

WHATCOM COUNTY'S BLS PROTOCOL

ADDENDUM

And

PROCEDURES



Revision
July 2011

"Primum non nocere"
(First, do no harm)

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Introduction

These Whatcom County supplemental BLS Protocols are to accompany the “Washington State Department of Health Basic Life Support Field Protocols for EMT-B, (Revision date September 2005) and First Responder, (Revision date September 1998) Trained Personnel.”

The Washington state protocols are available online at:

<http://www.doh.wa.gov/hsga/emtp/PUB&REPT.HTM>,

- Or hard copies can be ordered through the Department of Health.

This protocol addendum shall replace and supersede all prior revisions.

Revised: July 2011

The Washington State protocols used with the following addendum is to serve as the guidelines for First Responders and Emergency Medical Technicians working in Whatcom County. They will permit a standardization of care, and outline the limits of care that First Responders and Emergency Medical Technicians and BLS personnel can provide. This is considered **off-line permission**. On-line permission is granted through direct contact with the incoming medic unit or the Emergency Department Doctor. In certain unusual situations, procedures not outlined here may be approved or ordered by Medical Control.

When an incident occurs beyond the normal capacity of our system (MCI) normal procedures may be rescinded. EMTs and Paramedics may operate via protocols and BLS providers, at the discretion of the field medical supervisor or Medical Control, may transport ALS patients.

In all appropriate patients, routine use of oxygen, pulse oximetry, and vital signs should be considered as standard operating procedures.

At any time the EMT/FR is not certain that the patient meets the criteria set forth, **First Responders and Emergency Medical Technicians may contact the incoming Medic unit or the Medical Control Physician for guidance.**

Marvin A. Wayne, M.D., F.A.C.E.P.
Whatcom County Medical Program Director

Behavioral Disorders/Refusal of Care

EMT/FR Skill

I. Competent Adults

- A. Competent adults have the right to refuse medical care in most circumstances. **You must first determine that the patient is competent to refuse care. No one can refuse medical care for potentially life threatening conditions for a minor or an incompetent adult.**
- B. Attempt to convince the person of the need for medical care including consequences for not seeking care. Solicit assistance from friends and family.
- C. Contact Medical Control (Medic unit or ER physician) and inform the patient of the recommendation for treatment.
- D. Complete the Release of Responsibility Form on any patient refusing recommended medical care. Include witnesses if possible. Document all of the facts on the EMS Medical Incident Report (MIR) form, including topics covered regarding possible untoward effects of no transport/treatment, and the basis for your determination of patient competency.
- E. Patients under the age of 18 are minors and cannot legally sign a refusal of care. Law enforcement or a competent adult legal guardian must sign and accept custody of the patient.
- F. Complete the Refusal of Care and/or Transport Form

II. Incompetent Adults

- A. Patients under the influence of drugs, medications, or alcohol, or who demonstrate a lack of ability to make reasonable judgments regarding their care, are not considered competent.
- B. No EMS personnel are required to put themselves at risk in order to restrain an uncooperative patient. Elicit help from law enforcement, mental health, and Medical Control as needed for transport to the medical facility. If law enforcement is reluctant to help, ask them to speak to Medical Control.
- C. If no life threat is apparent, with consent of Medical Control, a patient may be left in the care of a sober, competent adult who assumes responsibility for them. This adult should sign the Release of Responsibility form.
- D. Document all facts on the MIR with attention to the patient's neurological and mental status, as well as specific advice given regarding possible adverse consequences of refusing care, and alternatives for obtaining care.

REFUSAL OF CARE AND/OR TRANSPORT

Patient Name: _____

Date: _____ Time: _____ Incident #: _____

_____ REFUSE TREATMENT AND TRANSPORT

_____ ACCEPT TREATMENT BUT REFUSE TRANSPORT

Possible consequences of my refusal may include:

RECEIPT OF NOTICE OF PRIVACY PRACTICES: I acknowledge that I have received a copy of the _____ (*Agency*) Notice of Privacy Practices.

I do hereby release the _____ (*Agency*), its personnel, and its medical advisors from any responsibility whatsoever for any unfavorable and untoward consequences due to my refusal to accept the care/transport offered me. The possible consequences of my refusal to accept care/transport have been explained to me and I fully understand these consequences. I, the patient or legal representative, understand that should Medicare, Medicaid or any other insurance carrier determine any billable services to be not reasonable and necessary or non-covered, I will be held responsible for payment of these charges along with any remaining amount my non-contracted insurance company does not pay. I authorize release of any records necessary to process my insurance claim. Charges that are not covered by Medicare, Medicaid and some other insurance companies include ALS no transport calls (IV and/or drug administration = x).

Signature: _____ Date: _____

Responsible Party (if pt unable to sign): _____

Witness (print): _____ sign: _____

Witness (print): _____ sign: _____

_____ Gave copy to patient/responsible party

Bleeding Control

Managing bleeding so that it stops completely as quickly as possible is a primary goal of EMS responders.

Control external bleeding with:

1. **Direct pressure** – using BSI, apply firm pressure by fingertips or full hand directly to the point or area of blood loss for up to 3 minutes. Using a dry dressing is helpful.
2. **Topical coagulant** – see below.
3. **Tourniquet** – see below.
4. Dress and Bandage wound only when bleeding has stopped.

Topical Coagulant

1. Expose wound. Identify actively bleeding tissues. This may require removal of superficial coagulated blood.
2. Apply topical coagulant product. (chitosan based non-thermogenic product such as Celox preferred)
3. Apply firm direct pressure for up to 3 minutes.
4. Ensure bleeding has stopped completely.
5. Dress and Bandage wound. Allow for distal circulation assessment.

Tourniquet

1. Tourniquets are used for uncontrolled/uncontrollable bleeding from wounds to limbs. A commercially produced tourniquet is preferred, but stopping the bleeding is the priority.
2. Expose the limb completely.
3. Apply the tourniquet above and near the wound. Do not apply above or across joints if possible.
4. Tighten tourniquet until bleeding stops.
5. Write the time of application on the patient's skin, ex: TK 1645
6. Dress, bandage and immobilize affected extremity. Consider topical coagulant to aid bleeding control.
7. **Keep tourniquet exposed.**
8. Expect increased pain from the tourniquet.
9. Initiate rapid transport, notifying ER of tourniquet placement.
10. Consider ALS for IV fluids.

CPR and AED

EMT/FR Skill

Whatcom County EMT and FR trained personnel will follow the CPR and AED standards for healthcare providers, per the American Heart Association, American Red Cross or other nationally recognized organization with substantially equivalent guidelines and approved by the Department of Health, with the following modifications.

The expectation in order to maintain certification is that every provider receives, at a minimum, annual training and testing on American Heart Association current CPR and AED guidelines.

Procedure: As a **standing order**, you are authorized to perform the following:

- A. Upon arrival, verify unresponsiveness and circulatory arrest by the absence of consciousness, lack of breathing or inadequate breathing, and no pulse.
- B. Initiate CPR, beginning with chest compressions. Continue with appropriate defibrillation protocol (using age/weight guidelines and considering whether **witnessed or unwitnessed** arrest). **Using the regular/adult pads, the AED is configured to shock patients over 20 kg (45 lbs).** For patients less than 20 kg (45lbs) without a pulse, there is benefit from AED defibrillation after airway issues have been resolved. It is desired that on pediatric patients, the **pediatric pads** be used. However, if adult pads are all that is available and they will appropriately fit on the chest, to include the anterior and posterior position, there is no significant harm in applying the AED as a last resort. For infants, if no pediatric pads are available, use adult pads as long as they fit on the chest and do not overlap.

GENERAL DEFIBRILLATION PROTOCOL:

Emergency personnel are authorized to deliver electric shocks with an automatic external defibrillator (AED) to patients unconscious and pulseless when a shockable rhythm is recognized by the device. This should be done as quickly as possible, with minimum interruptions of CPR.

For a **witnessed or unwitnessed arrest**, the AED should be applied as soon as possible. CPR should be initiated while the AED is being attached, but there is no prescribed time that CPR needs to initiate prior to the AED being used. It is desired that CPR be initiated while the AED is applied and prior to pressing the analyze button. Once the machine is ready, and pads placed, then CPR can be stopped at any time in the cycle to allow the rhythm to be analyzed and if the AED assesses, a shock to be delivered.

Defibrillation Guidelines Flowchart

Once EMS arrives on scene, the following decision tree for CPR and AED is as follows:

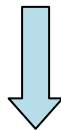
EMS Witnessed or Unwitnessed Arrest

- Assess responsiveness and pulse Do not perform a “look, listen and feel” for respirations – only scan quickly (5-10 seconds) to assess if breathing or inadequate breathing.
- Once loss of pulse is verified, begin CPR and prepare AED
- Attach proper size electrodes
“Clear” patient



Press “analyze” – AED should prompt with decision (shock/no shock) in less than 15 seconds

Shock Advised	No Shock Advised
<ul style="list-style-type: none">• Deliver shock – press shock button• Immediately begin and perform 5 cycles of CPR, beginning with chest compressions• Check Pulse after 5 cycles CPR	<ul style="list-style-type: none">• Immediately begin and perform 5 cycles of CPR• Check Pulse after 5 cycles CPR, beginning with chest compressions.



If a pulse is present →

Assess airway
Perform rescue breathing, if necessary
Provide oxygen
Assess blood pressure
Continue monitoring and performing patient care

← If NO pulse present

Press analyze
If directed by AED, either continue with 5 cycles of CPR or shock

CLINICAL GUIDELINES:

1. **Pediatric Considerations:** Using the standard adult pads, the AED is configured to shock patients over 20 kg (45 lbs). Patients less than 20 kg (45lbs) without a pulse can benefit from the defibrillation after airway issues have been resolved. **It is preferred and the recommendation of AHA that defibrillation in patients less than 20kg, only the pediatric pads be used.** However, if pediatric pads are unavailable and the adult electrode pads will fit in either the traditional anterior (white to right, red to ribs) placement or in an anterior/posterior placement, there is no significant harm in applying the AED and it could potentially be life saving. This includes patients less than one year of age.
2. **Rapid defibrillation:** No prescribed period for initial CPR. The first shock should be delivered within 60-90 seconds of the provider's arrival at the patient's side.
3. **Defibrillation takes precedence** over basic CPR, oxygenation, suctioning, history-taking, etc.
4. **No excessive interruptions of CPR:** If delays in CPR of 5 seconds or more are encountered (e.g. battery problems), resume CPR until the problem is resolved. Then reassess. Delays in CPR for more than 5 seconds are permitted only during rhythm assessment. In particular, do not delay CPR while checking to see if a rhythm is producing a pulse. **CPR must be performed continuously for 1 to 2 minutes to achieve central circulation.**
5. **Should the patient vomit during the analyze mode:** Do not delay the delivery of electrical shocks to respond to the airway. Clear the airway at the first opportunity during the CPR cycle.
6. **Blood pressure less than 60:** If the patient's systolic blood pressure persists \leq 60 mm/Hg, after treating for shock, and the patient remains unconscious, continue CPR. Do not stop compressions just because the heart has started to beat. The beat may be inadequate for survival but still give a pulse. Use of CPR in these patients may also be determined by the clinical picture i.e., does the patient appear to have evidence of adequate perfusion?
7. **Hypothermia:** AED in the setting of severe hypothermia is usually ineffective. Limit shocks to three unless long delays to ALS, then several minutes of CPR between shocks with core warming efforts.
8. **Documentation:** In accordance with WCEMSTCC Policies, documentation must be made on all cases of CPR, with or without an AED attempt, and whether or not the resuscitation was successful. The EMT/FR who is in charge of patient care is responsible for the required **reports**. *In addition to the standard MIR report kept at the user's agency, reports of CPR/AED use will be forwarded to the EMS/TC Council office for statistical and quality assurance purposes. The Cardiac and/or Respiratory Compromise/Anaphylaxis Report must be done for ALL events, including those initiated by the lay public. Reports are available online and must be submitted to the WCEMSTCC Office. These reports are kept and reviewed by the MPD.*

CPR Standards

The new 2010 American Heart Association CPR guidelines are *required* to be taught as of April 1, 2011. As per Whatcom County MPD, Health Care Providers will continue to use this standard.

2010 CPR Guideline Recommendations			
Component	Adult	Child	Infant
Recognition	Unresponsive (for all ages)		
	No apparent breathing		
	No pulse palpated within 10 seconds for all ages (HCP Only)		
CPR Sequence	C – A – B (circulation – airway – breathing)		
Compression Rate	At least 100/min.		
Compression Depth	At least 2 inches	At least 1/3 AP diameter (about 2 inches)	At least 1/3 AP diameter (about 1 ½ inches)
Chest Wall Recoil	Allow complete recoil between compressions. HCP's rotate compressors every 2 minutes.		
Compression Interruptions	Minimize interruptions in chest compressions Attempt to limit interruptions to <10 seconds		
Airway	Head tilt-chin lift (For HCP in suspected trauma: jaw thrust)		
Compression to Ventilation Ratio (until placement of advanced airway)	30:2 1 to 2 rescuers <i>(take no longer than 18 seconds to deliver 30 compressions)</i>	30:2 – Single Rescuer 15:2 – 2 HCP Rescuers <i>(for one-person, 30:2 ratio, take no more than 18 seconds to deliver 30 compressions)</i>	
Ventilations: General consideration	Lay Rescuers may provide compressions-only CPR – HCP must document when citizen or phone CPR is conducted prior to arrival. Impedance Threshold Device (ResQ POD) – Must be incorporated as soon as possible for mouth-to-mask and BVM ventilations, and continued during CPR after secure airway placed. Remove the ResQ POD if ROSC		
Ventilations with Advanced Airway (HCP Only)	1 breath every 6-8 seconds (equiv. to 8-10 breaths/min) Asynchronous with chest compressions; use ResQ POD timing lights About 1 second per breath with visible chest rise		
Defibrillation	Attach and use AED as soon as available. Minimize interruptions in chest compressions before and after shock; resume CPR beginning with compressions immediately after each shock.		

Use of the ResQ POD (Impedance Threshold Device) as a CPR tool

Over the past several years, Whatcom county EMS has recorded a statistically significant increase in successful resuscitations from cardiac arrest. The improved outcome for our patients could be due to

- participation in CPR research,
- more frequent CPR training,
- better quality CPR,
- CPR with the ResQ POD, or
- all of these reasons!

One of the most important factors in overall patient outcome is the quality of CPR. The AHA ACLS guidelines state that "high-quality CPR is more effective than any ACLS drug. The science tells us that our focus should be on BLS skills to maintain perfusion."

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We have observed EMS rescuers performing outstanding CPR, and we want to continue to monitor and encourage those practices that improve patient outcome, including

- performing high quality chest compressions & limiting pauses in chest compressions to perform other interventions,
- managing the airway (e.g. good facemask seal, correct rate and volume of rescue breaths),
- using the AED appropriately, and
- improved teamwork

The ResQ POD is designed to enhance circulation, by improving blood return to the heart during chest compressions. For this reason, the ResQ POD is included in the standard of care in Whatcom county, and should be used **immediately** on the BVM with a two-handed tight facemask seal, as soon as efforts to resuscitate a patient in cardiac arrest are begun. It is standard practice in Whatcom County to store the ResQ POD pre-loaded on the BVM in airway kits, to reduce any delays in deploying this critical CPR tool.

Ventilation Port

2 Timing Assist Lights

Flash @ 10/min
Promote proper ventilation & compression rate

Timing Assist Lights ON/OFF Switch

Turns timing assist lights on & off

Atmospheric Pressure Sensor System

Provides selective impedance to inspiratory air flow

Safety Check Valve

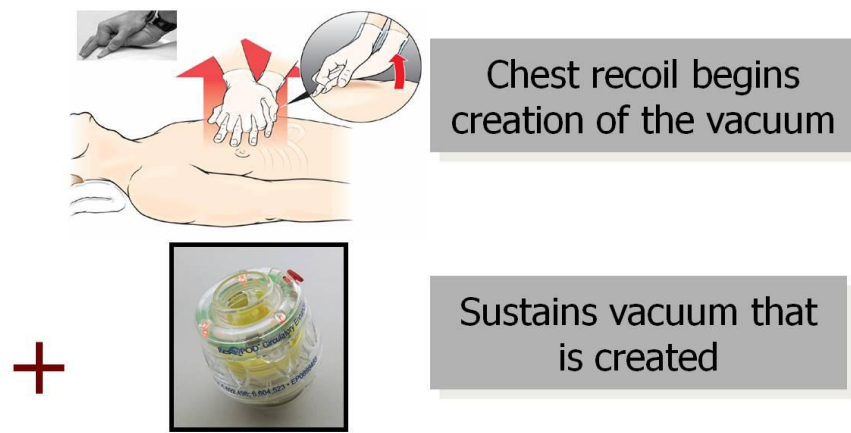
Enables inspiration @ -10 cmH₂O with spontaneous respiration



Patient Port

Mechanism: Air is allowed to leave the patient's chest during chest compressions, but the valve prevents air from entering the lungs as the chest recoils between chest compressions. The timing assist lights are turned on *only* after a secure airway is in place (King tube or ET tube), when compressions are performed continuously. Ventilations during CPR with a secure airway should occur at a rate of 8-10/min, or after every 10 compressions (at a compression rate of at least 100/min). The timing lights flash 10/min.

Mechanisms of the ResQ POD as a CPR Tool



= Enhance the negative pressure in the chest during the decompression phase of CPR in order to return more blood to the heart.

This small but important vacuum (negative pressure) developed in the chest during chest recoil with the ResQ POD in place...

- draws blood back into the chest and heart,
- increases coronary artery blood flow,
- decreases intracranial pressure and increases blood flow to the brain during CPR

The more blood that is returned to the heart (preload), the more that is pushed forward (cardiac output) with your next chest compression.

ResQ POD with a Bag-Valve Mask

Successful ventilation with a BVM begins with a good seal between the mask and the patient's face and maintaining an open airway. No air can be allowed to leak around the facemask, or the vacuum in the chest which serves to draw blood back to the heart will be destroyed.

To properly place a BVM:

Choose an appropriate size for the patient.

Consider placing an airway adjunct, such as an oropharyngeal (OPA) airway.

Position the mask over the patient's face with the apex of the mask over the bridge of the nose (between the eyebrows). Using both hands, stretch the sides and cuff of the mask laterally, and place the mask over the nose and mouth, settling the base of the mask between the lower lip and the prominence of the chin. With the cuff in contact with the patient's skin, allow the mask to snap into place. Position your hand(s) so that your fingers grasp the lower jaw to maintain a head-tilt, chin-lift. A good facemask seal will make it easier to hold in place with less pressure. **You should feel as if you are pulling the airway toward the facemask, rather than pushing the facemask onto the face.**

Two-Handed Technique (Preferred – see figures below)

One rescuer kneels with a knee on each side of the patient's head and applies the facemask as described above. **During CPR** with a BMV (30:2 compression to ventilation ratio), following each set of 30 compressions, a second rescuer (often, the rescuer performing chest compressions) will squeeze the bag two times, bringing the thumb and long finger together to ventilate. One ventilation for an adult should deliver approximately 500ml of air over 1 second.

Each ventilation should take 1 second and achieve chest rise.



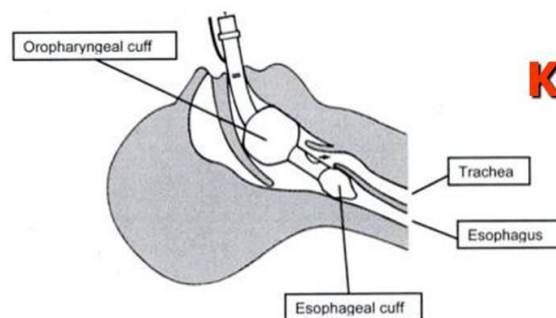
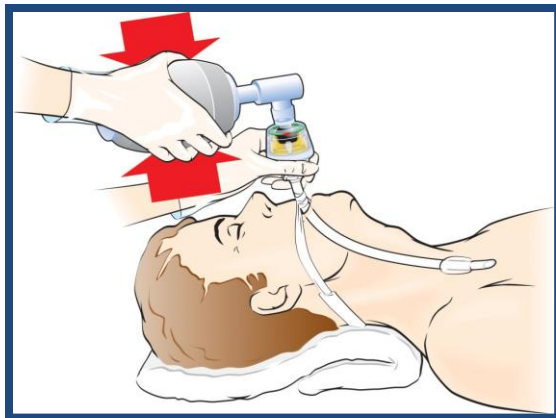
Photo credit: ACSI

REMOVE THE RESQ POD IF PULSE RETURNS

The ResQPOD is a CPR tool used to improve circulation during chest compressions. It does not assist in ventilations. Remove the pod if pulse returns, but keep near patient in case of re-arrest.

CPR with a Secure Airway (King-tube or ET tube)

Once the airway is secured with a King-tube or ET tube, move the ResQ POD to the tube, turn on the timing assist lights, and continue chest compressions without interruption for ventilations. Ventilations are performed at the rate of 8-10/min. The timing assist lights are independent of inspiratory impedance function. If the timing lights fail to operate correctly, continue CPR with the ResQPOD in place and ventilate the patient 10/min. With chest compressions performed at the recommended rate of at least 100/min, you may count compressions and provide one ventilation every 10 compressions.



King tube

Practice your CPR skills frequently

Good CPR takes training **AND** practice. Practice with the ResQ POD on both the facemask and secure airways. Research in skills training for healthcare providers demonstrates that:

- Students continue to show improvement in both knowledge and skills after 4 training sessions
- Knowledge and skills decrease within only 10 weeks after completion of training
- It is recommended that rescuers practice CPR at least 4 times per year

EPINEPHRINE AUTO-INJECTOR

EMT-B SKILL ONLY

While the Washington State 2005 EMT-Basic Field Protocols address the proper usage for administering epinephrine to patients having an anaphylactic reaction, clarification is necessary for approval per **on-line – or – off-line medical direction**.

While there are no contraindications when used in a life-threatening emergency, Whatcom County Guidelines for administering epinephrine are as follows:

1. 1st dose: **When a true a life-threatening emergency exists**, and signs/symptoms of anaphylaxis exist, use of the first dose is considered **“off-line”** permission.
2. If the patient does not significantly improve within 10 minutes, a second dose can be given with **on-line consultation to Med-Control** (incoming medic unit in most cases).
3. If, in the unlikely event that the BLS unit is unable to contact the Medic Unit or the hospital, and the patient’s condition is such that they would greatly benefit from a second dose, this would be an **allowable off-line and conditional off-line approval**. Proper documentation is essential.

OTHER FORMS OF EPINEPHRINE PRESCRIBED TO PATIENTS:

1. **Ana-Kit:** These have become obsolete in the United States, but some patients may have these. **Use BLS Unit carried Epi-Pens only.**
2. **Twinject® Auto-Injectors:** Some patients have been prescribed these types of auto-injectors which have these features:
 - a) **Single pen hold two adult doses of epinephrine**
 - b) **First dose is delivered as auto injector.**
 - c) **Second dose is a syringe*.**

See pages 3 and 48 in WA State EMT-Basic Field Protocols for complete information regarding epinephrine use in anaphylaxis.

EPINEPHRINE VIAL or AMPULE

ADULT ANAPHYLAXIS

Indication for drug administration: Vital signs, work of breathing, lung sounds, skin signs, and ability to speak.

Adult Dose: - 0.30 mg of 1:1,000

- Scrub the skin vigorously with an alcohol wipe
- Allow to air dry (do not touch, blow on, or fan the injection site)
- Break open ampule , or, if using a vial, cleanse vile with alcohol wipe
- Insert the needle into the ampule or vial. Withdraw the appropriate volume of medication. Fill to 0.1 ml more than the desired dose
- Hold the needle upright. Push any air bubbles and extra medication out of the syringe
- Broadly hold the muscle. Do not pinch the skin. Use Deltoid muscle for adult dose. Lateral thigh can also be used.
- Hold the syringe like a dart, Insert the needle with a quick stab at a 90° angle to the skin surface
- Depress the plunger with a slow, steady motion until the syringe is empty and the needle automatically retracts. Discard in Sharps Container.
- Cover the puncture site with an adhesive bandage. Reassess your patient. Take vitals every 5 minutes.
- Prepare for transport by ALS.
- If patient's vitals and signs/symptoms have not improved within 10 minutes call med control or incoming medic unit for permission to give a second equivalent dose.



Pediatrics – 0.15 MG of 1:1,000 The Anterolateral thigh is the best site for infants & children

BLS Skill for KING TUBE-certified rescuers (EMT-B)

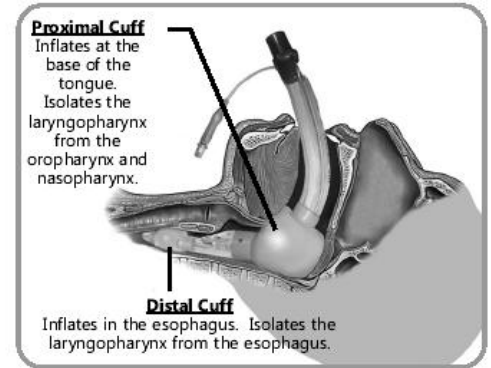
KING LTS-D LARYNGEAL TUBE AIRWAY

The KING LTS-D, hereafter referred to as the “KING TUBE”, is a double-lumen secure airway device designed for positive pressure ventilation. It has two low-pressure cuffs, one oropharyngeal and one esophageal, a ventilation outlet between the two cuffs for delivery of O₂ to the respiratory system, and a rounded distal tip designed to assist passage behind the larynx and into the normally collapsed esophagus.

The lumen in the distal tip of the KING TUBE provides three key additional benefits:

- Passage of gastric tube up to 18 French
- Channel for regurgitation, which significantly reduces potential for regurgitation to get past the cuff and therefore aids in reducing the chance for aspiration.
- Provides “vent” for gastric pressure and stomach decompression.

* Current approved sizes for Whatcom County are size 3, 4 and 5 only.



1. INDICATIONS

- Patient is apneic and without a gag reflex
- Primary airway management in cardiac arrest
- Failed ET intubation
- Difficult airway cases
- Upper gastrointestinal or airway bleeding (without trauma) that threatens airway patency.

2. CONTRAINDICATIONS

- Responsive patient with intact airway-protective (gag) reflexes.
- Patients with known esophageal disease
- Caustic ingestions
- Upper-airway obstructions due to foreign bodies or pathology.
- Children/adults less than 4' tall.

3. EQUIPMENT

Required:

- BVM
- 60-90 cc syringe
- ET Tube holder or tape

Optional:

- Water-based lubricant
- EtCO₂ sensor
- Gastric tube up to 18 F

4. GENERAL ITEMS

- For patients in cardiopulmonary arrest, CPR takes precedence over the placement of the KING TUBE.
- The KING TUBE is not a replacement for standard endotracheal (ET) intubation.

- Written documentation (on the Whatcom County Cardiovascular Respiratory Compromise report) must be made on all cases in which a KING TUBE attempt was made, whether successful or unsuccessful. The EMT who is in charge of patient care is responsible for the written report. A copy of this report must be forwarded to the Whatcom County Medical Program Director at the WCEMS/TC Council office.
- Before a patient with a KING TUBE in place is released to another care provider (i.e., EMT, paramedic, emergency physician, nurse), the EMT must communicate that the device is in place and be certain that the receiving person is knowledgeable about proper use and function of the KING TUBE.
- The EMT who performed the procedure will continue maintenance of the airway as long as a KING TUBE is in place if no other personnel trained in the use of the device or with a higher level of certification can assume patient care. This may include transport to the Emergency Room.
- When facial trauma has resulted in broken teeth or dentures, remove dentures and exercise extreme caution when passing the KING TUBE into the mouth to prevent the cuffs from tearing.
- The KING TUBE is a single patient use device and should not be reused or recycled.
- The KING TUBE is a short term device and may be left in place for a maximum of eight (8) hours unless instructed by Medical Control.
- Securing the KING TUBE should be accomplished by an ET tube holder or tape.
- On any patient that expires on scene, the KING TUBE shall remain inflated and in place (per Medical Examiner).
- Recertification requirements:
 - Skills verification twice per year. It is highly recommended that KING TUBE skills be implemented in all CPR/D-Fib training.
 - A successful field intubation will credit as one skill verification.

5. PROCEDURE

Insertion:

- Verify cardiac and/or respiratory arrest.
- Ensure gag reflex is not present.
- Initiate CPR and ventilate with high flow oxygen.
- Placement of the KING TUBE should be done **between** CPR cycles, after the initial 2 minutes of CPR and/or the first defibrillation has proven unsuccessful, or at any point between cycles of chest compressions when a shock is not indicated or rhythm analysis is not being performed. Do not interrupt chest compressions for longer than 10 seconds to perform any intervention.
- Select the appropriate size tube, based on the patient's height:
 - Size 3: 4 to 5 feet (122-155 cm)
 - Size 4: 5 to 6 feet (155-180 cm)
 - Size 5: over 6 feet. (180 cm)
- If lubricant is needed: apply to the beveled distal tip and posterior aspect of the tube, taking care to avoid introduction of the lubricant in or near the ventilatory openings between the cuffs.
- With the KING TUBE airway, it is not necessary to hyperextend the head. The ideal head position for insertion of the KING TUBE is the "sniffing" or neutral position. For obese patient, elevation of the shoulders and upper back should be considered.

- Hold the KING TUBE at the connector with the right hand. With left hand, perform a tongue-jaw lift and insert the tube into the corner of the mouth.
- With the KING TUBE rotated laterally (blue orientation line at corner of mouth) or inserted straight, introduce the airway into the mouth.
- As tube tip passes behind the tongue down the back of the mouth, rotate tube back to midline (if rotated when inserting so that the blue orientation line faces chin).
- Without exerting force, advance tube until base of connector is aligned with teeth or gums.
- Using the syringe provided, inflate the cuffs of the KING TUBE with the appropriate volume:
 - Size 3 - 50 ml
 - Size 4 - 70 ml
 - Size 5 - 80 ml
- Attach BVM to the connector of the KING TUBE and resume ventilations at the appropriate rate.
- While gently bagging the patient to reassess ventilation, simultaneously withdraw the KING TUBE until ventilation is easy and free flowing (adequate tidal volume with minimal airway pressure).
- Confirm proper position by auscultation the absence of gastric sounds, the presence of lung sounds, chest rise and EtCO₂ wave form (if available), and monitor for adequate ventilation throughout patient care.
- For gastric distention, up to an 18 Fr gastric tube can be used through the gastric access lumen of the KING TUBE.

Removal:

- If the patient begins to gag, regains consciousness and spontaneous respiratory effort, or otherwise begins to fight the tube, restrain if necessary, and remove the KING TUBE as follows:
 - Have suction available.
 - Turn the patient on to their side.
 - Deflate both cuffs.
 - Gently remove the KING TUBE.
 - Be prepared for the patient to vomit; suction as necessary.
 - Assure the patient's respirations are adequate; assist as necessary giving supplemental oxygen per protocols.

Pneumatic Anti-Shock Trousers (MAST)

EMT Skill

The PASG or MAST device is no longer recommended for control of hypotension or splinting. For multiple lower extremity fractures, consider individual limb splinting or traction splinting as possible, or spineboard immobilization alone with adequate padding. For pelvic injuries, use of the Pelvic Sling provides better stabilization than the MAST.

Diabetic Emergencies

Management of oral glucose:

- A. Use of oral glucose, or any other substance of similar consistency, is not recommended unless ALS unit is more than 15 minutes away.
- B. If patient is able to swallow, administer oral glucose (if 15 min threshold met), or substance high in simple sugar; i.e., honey, orange juice with 2-3 tsp. of sugar
- C. Be prepared for patient to vomit
- D. Provide supplemental oxygen and/or ventilatory support assistance as necessary, if not done during initial patient assessment
- E. Maintain body temperature

Respiratory Emergencies

Management of Metered Dose Inhalers (MDI's) for patient c/o SOB with wheezing

- A. Provide supplemental oxygen and/or ventilatory assistance as necessary, if not done during initial patient assessment
- B. If available and prescribed for the patient assist with self administration of 3-4 inhalations initially, which can be repeated every 15 mins

Spinal Assessment

EMT/FR Skill

To use this Spinal assessment protocol Whatcom County EMT's and FR need to have been trained in the complete use of field spinal assessment. Once the patient condition indicates movement to the (red) immobilize side the spinal assessment protocol stops and normal neurological status checks before and after spine boarding are done.

I. Mechanism of Injury

A. Negative mechanism of injury indicates a mechanism that could not possibly damage the spinal column, such as an isolated hand laceration.

B. Uncertain mechanism of injury relates to mechanisms that could cause an injury to the spinal column but that the index of suspicion is not high, such as GLF's, falls from low heights, and low to medium speed MVA's.

C. Positive mechanism of injuries relates to mechanisms that cause a high index of suspicion such as, high speed MVA's, falls from twenty (20) feet or more, ejection from MVA, and gun shot wounds of the torso.

If mechanism is "uncertain" move to patient reliability.

II. Patient Reliability

A. This is the area of the spinal assessment protocol that requires the most careful observation and judgment. The questions to ask yourself are,

1. Is this patient calm, alert, cooperative, sober.
2. Can I communicate with them?

Some common causes for patients to be unreliable are,

1. Unconsciousness
2. Altered LOC with or without intoxication.
3. Acute stress reaction.
4. Distracting injuries.
5. Language barrier.

Remember many patients will be unreliable initially, then with calming and reassurance over time they may become reliable.

If patient passes reliability issues, move to palpation assessment.

III. Spine Pain or Tenderness

A. This section refers to the palpation of the spinal column (this does not include lateral muscular pain), with pain referring to constant pain, and tenderness referring to pain elicited with palpation. The exam needs to be fingers on skin (or light clothing), not mittens on coats.

If no spine pain or tenderness move on to motor sensory exam.

IV. Motor Sensory Exam

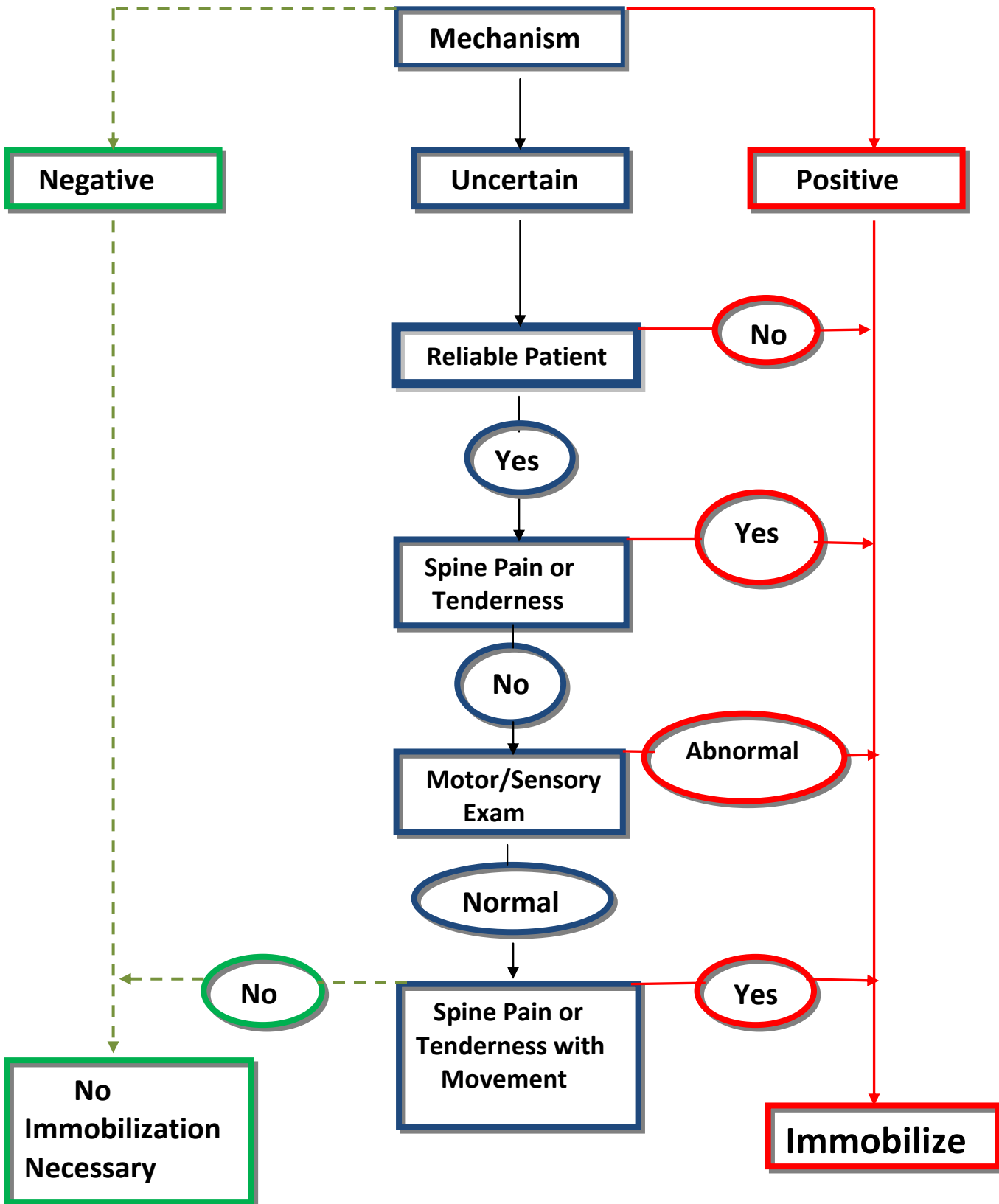
A. The motor sensory exam must show bilaterally equal (and normal) motor and sensory nerve function. Remember the three classic patterns of cord damage and check multiple nerve roots for both light touch and sharp sensation. (The three classic patterns of cord damage are decreased sensation, no sensation, hypersensitivity)

If motor sensory exam is normal move on to spine function tests.

V. Spine Pain with Movement

A. If all questions and tests to this point indicate a reliable patient with no spine fracture or spinal cord damage, then the final tests are to have the patient move the spine through a full range of motion. If that does not cause pain repeat the same movements against resistance. The patient must be told to stop any movement at the first sign of pain. If the movement does not elicit any spine pain, the patient is free of a spinal column injury and does not require spinal immobilization.

Spinal Care Algorithm



WRITTEN REPORTS

EMT/FR Skill

I. Medical Incident Reports (MIR)

- A. Following all calls, a medical incident report (MIR) form is to be filled out completely. The EMT/FR in charge of patient care will document their report on one of the following MIR's:
1. State of Washington DOH Medical Incident Report
 2. Bellingham Fire/Whatcom Medic One Medical Incident Report or
 3. Medical Incident Report approved by the EMS Medical Director
- B. The Medical Program Director or CQI (Continuous Quality Improvement Committee) may periodically request for review BLS transport runs for the purpose of improving patient care.
- C. The narrative portion of the MIR will be formatted consistent with the S.O.A.P. format.
1. **S = SUBJECTIVE:** This is the information you have received from dispatch, law enforcement, bystanders, family members, and of course, the patient. In other words, this is the information that has been told to you. This will include chief complaint, events that led to event, past history, medications, (with dosages and times taken each day) and allergies.
 2. **O = OBJECTIVE:** The objective information you obtain is that information that you and/or your team of responders personally see, hear, feel or smell from performing a patient assessment. This will include such things as patient exam, lung sounds, vital signs, odors on breath, blood loss, blood sugar, pulse ox, orthostats, etc.
 3. **A = ASSESSMENT:** After taking a history and doing an exam, what is your best guess as to what is wrong with the patient. Remember that when stating/writing your conclusions/impressions it must be prefaced by the word "**possible**" or "**R/O**", unless the injury or illness is obvious, e.g.: fracture.
 4. **P = PLAN:** This will include the actual treatment/intervention that was performed for the patient. Include all methods of treatment, equipment used as well as patient response to the treatment, and the patients disposition (where did you leave them and what kind of condition). Be very specific and detailed with this information. The general rule is, "**IF IT ISN'T WRITTEN DOWN, IT WASN'T DONE.**"

D. Expanded S.O.A.P. Format

Many agencies in the county, especially transporting agencies, are using the expanded SOAP format for written reports. This does meet the required criteria for written reports in Whatcom County.

1. SUBJECTIVE: *What the patient, family or bystanders tell you as well as the scene observations.*

Chief complaint:
(CC) The age, sex, and chief complaint of the patient.

History of Presenting:
(HPI) *The reason for the chief complaint.*

(MOI) Mechanism of Injury including damage done to vehicles or objects causing trauma.

(NOI) Nature of Illness Answers to your OPQRST and **SAMPLE** history questions, Symptoms reported, pertinent negatives all go in this section.

Previous History:
(PHX) Pertinent past medical history. **SAMPLE** History is listed here including meds, allergies and Phx.

2. OBJECTIVE: *What you see, smell, touch and hear during your exam that pertains directly to the patients' condition.*

Exam:
(ASS) What position was the patient in upon your arrival?

Pt's level of consciousness/ distress level, skin color/temperature and condition, vital signs, pulse ox, Dex

HEENT: Head, Ears, Eyes, Nose and Throat

CTL: Cervical, Thoracic and Lumbar spine

Chest: Lung sounds, tidal volume, POP

Abdomen: POP, Bowel sounds

Pelvis: POP

Extremities: POP, Injuries, PMS/CMS in all four extremities

3. ASSESSMENT: *What you think is wrong*
(IMP) Rule out, or "R/O" what do you think is wrong with the patient.

4. PLAN: *Your plan as to what to do, what you did for the patient and any changes in the patient's condition while in your care.*

Treatment: All the things you did for the patient, (a list of the tests you and/or your team performed) such as vital signs and posturals, and any responses to treatments.

Disposition: What happened to the patient, for instance, did a Medic Unit
(Disp) transport the patient? Did you leave the patient at home? Was
Medical Control notified?

II. Cardiovascular and/or Respiratory Compromise Report

A. Reporting of AED use will be done either:

1. Electronically with Medtronic Physio-Control software – or -
2. Using the written AED Use report.

Either method requires forwarding of reports to the Whatcom County Medical Program Director at the **WCEMS/TC Council office**.

B. Written documentation (on the Whatcom County Cardiovascular and/or Respiratory Compromise Report) must be made on all cases in which a King tube attempt was made, whether successful or unsuccessful. The EMT who is in charge of patient care is responsible for completing the online report available at <https://www.surveymonkey.com/s/6HFR9TB>. The link can also be accessed from http://www.whatcomcountyeems.com/Committees_CQI.shtml. A hard copy is included below if necessary.

III. Reporting Timeline

- A. Reports are to be received by the Whatcom County Medical Program Director, or WCEMS/TC council office, within 2 business days after the call. These reports will be reviewed and utilized as necessary for continuing education, quality assurance, and statistical information.

Whatcom County Emergency Medical Services and Trauma Care Council

Cardiovascular and/or Respiratory Compromise Report

This report does not replace the MIR. It is for data collection and quality assurance purposes only.

Instructions: Complete all applicable sections and forward to the Whatcom County EMS/TC Council office. Information will be compiled and the original form forwarded to the Whatcom County MPD.

PATIENTS AGE: Sex: M F	INCIDENT DATE:	FD INCIDENT NUMBER: BFD INCIDENT NUMBER: (If known)	DISTRICT/AGENCY: STATION NUMBER:
PATIENTS CONDITION: check all that apply <input type="checkbox"/> Cardiopulmonary arrest <input type="checkbox"/> Respiratory arrest only <input type="checkbox"/> Anaphylaxis		DISTANCE FROM NEAREST RESPONDING UNIT TO INCIDENT?	NAME OF PROVIDER COMPLETING REPORT: PHONE # FOR ADDITIONAL INFORMATION:
AED		INTUBATION	EPI
AED USE: check all that apply <input type="checkbox"/> Lay public <input type="checkbox"/> BLS Responders <input type="checkbox"/> ALS Responders		INTUBATION ATTEMPTS: _____ Number of attempts SUCCESSFUL: <input type="checkbox"/> Yes <input type="checkbox"/> No	EPI AUTO INJECTOR USE: <input type="checkbox"/> Adult <input type="checkbox"/> Child
PATIENT DOWN TIME: <input type="checkbox"/> Bystander CPR Started <input type="checkbox"/> Witnessed Collapse		TYPE OF DEVICE USED: <input type="checkbox"/> King Tube Size: _____ <input type="checkbox"/> Combi-tube Size: _____ <input type="checkbox"/> Easy-tube Size: _____	NUMBER OF INJECTIONS ADMINISTERED:
		TUBE USED FOR VENTILATION: <input type="checkbox"/> Tube #1 (esophageal) <input type="checkbox"/> Tube #2 (tracheal)	TIME OF ANAPHYLACTIC EXPOSURE:
		SUCTION REQUIRED: <input type="checkbox"/> Yes <input type="checkbox"/> No	
PATIENT OUTCOME [check all known] <input type="checkbox"/> Expired at scene <input type="checkbox"/> Admitted with a pulse <input type="checkbox"/> Expired After Admission <input type="checkbox"/> Discharged alive <input type="checkbox"/> Transported by Paramedics <input type="checkbox"/> Expired in ER <input type="checkbox"/> Expected to be discharged alive <input type="checkbox"/> Unknown at this time			

Narrative: (Only fill out this section if you need to document any problems, special circumstances, or other information relevant to collection of this data for educational, statistical, and quality assurance purposes.)

Form # [WCEMSTCC 2008]

Permissive Protocols

The following protocols (Oxymetazoline and Pelvic Sling™) are permissive in nature, meaning that an agency may choose to participate or not.

Considerations for implementing this protocols should include;

- **Time to ALS intervention**
- **Agencies ability to uniformly apply protocols**
- **Costs associated with interventions**
- **Potential risks and benefits to patients**

OXYMETAZOLINE

(e.g. Afrin®)

EMT-B Skill

Rational:

Field care of epistaxis (nosebleeds) is now a BLS dispatch. Judicious use of over the counter medication (Afrin) can alleviate the situation in a timely manner with little risk to patient.

I. Indications

May be used to assist in controlling epistaxis in conjunction with direct nasal pressure.

II. Contraindications

Known hypersensitivity to the medication.

III. Cautions

Use with caution in patients with a history of significant cardiovascular disease. This is rarely a problem in short term use.

IV. Dosage and Administration

- A. Have patient clear Nasal passage (blow nose)
- B. Administer dose into desired nostril (Usual dosage is 2 - 3 sharp squeezes)
- C. Apply direct pressure to bridge of the nose

V. Adverse Effects

Very rare; sinus tachycardia may occur.

The Pelvic Sling™

EMT-B skill

Rational: Unrestrained movement of fractured pelvic bones following significant trauma can cause internal hemorrhage of 2-3 liters of blood, and death. Similar to c-spine injuries, pelvic fractures require **stabilization before transport**. Any motion between the torso and legs can cause severe shifting of the fractured pelvis, potentially dislodging any clotting already in place.

MAST pants can stabilize a broken pelvis, but over or under inflation of MAST will compromise their effectiveness. There is no way to know when the pressure is right for pelvic stabilization.

The Pelvic Sling was designed to apply the ideal amount of force to bring the pelvic ring back into alignment. Like the MAST, the Pelvic Sling uses circumferential pressure to squeeze the pelvis uniformly. The Sling's major advantage is that its buckle has a definite stop with a positive click at exactly the optimal calculated pressure.

Like a C-collar, the Pelvic Sling should be applied to *any* patient with high speed or other significant trauma suspicious for pelvic injury. 55% of all pelvic fractures are classified as stable therefore, even if instability of the pelvis is not obvious on exam, **mechanism of injury alone may indicate use of the Sling**.

I. Indications for Use

A. Patients with a history of high energy, multi-system trauma i.e.: motor vehicle accidents, pedestrian accidents, crush injuries, falls.

II. Contraindications for Use

Patients under 80 pounds

III. Procedure

- Review use instructions on the package.
- Clothing should be removed before placing the Sling. *(It is designed to stay in place until the patient goes to surgery).*

- Three sizes are available to fit patients

 - Large >200 pounds

 - Standard 110 – 200 pounds

 - Small <120 pounds

The standard size can be field modified to fit smaller patients, just cut off the plastic slide pad and use the Velcro that is under it. Cautions

- The Sling wraps the hips and buttocks, not the waist. Be sure you place the top of the sling no higher than the anterior superior spine of the femur. Try to make sure the buckle is centered over the alignment of the pubic symphysis.**

- The Sling is a single-use, disposable item

IV. Removal: ONCE THE SLING IS IN PLACE: DON'T REMOVE IT.

Patient Care Procedures

In an effort to standardize operations in special circumstances, the following section offers guidance on accepted and approved methods of procedure in the following areas.

Air Ambulance Operations

Crime Scene Activities

Transporting of Handcuffed Patients

Probable D.O.A. Patients

Air Ambulance Guideline

REVIEW

I. General Information:

Airlift Northwest is the air ambulance company serving Whatcom County and has helicopters based at St. Joseph Hospital (Bellingham), Arlington, as well as Seattle. When requesting a helicopter the closest, available ship will be sent.

It is advisable to request information on which ship is being dispatched and an estimated time of arrival (ETA).

II. Helicopter Capabilities:

The RN/RN crew is an ALS response team with prehospital skills including:

- * Airway Management/Endotracheal Intubation
- * IV starts/maintenance and medication administration
- * Cardiac Monitoring
- * Management of unstable patients including: Trauma, CPR, OB, Peds, Cardiac, Respiratory, Head Injury (see Category I list).

The pilot will make final determination about weather, takes-offs and landings, and IFR/VFR (instrument/visual) capabilities; day or night 24/7

III. Dispatch protocol for Use of Helicopters within Whatcom County:

The dispatch of a helicopter will be considered with any "Category I" patient for whom ALS care is greater than 30 minutes away.

In addition Airlift should be considered in multiple ALS Crew Response (MCI) situations even when within the 30 minute space. Some of the potential "close uses" would include MCI situations exhausting available ground ALS units, severe burn patients that might benefit from direct "Burn Center" transport, or other severe trauma patients that may benefit from direct transport to a "Level 1 Trauma Care center.

- **Category I patients include:**

- Multi-system trauma patient with blood pressure less than 90*

- Head Injury with decreased level of consciousness*

- Trauma with airway compromise, failing VS, or significant mechanism of injury*

- Uncontrolled bleeding*

- Spinal Cord injury with neurological impairment*

- Amputation with potential for re-implantation*

- Acute Chest Pain with possible MI*

- Resuscitated Cardiac/Respiratory Arrest*

- Decreased Level of consciousness or new onset CVA symptoms*

- Moderate to severe hypothermia or near drowning*

- Patients >60 with acute abdominal pain and blood pressure <90*

- Complications of Pregnancy*

- Unstable vital signs*

*Burns 20%, 10% for age <10 and age >50
Pediatric Trauma Score 8 or less
Pediatric Respiratory Emergencies*

IV. Procedure:

The normal procedure for dispatching Airlift should be to:

1. Consult with responding ALS ground ambulance about patient condition and need to fly,
2. Contact Prospect (or have medic unit to so) and request Airlift to be dispatched. In unusual situations Airlift Northwest can be dispatched by calling 1-800-426-2430 (Airlift dispatch) and requesting dispatch directly.

- **Requestor will be asked to provide one or two of the following:**

- Landing Zone Coordinates,*
 - GPS Coordinates,*
 - Map Coordinates,*
 - Totem map page and approximate location on page,*
 - Washington Road & Recreation Atlas*

- **Other considerations:**

- Radio Frequency (Fire 1,2,3, etc.) NOTE: It is recommended that the landing Zone use a separate frequency that that used in patient care.*

- Ground Contact (Unit Radio Identification)*

- Brief Patient Report*

- Destination Facility (Airlifts): Normally, St. Joseph Hospital in Bellingham will be the facility for Whatcom County transports. On rare occasions, would patients benefit from transport directly to another facility? Medical Control should be part of this decision process.*

Important to Note: Airlift **DOES NOT** communicate directly with St. Joseph Hospital (SJH) in Bellingham. Therefore, a patient report will need to be given to Medical Control at SJH as soon as possible in order to prepare to receive the patient and have the proper treatment teams in place.

Crime Scene Activities

EMT/FR Skill

I. The basic objective of crime scene protection is to preserve physical evidence that may be used to develop investigative leads and to prosecute defendants in court. Physical evidence must be protected from accidental or intentional alteration from the time it is first discovered to its ultimate disposition at the conclusion of an investigation.

A. Often, emergency medical service personnel are the first to arrive at potential crime scenes. EMS personnel may be unaware that the incident which necessitated the request for medical aid is a result of a criminal act.

1. While emergency aid may be imperative, medical personnel should exercise extreme caution in approaching scenes suspected or known to involve any violent act.
2. Sniper incidents have often resulted in multiple injuries among those trying to rescue the victim.
3. Responding emergency personnel must consider their own safety as well as the methods they will use in aiding victims.

B. Personnel should consider evidence preservation and crime scene protection while enroute to such an emergency. While saving life is paramount, personnel should do all they possibly can to prevent the loss of related evidence.

II. Errors of commission and errors of omission. Most errors in either category are unintentional, but they still complicate the investigation. A brand of cigarettes determined from butts found at the scene may be important, but if they were left by an officer, F/R, or EMT they are merely a waste of time, money and effort to analyze. Being aware of the problems commonly found at scenes and the needs of the investigating officers should help to prevent some of these difficulties. Descriptions of the two primary types of mistakes, which damage crime scenes are;

A. Errors of commission: occur when citizens, witnesses, officers, or emergency personnel smear fingerprints, step on evidence, add their own fingerprints, rearrange the scene, drop cigarette ashes and butts at the scene, etc. Any time anyone destroys existing evidence or adds "evidence" (cigarette butts), a serious mistake has damaged the crime scene.

B. Errors of omission: occur when personnel fail to notice the scent of perfume or cigar smoke, fail to listen to persons standing near the scene discussing the crime, or fail to take efforts to protect existing evidence which may otherwise be destroyed.

III. Crime Scene Do's and Dont's:

A. Do:

1. Ensure that items of evidence (spent cartridges, weapons, clothes, etc.) are not stolen or destroyed, moved or inadvertently stepped on.
2. Designate a garbage spot for all non-essential or non-evidentiary items.
3. Contain the crime scene area and restrict/stop pedestrian/vehicle traffic, (limit the number of EMS personnel to what is needed).
4. Note position of clothes on the body before disturbing for medical aid and check for any foreign substances that may be on the body.
5. If you move the body, be aware that pertinent evidence is often found underneath a body. Mark its location.
6. Call for assistance as needed to control onlookers and bystanders.
7. Seek guidance from the on-scene police officer.
8. Inform the officer in charge about any material (coat, sheet, blanket, etc.) used to cover/protect the victim from the elements. Officer may want those items as evidence.
9. Check with the officer in charge of the crime scene if you had close contact with the victim/deceased (your clothes may contain fibers and trace evidence).

B. Don't:

1. Do not move the body unless necessary to give aid, then note and/or mark the body's position.
2. Do not move evidence unless necessary. Point the evidence out to the officer where it is found, or mark (chalk, tape, etc.) the location where the evidence/items that required moving were. Obviously a gun on a crowded sidewalk probably should be secured, but use common sense. If the item is not going to be dangerous, stepped on, lost, or stolen where it is, leave it there for the officer.
3. Do not use bathroom facilities or sinks.
4. Avoid using the telephone and items in and around the crime scene.
5. If clothing must be cut, do not cut through bullet holes or knife cuts. These are critical pieces of evidence.
6. If patient is deceased or dies during your resuscitation, do not remove Combi/Easy-tube or any other invasive equipment. Mark all sites that caregivers broke the victim's skin, (epi-pen, glucose checks, etc.).
7. Hangings or other crimes involving ropes:
 - ❖ If a rope must be cut, do not cut it at the knot.
 - ❖ If the possibility of life exists, cut the rope at least 18 inches above the knot and in the bight. The knot is important evidence.
 - ❖ If the rope is over a limb or a beam, do not pull it down. Cut the victim down, if necessary, but do not pull the remaining rope down.

Transporting Handcuffed Patients

With the advent of BLS transport in the county it is more likely that law enforcement will be asking us to transport a patient who has been restrained but is still in need of an evaluation.

Decision to transport should be based on patient care needs.

Decision to transport with handcuffs should be based on patient care needs, security requirements and risk assessment. This decision should be reached through consultation with law enforcement (Would another means of restraint allow for better treatment and still address safety issues?)

Once the decision to transport with handcuffs has been made an officer needs to provide escort. Officer should be in the ambulance with the patient. If that is not possible they may provide escort by following directly behind the ambulance. Do not leave the scene with the patient until officer is also ready to follow.

Probable Dead on Arrival (D.O.A.)

EMT/FR Skill

*This protocol should be used in conjunction with the Washington State Department of Health Basic Life Support Field Protocols for “EMT-B,” or the “First Responder Trained Personnel,” **as well as the Washington State Department of Health “EMS- No CPR Guidelines” and the Washington State Department of Health/Washington State Medical Association, “Physician Orders for Life-Sustaining Treatment (POLST)”**.*

Purpose: To provide Basic Life Support providers with guidelines to aid in identifying the D.O.A. patient, as well as possible scene management concerns.

Application: D.O.A. patients are divided into two general categories:

- A. Obvious death, i.e. non-recent death and/or severe injuries obviously incompatible with life such as,
 - 1. Patient is cold and stiff while in a warm environment.
 - 2. Decomposition.
 - 3. Rigor Mortis (*A stiffening of the body after death*).
 - 4. Lividity (*A discoloration in the dependent portion of a deceased’s body, described as dark bluish or blackish in color*).
 - 5. Decapitation or severe head trauma with large parts of the skull and brain missing.
 - 6. Incineration.
 - 7. Evisceration of the heart, brain, or liver.
 - 8. Underwater submersion for 2 or more hours (consider extending 2 hour time if water temperature near freezing).
- B. Expected deaths (*refer to WA. State EMS No-CPR & POLST guidelines*).
 - 1. Terminal illness.
 - 2. Do not resuscitate orders (*DNR or POLST Orders*).

Procedure: When dispatched to a possible D.O.A. personnel should respond to the scene and:

- A. Confirm that the patient is pulseless, apneic, has no signs of life, and meets at least one of the above criteria.

If patient has any signs of life or does not meet the above criteria initiate appropriate resuscitative or care measures and an Advance Life Support response.

- B. Provide supportive care for family, and/or bystanders as needed to possibly include, but not limited to support officer response.
- C. Make appropriate contacts to facilitate deceased patient disposition, i.e.,
 - 1. **Non Hospice patient outside of a health care facility;**

In Whatcom county the Law Enforcement agency with jurisdiction at the scene works as the coroners agent and is the appropriate agency to make contact with and release the scene and deceased patient to;

2. Patient under hospice care;

Hospice is an organization dedicated to relieving pain and suffering of the terminally ill patient. Generally EMS is not activated when a patient under the care of hospice dies. If you do find yourself at the scene of a deceased patient that was under hospice care, hospice should be contacted and will usually respond to the scene to assist. The phone number is 733-5877 and first contact should be with the nurse on call. If no contact is made within 20 mins then recall and ask for the administrator on call. If both of these fail to get a response then the above law enforcement agency may be contacted to assist.

3. Patient in a health care facility, including “adult home health care facilities;”

Deaths of terminally ill patients at a health care facility are generally considered an attended death and usually do not require a law enforcement response. However the facilities ability to handle these situations varies greatly. Sometimes contact with the on call, or chief administrator, can facilitate an acceptable solution. If no acceptable plan can be arrived at, or patient was not terminally ill, or the death seems suspicious in any way then the above mentioned law enforcement agency should be contacted.

Other considerations: For EMS responders the scene of a death can have feelings of failure, inadequacy, and guilt associated with them. The switch from aggressive patient care to that of a sometimes-reluctant “Grief Counselor” can be difficult to make. Failure to recognize the need to “change gears” or recognize the emotions associated with death and dying can have long lasting psychological effects on families of the deceased as well as the responders.

Consider:

- A. Once a patient is deemed dead, you gain a new set of patients: “the grieving family.”
- B. What is the right way to grieve? (Don’t be judgmental about how different cultures and families express grief).
- C. CISM may be important for the responders.

TASER® Dart Removal

You may encounter a patient that has been subdued by law enforcement by the use of a TASER®, or stun gun. The TASER® works by firing two darts that are attached by wires. They can hit a suspect from 15 feet or more. The TASER® delivers up to 50,000 volts of electricity that renders the victim incapacitated. The discharge lasts 5 seconds or less and the patient can be controlled by the officer who delivered the charge. The electrical delivery is not harmful to the heart rhythm, to pacemakers or to breathing function.

They TASER® only enters the skin to about a few millimeters in depth. The EMT can safely remove the dart from the skin. There are parts of the body however, that if hit, the dart should be left in place. Those are the eye, face, neck, groin or breast. If a dart has been discharged to these areas, the dart should be left in place and the patient transported to the emergency room for dart removal.

Remember scene safety. There is a reason the TASER® was used! Your safety and that of your co-workers is important. Potential violence is a possibility. Just because a TASER® was used on the patient does not mean that the patient needs transport. If no other injuries are present and the patient had no need for further medical evaluation, the patient may be left with law enforcement.

TASER® DART REMOVAL AND CARE

ALS Indicators

Compromise in ABCs

BLS Indicators

TASER dart imbedded in skin

BLS Care

1. Assure the scene is safe
2. Wear PPE including gloves and eye protection – consider mask and gown if blood is present.
3. Remove TASER® cartridge from gun or cut wires *before removing darts*
 - **Darts are a sharps hazard** – treat as contaminated needle
 - Dispose of darts in sharps container or TASER® cartridge
4. Police must be in custody of patient
5. Restrain if needed

Removal Procedure

1. Grasp firmly with one hand and pull to remove, one dart at a time
2. Reassess patient
3. Consider medical or behavioral problems as the original cause of violent behavior
 - Drug/alcohol intoxication

- Behavioral problems
 - Trauma, etc.
4. Bandage wounds as appropriate
 5. Document situation and patient contact thoroughly

DO NOT REMOVE darts if:

- Patient is not under control
- Eye, face, neck, breast or groin are involved – patient must be transported to hospital for dart removal in this case

Patient Disposition

1. Release to law enforcement if indicated
2. Transport with law enforcement support if:
 - Eye, face, neck, breast or groin are involved
 - ALS indicated
 - Law enforcement officer requires medical evaluation. Police protocol may require transport. This may be by PD or ambulance.
3. Follow Patient Care Guidelines regarding restraint of aggressive or violent patients.

Burn Hazard

When a TASER® is used in the presence of pepper spray propellant, there is a burn hazard. Electrical arcing from imperfect (but effective) dart contact can ignite the propellant. The resulting combustion may not be visible, but can lead to complaints of heat and burning. If a patient complains of heat or burning, evaluate for possible minor burns.

BLS Transport Guideline/Considerations

This guideline is to allow responders to consistently apply standards to decisions regarding basic life support transportation. It is not meant to be all-inclusive but rather a guide for general practice. Each responder needs to be familiar with normal vital sign ranges and request advanced life support when the patient falls outside of those parameters.

A. Field Triage of BLS Patient

Chief Complaint

Age

Level of Consciousness

Breathing Status

Vital Signs

B. Parameters for BLS Transport

Systolic BP greater than 90mmHg

Heart Rate between 60-110

Respiratory Rate less than 30 without distress

Oxygen Saturation greater than 91% after O2 administration

Blood Glucose greater than 50mg/dl

SS of stroke that have definite onset of less than two hours needs immediate transport

C. Considerations: for upgrade to Advanced Life Support

Will time make a difference?

How much time can be saved driving code red versus meeting Medics en-route?

Time critical patients always need to have rendezvous with medic unit considered.

Do you feel patient would benefit from paramedic history and physical exam?

Does patient have complex medical history that may contribute to current illness?

Is the problem acute or chronic?

Does the patient require IV or meds?

Would patient benefit from severe pain management?

Do vitals fall within BLS parameters? Stable for transport?

Identifying Priority Patients

ALS Indicators = "Sick Patient"

- Poor general impression
- Unresponsive with no gag or cough reflexes
- Difficulty breathing
- Signs of poor perfusion
- Complicated childbirth
- Uncontrolled bleeding
- Severe pain
- Severe chest pain
- Inability to move any part of the body

Standard Criteria for Transport Decisions

■ **Leave At Scene**

- Minor illness or injury with little or no potential for patient to worsen
- BLS Indicators
- EMT feels confident that patient is responsible for self-care, or that another responsible party is present
- EMT urges patient to call back if further concerns or problems arise
- EMT recommends patient to follow up with private physician
- Patient refusal signed ONLY if:
 - ✓ a) EMT believes patient *should* go to medical facility and
 - ✓ b) patient refuses treatment/transportation

■ **Privately Owned Vehicle (POV)**

- Minor illness or injury with little or no potential for patient to worsen
- Clearly a minor BLS patient
- Further evaluation or treatment needed
- Responsible and capable driver and transportation is available

■ **BLS Aid Car**

- BLS Indicators (no suspicion of ALS)
- Further evaluation or treatment needed
- Continued BLS assessment, oxygen or other treatment needed en route
- No other responsible transport available
- Patient requires stretcher for transport

■ **ALS**

- ALS Indicators (IV, Cardiac monitoring, indications that patient may worsen)
- Continued ALS assessment or treatment needed during transport