12-20 for child with BVM attached to oxygen at 10-15lpm
2. Selects/Prepares equipment
  - Selects proper size based on patient's ideal body weight according to the charts on next page
  - Securing device/tape
  - Lubricates distal external surfaces
3. Remove denture devices if present
4. Position patient in the "Sniffing" position
5. Open mouth and elevate tongue (mandibular lift)
6. Inserts to proper depth
  - Utilize slight forward angle if possible
  - Gently apply inward and downward pressure using curvature of the device as a guide
  - Does not force
  - Advance until fixed resistance is felt
  - Pull device slightly backward and re-seat with gentle downward pressure
    - i. Does not over-insert
  - Use of a finger to "guide" device may be utilized to assist insertion into pharynx
7. Attach BVM and ventilates patient
8. Verifies proper tube placement
  - Rise and fall of chest
  - Bilateral breath sounds
  - Absent epigastric sounds
9. Secures tube
10. Ventilates at appropriate rate of 10-12 breaths per minute for adult or 12-20 for child

## Ideal Body Weight/Air-Qsp3G Size Chart Adult

Adult Male			Adult Female		
Height	Ideal Body Weight	Air-Qsp3G Size	Height	Ideal Body Weight	Air-Qsp3G Size
60 Inches (5' 0")	50kg	3 (Yellow)	60 Inches (5' 0")	46kg	3 (Yellow)
62 Inches (5' 2")	55kg	3 (Yellow)	62 Inches (5' 2")	50kg	3 (Yellow)
64 Inches (5' 4")	59kg	3 (Yellow)	64 Inches (5' 4")	55kg	3 (Yellow)
66 Inches (5' 6")	64kg	4 (Red)	66 Inches (5' 6")	59kg	3 (Yellow)
68 Inches (5' 8")	68kg	4 (Red)	68 Inches (5' 8")	64kg	4 (Red)
70 Inches (5' 10")	73kg	4 (Red)	70 Inches (5' 10")	69kg	4 (Red)
72 Inches (6' 0")	78kg	4 (Red)	72 Inches (6' 0")	73kg	4 (Red)
74 Inches (6' 2")	82kg	5 (Purple)	74 Inches (6' 2")	78kg	4 (Red)
> 74" (6' 2")		5 (Purple)	> 74" (6' 2")		5 (Purple)

## Ideal Body Weight/AirQsp3G Size Chart Pediatric

*Use Broselow Tape to Determine Ideal Body Weight*	
Ideal Body Weight*	Air-Qsp3G Size
< 2.0kg	0 (Light Purple)
2-4kg	0.5 (Pink)
4-7kg	1.0 (Blue)
7-17kg	1.5 (Green)
17-30kg	2 (Orange)
30-60kg	3 (Yellow)

## IV Therapy

1. Prepares Equipment
  - Appropriate IV fluid
  - Administration set
  - IV catheters
  - Alcohol prep
  - Tape or other securing device
  - Sharps container
  - Tourniquet
2. Checks fluid for expiration date and clarity
3. Properly connects administration set to IV bag
4. Fills drip chamber to proper level
5. Flushes tubing to expel air
6. Locates appropriate vein
7. Applies tourniquet
8. Cleanses skin
9. Performs venipuncture
  - Inserts at proper angle
  - Notes flashback
  - Occludes vein proximal to catheter
  - Removes stylet
  - Connects tubing to catheter
10. Disposes of needle in proper container
11. Releases tourniquet
12. Runs IV fluid briefly while monitoring for signs of infiltration
13. Secures catheter
14. Adjusts to appropriate flow rate

## **Endotracheal Intubation**

1. Assures proper pre-oxygenation
  - Ventilates at 10-12 breaths per minute for adult or 12-20 for infant or child with BVM attached to oxygen at 10-15lpm
2. Selects/Prepares equipment
  - Proper size tube
  - Laryngoscope and blade with properly functioning light
  - Stylet
  - 10cc syringe
  - Securing device/tape
3. Checks cuff for leak
4. Performs procedure
  - Positions head properly
  - Inserts blade while displacing tongue
  - Elevates mandible with laryngoscope
  - Introduces ET tube between vocal cords and advances to proper depth
  - Inflates cuff to proper pressure and disconnects syringe
  - Ventilates patient
5. Verifies proper tube placement
  - Rise and fall of chest
  - Bilateral breath sounds
  - Absent epigastric sounds
  - Capnography device
6. Secures tube
7. Ventilates at appropriate rate of 10-12 breaths per minute for adult or 12-20 for infant or child

## **EZ IO (Adult and Pediatric)**

1. Prepares Equipment
  - Appropriate IV fluid
  - Administration set
  - EZ IO driver
  - Appropriately sized EZ IO catheter and extension set
  - EZ IO Stabilizer or bulky dressing/tape to secure catheter
  - Sharps container
  - Alcohol preps or betadine cleaning swabs
  - Syringe with saline flush solution
2. Checks fluid for expiration date and clarity
3. Properly connects administration set to IV bag
4. Fills drip chamber to proper level
5. Flushes tubing to expel air
6. Identifies appropriate anatomical site for IO puncture
7. Cleanses site appropriately with alcohol or betadine
8. Performs IO puncture
  - Stabilizes area without placing hand under puncture site
  - Inserts needle at proper angle (90°)
  - Powers driver with direct pressure until “pop” is felt or a sudden lack of resistance occurs
  - Removes stylet and dispose into sharps container
9. Attaches syringe and extension set to IO needle and flushes slowly with saline solution while monitoring for signs of infiltration
10. Connects IV tubing
11. Adjusts flow as required (Attaches pressure bag as needed)
12. Secures needle with EZ IO stabilizer or with bulky dressings and tape

## **Pleural Decompression**

1. Manages patient's airway with basic and/or ALS procedures
2. Recognizes need for pleural decompression
  - Absent lung sounds on affected side
  - Hollow sound when percussed
  - Possible tracheal deviation away from affected side (late sign)
3. Prepares Equipment
  - 14ga X 2" (or longer) IV catheter
  - Antiseptic solution (alcohol or betadine)
  - 4 X 4's
  - Tape
4. Locates appropriate site at the 2<sup>nd</sup> or 3<sup>rd</sup> intercostal space on the midclavicular line
5. Cleanses site appropriately
6. Inserts catheter over the top of the rib
7. Listens for rush of air
8. Removes needle leaving catheter in place and leaves catheter hub open
9. Disposes of needle in sharps container
10. Stabilizes the catheter hub as needed with 4 X 4's and tape
11. Continually reassess adequacy of ventilation, lung sounds, and tracheal position

## **Defibrillation**

1. Checks patient's responsiveness
2. Assess for breathing and carotid pulse (no more than 10 seconds)
3. Immediately begins chest compressions
4. Performs 2 minutes of high quality CPR
  - If witnessed arrest, defibrillation should occur as soon as possible but CPR should continue until defibrillator is properly applied
  - Rate between 100 and 120
  - Correct depth (at least 2" but not greater than 2.4")
  - Compression to ventilation ratio of 30:2
  - Adequate volume for each breath (visible rise in chest)
  - Minimal interruption of less than 10 seconds throughout
5. Correctly attaches defibrillation pads to patient
6. Stops CPR and verifies V-fib or pulseless V-tach
7. Ensures all personnel are clear of the patient
8. Delivers shock(s) per manufacturer's recommendations
9. Immediately resumes CPR

## **Needle Cricothyrotomy**

1. Selects/Prepares equipment
  - BVM
  - Large bore IV catheter
  - 10 or 20cc syringe
  - 3.0 ET tube adapter
  - Antiseptic solution (alcohol or betadine)
  - Tape or other securing device
2. Places patient in supine position and hyperextend the head/neck (neutral position if cervical spine injury is suspected)
3. Palpates neck locating the cricothyroid membrane (between the thyroid and cricoid cartilages)
4. Cleanses site
5. Stabilizes the site and inserts needle through cricothyroid membrane at midline directing at a 45° angle towards the chest
6. Aspirates syringe to confirm placement in trachea
7. Advances catheter while stabilizing needle
8. Removes needle and disposes in sharps container
9. Attaches 3.0 ET tube adapter to catheter and connects BVM and begins ventilation
10. Secures catheter with tape or other securing device
11. Observes for chest rise and auscultates lungs to assess adequacy of ventilation
12. Continues ventilation while constantly monitoring effectiveness

## **Surgical Cricothyrotomy**



1. Selects/Prepares equipment
  - BVM
  - Scalpel
  - Hemostat
  - Gauze pads
  - Betadine antiseptic solution
  - Tape or other securing device
  - Appropriate size cuffed ETT tube with stylet
  - 10cc syringe
2. Places patient in supine position and hyperextend the head/neck (neutral position if cervical spine injury is suspected)
3. Palpates neck locating the cricothyroid membrane (between the thyroid and cricoid cartilages)
4. Cleanses site
5. Stabilizes the site while using a scalpel to make a 1 to 2 centimeter vertical incision through the skin over the membrane
6. Stretch skin from incision and visualize the cricothyroid membrane
7. Makes a 1 centimeter incision in the horizontal plane through the membrane
8. Inserts hemostats into the membrane and spreads it open
9. Inserts a proper sized cuffed ET tube into the trachea advancing toward the chest until cuff is fully into trachea. Use of stylet may be required
10. Inflate the cuff
11. Confirm placement by visualizing chest rise, auscultation of bilateral breath sounds and capnography
12. Secures tube with tape or other securing device
13. Continues ventilation while constantly monitoring effectiveness