

## June 1, 2016 Standards Manual Changes

Document	Page	Change	Reason for Change	Practice Changes
<b>Practice Guideline</b>				
Cardiac Arrest	1-10	Remove PEA as a reason for an ALS unit to terminate resuscitation efforts	Could be a sign of cardiac activity with non-palpable pulses. Patient must meet all termination of resuscitation criteria for ALS to terminate resuscitation attempt without on-line medical control (OLMC) order.	Patients in PEA must have OLMC order to terminate resuscitation attempt.
Traumatic Arrest – Sudden	1-45 – 1-45.1	Remove tourniquet from list of life sustaining interventions (LSI) for chest injury	Including tourniquets on the list is contradictory to initial requirement of penetrating thoracic chest injury only.	Patients with penetrating thoracic chest injury <i>only</i> and ETA of less than 10 minutes will be transported to the Trauma Center
<b>Skill</b>				
CPAP	3-4.2	Revised for use with new CPAP masks. System also has the ability to administer concurrent nebulized medication.	System changed to O2-MAX© System	Providers will use the new O2-MAX© System for CPAP with possible concurrent nebulized medication administration.
Video Laryngoscope	3-17.1 – 3-17.2	New skill	Documents directions for use of video laryngoscopes for departments using them	Enables providers to visualize airway during endotracheal intubation if they have access to a video laryngoscope.
Pericardiocentesis	3-54	Remove requirement for OLMC order for pericardiocentesis from the skill	OLMC order is not part of a skill. Protocols dictate when an order is required.	Patients in traumatic arrest may have pericardiocentesis initiated as a life saving measure (LSI) without OLMC order.
<b>Policy</b>				
None				
<b>To Be Deleted</b>				
None				

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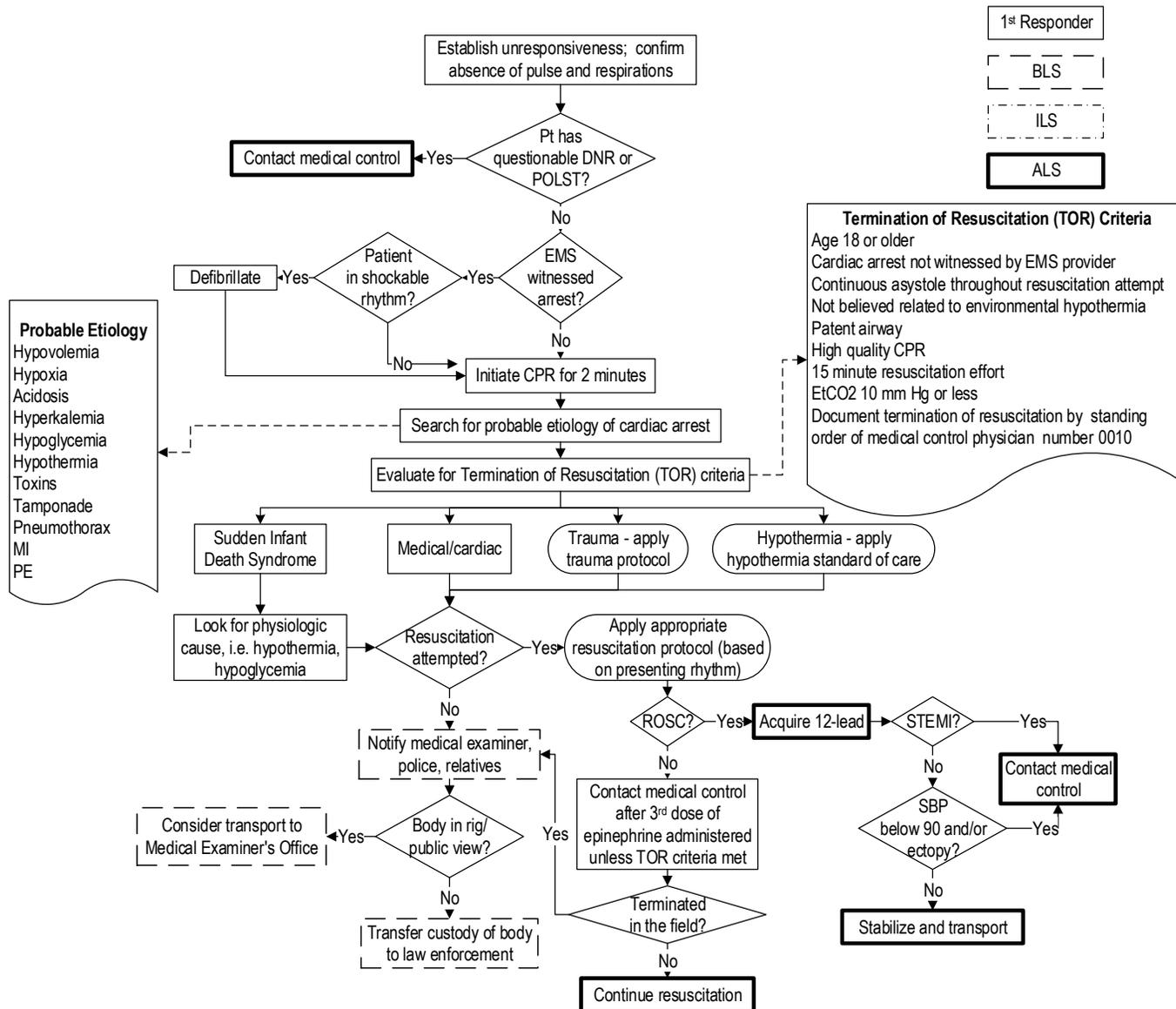
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Initiated: 11/73  
 Reviewed/revised: 6/1/15  
 Revision: 31

**MILWAUKEE COUNTY EMS  
 PRACTICE GUIDELINE  
 CARDIAC ARREST**

Approved by: M. Riccardo Colella, DO, MPH, FACEP  
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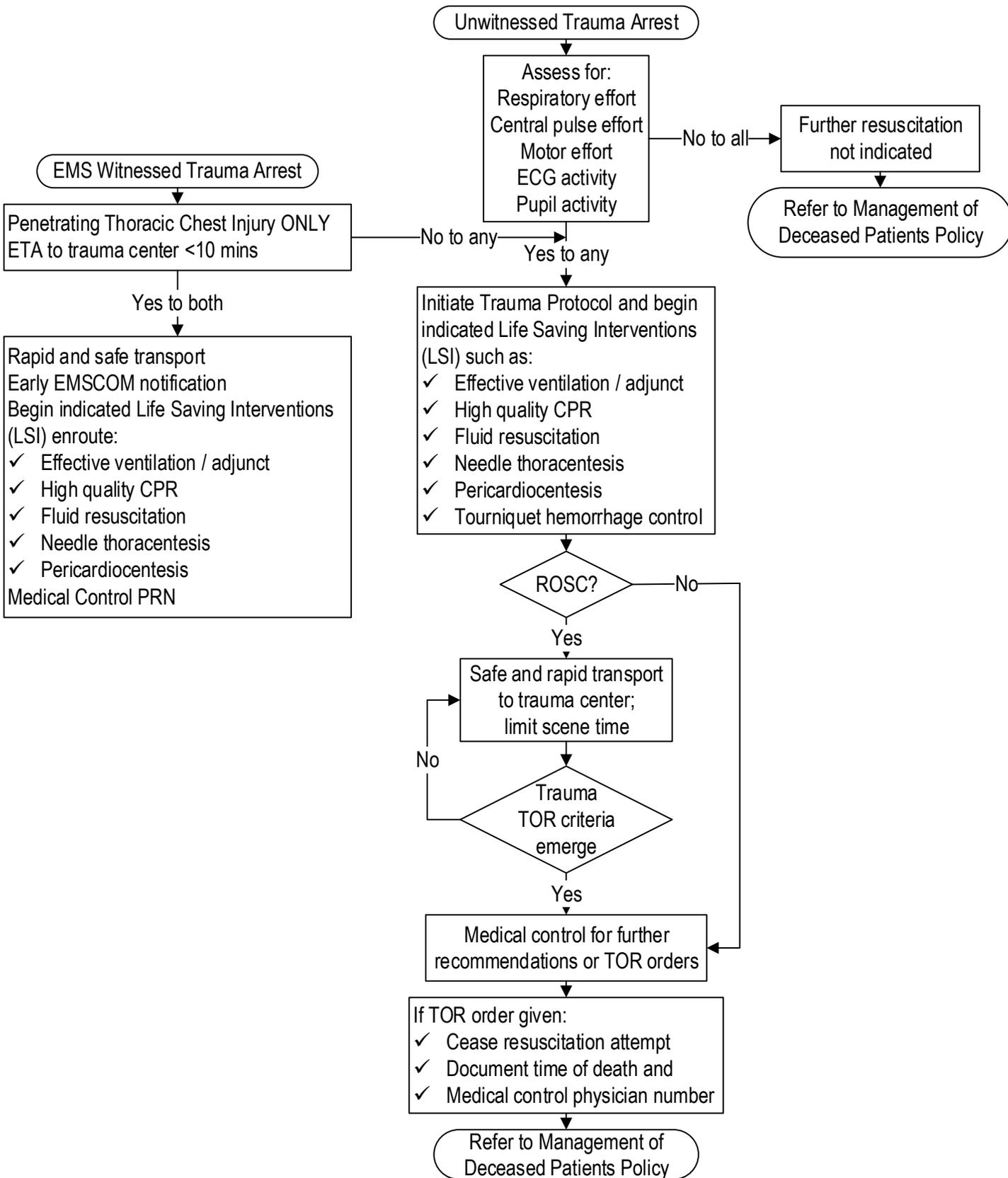
**NOTES:**

- BLS shall be started on all patients in cardiac arrest with the exception of victims with: decapitation; rigor mortis; evidence of tissue decomposition; dependent lividity; presence of a valid Do-Not-Resuscitate or POLST (Physician Orders for Life-Sustaining Treatment); fire victim with full thickness burns to 90% or greater body surface area; hypothermic patients with signs of frozen tissue, rigid airway, ice formation in mouth, or chest noncompliant for CPR.
- A responding paramedic may cease a BLS initiated resuscitation attempt if:
  - No treatment other than CPR, non-visualized airway insertion, and/or AED application with no shock advised **OR** patient is in traumatic arrest and ECG shows asystole **OR** core temperature is less than 10 °C or 50 °F.
  - If the patient meets termination of resuscitation (TOR) criteria
- Resuscitation must be attempted in traumatic cardiac arrests if the patient is in Vfib (defibrillate once and transport) or if the patient has a narrow QRS complex, regardless of the rate.
- The system standard is: CPR will be provided whenever patient is pulseless; compressions at least 100/minute; hands on chest more than 75% of time; minimum compression depth of 2 inches in adults 75% of the time.
- If a fire victim has ROSC, hypotension or altered consciousness, evaluate for possibility of cyanide poisoning and consider administration of hydroxocobalamin (refer to Cyanide Poisoning protocol).
- Please call the Research Line at 805-6493 to report all cardiac arrests, including DOA.
- There is no evidence of naloxone improving the chance of ROSC when a patient is in cardiac arrest due to a narcotic / opiate overdose. Focus should be on standard CPR/ACLS with good CPR and mechanical ventilation rather than attempts with naloxone.

Initiated: 3/1/16  
 Reviewed/ revised: 6/1/16  
 Revision: 1

**MILWAUKEE COUNTY EMS  
 PRACTICE GUIDELINE  
 TRAUMATIC CARDIAC  
 ARREST - SUDDEN**

Approved by: M. Riccardo Colella, DO, MPH, FACEP  
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Initiated: 3/1/16
Reviewed/revised: 6/1/16
Revision: 2

**MILWAUKEE COUNTY EMS  
PRACTICE GUIDELINE  
TRAUMATIC CARDIAC  
ARREST - SUDDEN**

Approved by: M. Riccardo Colella, DO, MPH, FACEP
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**NOTES:**

- **NO ACLS drugs indicated** (epi, amiodarone, calcium, bicarb) unless ordered by medical control.

**Termination of Resuscitation (TOR) Criteria for Traumatic Arrest:**

- Less than 20 weeks pregnant (fundus at umbilical height)
- Not believed related to environmental hypothermia
- High quality CPR unsuccessful
- Life Saving Interventions (LSI) unsuccessful
- ETCO<sub>2</sub> 10 mm Hg or less
- No agonal breaths
- No central pulses
- No muscle movement
- No ECG activity
- Fixed, non-reactive pupils

**Trauma Arrest LSI and Decision to Transport Summary Matrix**

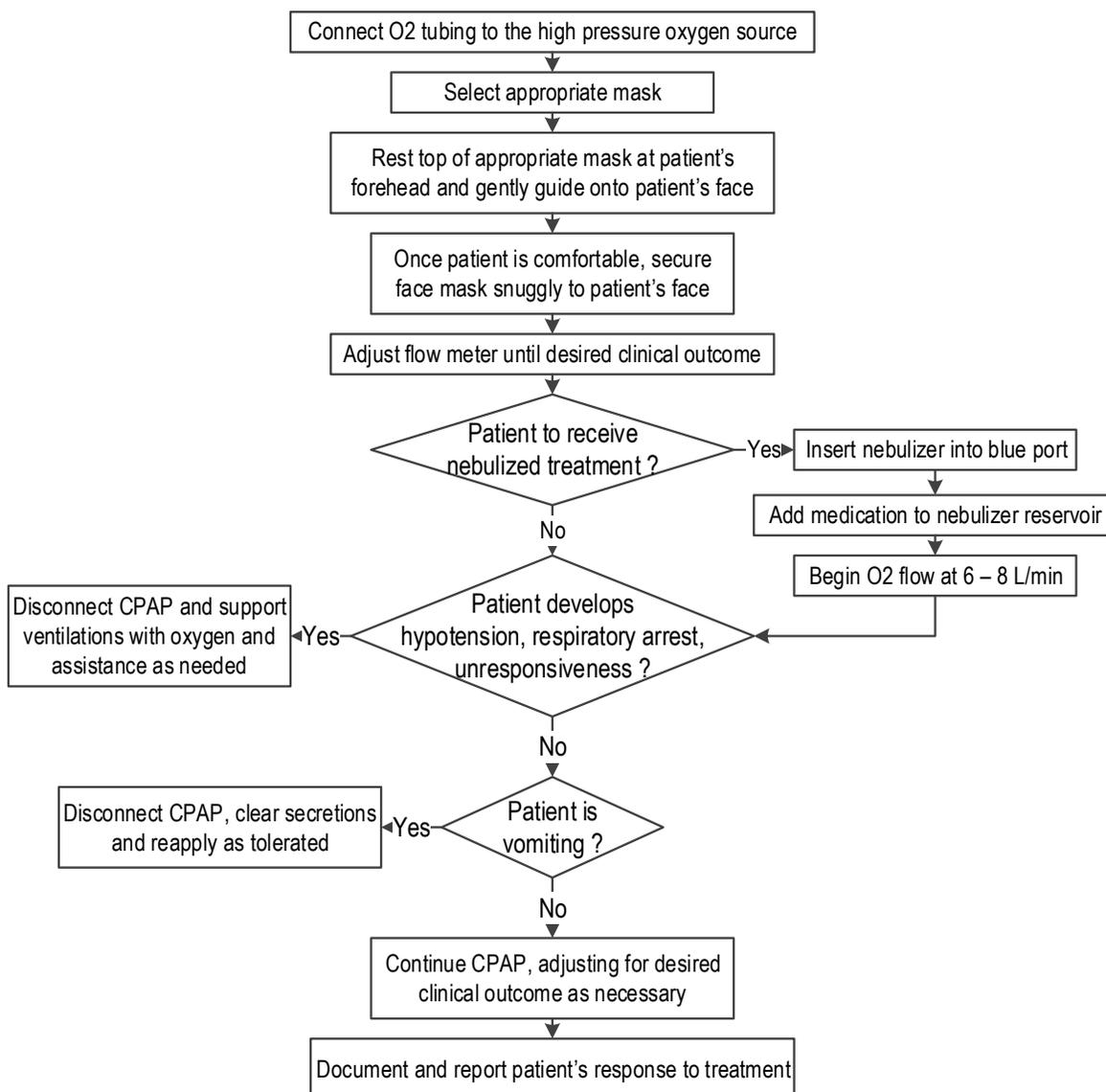
Mechanism	Site	TOR Criteria Met?	Start LSI?	Call Med Control?	Transport to Trauma Center?
<b>Penetrating</b>	Thoracic chest or back; above abdomen	No	Yes	Yes	Perhaps if time from arrest to DELIVERY at trauma center is absolutely <10 min. Logistically, this would be an exceptionally rare occurrence.
<b>Penetrating</b>	Multi-site	No	Yes	Yes	Transport generally not recommended unless ROSC develops.
<b>Blunt</b>	Any	No	Yes	Yes	Transport generally not recommended unless ROSC develops.

Initial: 8/1/13  
 Reviewed/revised: 6/1/16  
 Revision: 1

**MILWAUKEE COUNTY EMS  
 PRACTICAL SKILL  
 CONTINUOUS POSITIVE  
 AIRWAY PRESSURE (CPAP)**

Approved by: M. Riccardo Colella, DO, MPH, FACEP  
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<b>Purpose:</b> To provide continuous positive airway pressure (CPAP) ventilation support adjunct in patients with moderate to severe respiratory distress		<b>Indications:</b> Moderate to severe respiratory distress in spontaneously breathing patients	
<b>Advantages:</b> Adjunct to respiratory distress therapy to be used in conjunction with oxygen and other respiratory treatment medications and therapies; if used early, may reduce the need for intubation and improve clinical comfort and outcome; light weight and oxygen sufficient; easily transferrable between portal, ambulance wall and ER wall oxygen sources	<b>Disadvantages:</b> Can be difficult to initiate and maintain seal; will require therapeutic relationship between provider and patient to establish trust with placing mask over face; competes with medication administration; oxygen use	<b>Complications:</b> Gastric insufflation; aspiration risk	<b>Contraindications:</b> Respiratory arrest/agonal respirations; unconscious; active vomiting; systolic blood pressure less than 100; pneumothorax; facial anomalies; facial trauma; laryngeal trauma; GI bleed



Date Initiated: 6-1-16
Reviewed/Revised:
Revision:

**MILWAUKEE COUNTY EMS  
PRACTICAL SKILL  
VIDEO LARYNGOSCOPE**

Approved: M. Riccardo Colella, DO, MPH, FACEP
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<b>Purpose:</b> To allow visual insertion of an endotracheal tube To provide positive control of an airway To facilitate assisted ventilation in a patient with inadequate respirations To prevent aspiration in a patient with decreased reflexes		<b>Indications:</b> Patients in severe respiratory distress Unconscious patients unable to protect own airway Apnea or inadequate respiratory effort	
<b>Advantages:</b> Allows second provider confirmation of tube placement Positive control of the airway Prevents aspiration Facilitates ventilation Provides route for administration of selected medications Facilitates suctioning	<b>Disadvantages:</b> Requires special training and equipment May be difficult to avoid C-spine movement Does not prevent gastric regurgitation	<b>Complications:</b> Airway trauma Misplacement Esophageal trauma causing hypoxia Potential for simple or tension pneumothorax Gastric dilatation	<b>Contraindications:</b> Patient with intact gag reflex

**Pre-use Battery Check**

- Press the POWER button (Fig. 1, #4) on the back of the King Vision Display.
  - The Display should turn ON immediately. Note: No image will be displayed on the screen without an attached Blade.
    - The GREEN LED battery indicator light (Fig. 1, #5) indicates the Display is ready for use. Important: If the LED battery indicator light is FLASHING RED, the batteries must be replaced as soon as possible as a limited amount of battery life remains.
  - The Display can be turned “OFF” manually by pressing and holding the POWER button. If a King Vision Blade is not attached to the Display, it will automatically turn off in approximately 20 seconds.
- Step by Step Instructions Important: The King Vision Display must be “OFF” before attaching a Blade; otherwise, the video image will become distorted. If this happens, simply turn the Display “OFF” then back “ON”.

**STEP 1 – Preparing the King Vision Video Laryngoscope (the Display and Blade combination) for use**

- **Choose the Channeled blade**
- Install the Display into the Blade (only goes together one way). Listen for a “click” to signify that the Display is fully engaged with the Blade. Note that the front and back of the parts are color-coded to facilitate proper orientation. In patients with high body mass index, large chest AP diameter, or sometimes with active chest compressions being applied, you may need to insert the blade “headless” and attach display once blade is partially inserted. Alternately, you can insert the blade perpendicular to the nose and rotate device into the midline position.

Using The King Vision Channeled Blade:

The size #3 Channeled blade is designed to be used with standard ETT sizes 6.0 to 8.0. No stylet is needed. Lubricate the ETT, the guiding channel of the Channeled Blade and the distal tip of the Blade using a water soluble lubricant. Take care to avoid covering the imaging element of the blade with lubricant. The ETT may be preloaded into the guiding channel with its distal tip aligned with the end of the channel. Note that the ETT tip should not be evident on the screen when loaded properly.

Date Initiated: 6-1-16
Reviewed/Revised:
Revision:

**MILWAUKEE COUNTY EMS  
PRACTICAL SKILL  
VIDEO LARYNGOSCOPE**

Approved: M. Riccardo Colella, DO, MPH, FACEP
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**Step 2 – Powering On**

- Press the POWER button (Fig. 1, #4) on the back of the King Vision Display.
- The King Vision Display should turn “ON” immediately AND Display shows a moving image.
- Confirm the imaging of the King Vision is working properly. If not, stop and refer to the “Acquiring an Image” section.

IMPORTANT: If the LED Battery indicator light (Fig. 1, #5) in the upper left hand corner of the King Vision Display is FLASHING RED, the battery life remaining is limited and the batteries should be replaced as soon as possible.

**Step 3 – Insertion of King Vision Blade into the Mouth**

- Open the patient’s mouth using standard technique.
- In the presence of excessive secretions/blood, suction the patient’s airway prior to introducing the Blade into the mouth.
  - Insert the Blade into the mouth following the midline. Take care to avoid pushing the tongue towards the larynx. In patients with high body mass index, large chest AP diameter, or sometimes with active chest compressions being applied, you may need to insert the blade “headless” and attach display once blade is partially inserted. Alternately, you can insert the blade perpendicular to the nose and rotate device into the midline position.
  - As the Blade is advanced into the oropharynx, use an anterior approach toward the base of the tongue. Watch for the epiglottis and direct the Blade tip towards the vallecula to facilitate visualization of the glottis on the Display’s video screen. The King Vision Blade tip can be placed in the vallecula like a Macintosh blade or can be used to lift the epiglottis like a Miller blade. For best results, center the vocal cords in the middle of the Display’s video screen.
  - If the lens becomes obstructed (e.g., blood/secretions), remove the Blade from the patient’s mouth and clear the lens.
  - Avoid putting pressure on the teeth with the King Vision Video Laryngoscope.

**STEP 4 – ETT Insertion**

**Advance the ETT (Channeled Blade)**

OBTAIN THE VIEW AND DO NOT ADVANCE TUBE UNTIL YOU CLEARLY SEE THE OPTIMAL ANATOMY. After you can see the vocal cords in the center of the King Vision Display, advance the ETT slowly and watch for the cuff to pass through the vocal cords. Note that minor manipulation of the blade may be needed to align the ETT tip with the vocal cords.

**Troubleshooting Guidelines:**

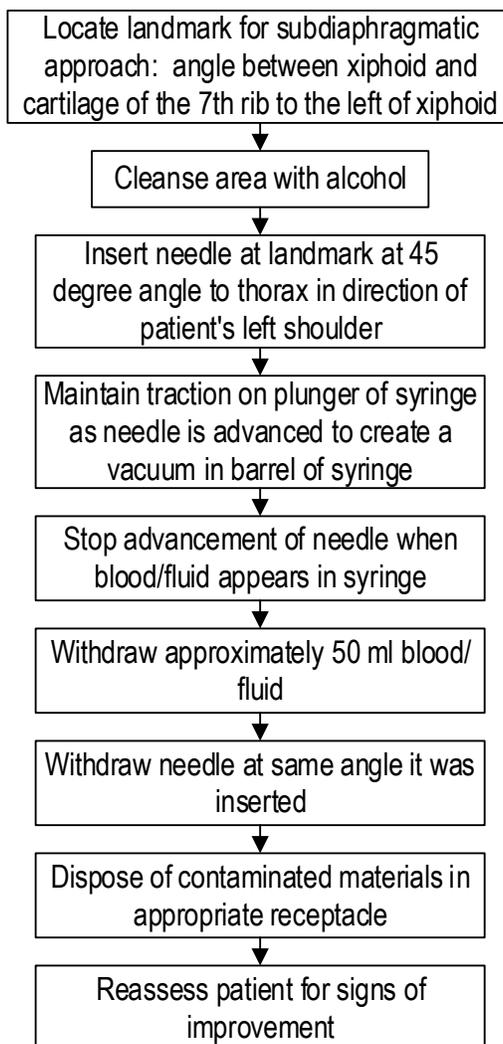
Issue:	Cause:	Correction:
Chest contact during insertion	Obesity, large AP chest diameter, active chest compressions	“Headless” insertion of blade and subsequent attachment of display; turn on obtain view, load endotracheal tube and pass <b>OR</b> Insert the loaded blade perpendicular to the nose and rotate device into the midline position
View of esophageal intubation (clearly not in trachea)	Blade advanced too deep Holding handle too high	Back tube out to starting position on blade Hold device lower Lift device anteriorly
Tube is lateral to glottis opening and won’t turn to pass through glottis	Anatomy	Back tube out to starting position on blade Rotate tube in direction opposite of where the tube is sticking
Realized blade handle is too deep and can’t view epiglottis	Overextended the insertion or in too deep	Back tube out to starting position on blade Lift device anteriorly
Camera image obstructed	Mucous or vomit	Remove and clean camera lens Continuous use of suction

Initial: 9/92
Reviewed/revised: 6/1/16
Revision: 3

**MILWAUKEE COUNTY EMS  
PRACTICAL SKILL  
PERICARDIOCENTESIS**

Approved: M. Riccardo Colella, DO, MPH, FACEP
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<b>Purpose:</b> To remove blood or fluid from the pericardial sac		<b>Indications:</b> Pulseless, apneic patients with signs/symptoms of pericardial tamponade
<b>Advantages:</b> Removes blood or fluid from the pericardial sac	<b>Complications:</b> Damage to the left anterior descending coronary artery Pneumothorax Laceration of myocardium	<b>Contraindications:</b> Any patient with pulses



**NOTES:**

- Signs/symptoms of pericardial tamponade are: hypotension, tachycardia, distended neck veins, narrow pulse pressure, lack of pulses with CPR.