BASIC LIFE SUPPORT PROTOCOLS

for

Skagit County Emergency Medical Services

Version 3.2

Donald L. Slack, M.D.
Skagit County Medical Program Director

Receipt for BLS Protocols

TO: Donald L. Slack, M.D.
Skagit County Medical Program Director
C/O Skagit County EMS Commission
2911 E. College Way, Suite C
Mount Vernon, WA 98273-8909

SUBJECT: Basic Life Support Patient Care Protocols (Version 3.2)

The purpose of this memo is to inform you that I have received Version 3.2 of the Basic Life Support Patient Care Protocols. Furthermore, I have reviewed these Protocols and will abide by their direction.

_____
Signature

_____
Printed Name

_____
Agency

_____
Date

Introduction

The following protocols are intended to serve as guidelines to EMS personnel in the management of pre-hospital patient care. Medical review and control of protocols is mandatory at the state, regional, and local levels. The protocols are not intended to be absolute treatment doctrines, but rather guidelines which have sufficient flexibility to meet the complex challenges faced by the EMS provider in the field.

The Skagit County Medical Program Director authorizes EMS personnel to provide EMS medical care. Daily authorization for pre-hospital medical care is delegated by the Medical Program Director to the On-line Medical Control physician in the Emergency Department(s) (base hospital(s)).

All EMS providers are expected to use the protocols appropriate to their certification level. First Responders and EMTs shall utilize the Basic Life Support (BLS) Protocols according to their certification level.

These protocols shall supersede all BLS Protocols in Skagit County.

Revised: Sept. 28, 2007

Donald L. Slack, M.D.
Skagit County EMS Medical Program Director

Skagit County BLS Protocols

TABLE OF CONTENTS

(Page 1 of 2)

TABLE OF CONTENTS

(Page 2 of 2)

(Continued)

GENERAL ORDERS

I. Scene Size-up/Assessment
- A. Body substance isolation per agency exposure control program
- B. Scene safety

II. Initial Patient Assessment
- A. Airway - Breathing - Circulation
  1. Follow current national standards for CPR, FBAO and defibrillation
  2. If patient has a DNR order, follow the Do Not Resuscitate (DNR) protocol
- B. Consider need for additional resources including ALS

III. Focused History And Physical Exam - Medical Patients (see Medical Assessment Protocol)

IV. Focused History And Physical Exam - Trauma Patients (see Trauma Assessment Protocol)

V. Detailed Physical Exam
- A. Patient and injury specific
- B. Perform a detailed physical examination for additional information

VI. Management
- A. Provide appropriate care according to specific treatment protocol.
  1. Follow current national standards for CPR, FBAO and defibrillation
  2. Consider **ALS** for **all** patients
  3. **ALS evaluation required for:** respiratory distress or threatened airway compromise, signs of shock, SBP<80 or>220, ongoing chest pain in a male > or equal to 40 years of age or female> or equal to 45 years of age, extreme pain with need for pain management

VII. Ongoing Assessment
- A. Repeat and record initial patient assessment, including time
- B. Reassess mental status
- C. Maintain open airway and monitor breathing for rate and quality
- D. Reassess pulse for rate and quality
- E. Monitor skin color and temperature
- F. Re-establish patient priorities
- G. Reassess and record vital signs, include time
- H. Repeat focused assessment of patient complaint or injuries
- I. Check interventions

VIII. Communications
- A. Radio information protocol to in coming units.
  1. Identify your response unit.
  2. Patient's age, sex, and primary complaint or problem
  3. Physical assessment findings including, vital signs and level of consciousness
  4. Pertinent history as needed to clarify problem (medications, illnesses, allergy, mechanism of injury)
  5. Treatment given and patient's response.
- B. Verbal and written report to ALS or receiving staff
- C. Consider critical incident stress debriefing as necessary.

IX. Clean, Service and Restock Vehicle

AIR-MEDICAL TRANSPORT FROM FIELD

Airlift Northwest Dispatch 1-800-426-2430

Helicopter transport from the field is appropriate for critical patients who have a prolonged ground transport time to an appropriate hospital. Multisystem trauma patients with a ground transport time to Skagit or Island Hospital greater than 30 min, neurologic/spinal trauma patients (altered level of consciousness or motor deficit after trauma) may be flown from the scene to Harborview Medical Center. For neurologic/spinal patients who are within 20 min by ground (inclusive of packaging time) to Skagit or Island Hospitals, initial stabilization at the hospital prior to transport may be appropriate. Contact medical control (inbound ALS units, or the ED physician) when practical, prior to initiating helicopter transport from the field. In the event of a prolonged response time from Airlift Northwest, (greater than or equal to anticipated ground transport time to Skagit or Island), the patient should be transported by ground to the nearest appropriate hospital. In the most northern parts of the county, transport to St Joseph's Hospital in Bellingham may be appropriate. Critical non-trauma patients with prolonged ground transport times may also be appropriate for air transport, in this case, the destination should be the nearest appropriate hospital, this should be determined in discussion with medical control. The goal should be to minimize the time between patient contact and arrival at the hospital, when evaluating this, response time for airlift should be considered.

Airlift Northwest encourages the practice of placing them on standby when there is a possibility they will be utilized. An initial call to airlift to place them on standby to check on availability and estimated response time for airlift may be helpful in decision making.

Medical Emergencies

GENERAL MEDICAL ASSESSMENT

I. Scene Size-up/Assessment

II. Focused History and Physical Exam

A. Assess complaints and signs and symptoms, responsive patient

1. O-P-Q-R-S-T assessment guidelines
2. Obtain SAMPLE history
3. Obtain vital signs
4. Conduct AVPU mental status exam as needed
5. Intervention

III. Management

A. Provide appropriate care according to specific treatment protocol.

IV. Ongoing and/Or Detailed Assessment As Needed

Medical Emergencies
ANAPHYLAXIS/ALLERGIC REACTION

Note: Life threatening airway/respiratory compromise may develop as the reaction progresses.

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Detailed Physical Exam

A. Signs and symptoms

1. Not all signs and symptoms are present in every case
2. History - Previous exposure; Previous experience to exposure; Onset of symptoms; Dyspnea
3. Level of Consciousness - Unable to speak; Restless; Decreased level of consciousness; Unresponsive
4. Upper Airway – Hoarseness; Stridor; Pharyngeal edema / spasm
5. Lower Airway – Tachypnea; Hypoventilation; Labored-Accessory muscle use; Abnormal retractions; Prolonged expirations; Wheezes; Diminished lung sounds
6. Skin – Redness; Rashes; Edema; Moisture; Itching; Urticaria; Pallor; Cyanotic
7. Vital Signs – Tachycardia; Hypotension
8. Gastrointestinal - Abnormal cramping; Nausea/vomiting; Diarrhea

III. Management

A. Remove offending agent (i.e. stinger)

B. Clear the airway, provide oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment

C. Anaphylaxis/Allergic Reaction with Severe Respiratory Distress

1. Epinephrine 1:1000 (Administered by an Epi Auto-injector from **your** EMS supplies)
   a) Dosage:
      (1) **Adult:** (30 kg or 66 lbs and higher) - one adult auto-injector (0.3 mg)
      (2) **Infant and child:** (Under 30 kg or 66 lbs) - one pediatric auto-injector (0.15 mg)
   b) Ensure epinephrine is not expired, cloudy or crystallized
   c) If situation appears to be immediately life threatening and is clearly due to anaphylactic reaction, administer Epi Auto-injector.
   d) Record time of injection and reassess in two minutes
2. If the administration of Epi is refused do not administer Epi, ALS transport and continue supportive care.
3. If patient is 17 years of age or younger and parent or guardian is not immediately available or refuses, contact Medical Control prior to any administration of epinephrine.

D. Pulse Oximetry if available

E. Psychological support

IV. Ongoing Assessment

V. ALS/BLS Transport

Medical Emergencies

ALTERED MENTAL STATUS

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Use AVPU mnemonic to determine level of responsiveness
1. Alert and oriented
2. Responsiveness to verbal stimuli
3. Responsiveness to painful stimuli
4. Unresponsiveness

B. Attempt to determine cause of altered mental status, if possible; e.g., overdose, medical condition by SAMPLE history or trauma assessment
1. Signs and symptoms
2. Allergies
3. Medications
4. Pertinent past medical history
5. Last oral intake
6. Events leading to the injury or illness

III. Management

A. Provide oxygen and/or ventilatory assistance as necessary

B. Do not leave unattended

C. Attempt to determine cause - i.e., hypoglycemia, poisoning, post seizure, infection, head trauma, hypo perfusion

D. ALS indicators - i.e., hypoglycemia other standard indicators

IV. Ongoing Assessment

V. ALS/BLS Transport

Medical Emergencies

BEHAVIORAL EMERGENCIES

CAUTION:

Be alert: Patient behavior may change rapidly and the scene may become unsafe.

I. Scene Size-Up/Initial Patient Assessment

A. If Scene Is Not Secure
1. Guarantee your own safety
2. Wait for law enforcement to secure the scene

B. When Scene Is Secure
1. Scan for signs of items contributing to crisis
2. Locate the patient
3. Assess and treat life-threatening problems
4. If show of force necessary to render care, request assistance from law enforcement and contact medical control

II. Focused History and Physical Exam

A. Signs and symptoms **Note: Always consider Medical cause** i.e. Hypoxia, hypoglycemia, trauma, shock, infection toxicity
1. Psychological Crisis
a) Panic
b) Agitation
c) Bizarre behavior
d) Danger to self or others
2. Suicide Risk
a) Depression
b) Suicidal gestures/past suicide attempts
c) Mental Status Examination (see Altered Mental Status Protocol)

III. Management

A. One EMT to assume control of situation
B. Speak in a calm, quiet voice; maintain eye contact and move slowly
C. Answer questions honestly
D. Do not leave the patient alone or turn your back
E. Restrain only if necessary for your protection or that of the patient

IV. Ongoing Assessment

V. ALS/BLS Transport

A. If patient consents, follow general medical assessment guidelines.
B. Patient refusal: Evidence of danger to self or others OR evidence that the patient is gravely disabled and lacks the capacity to refuse care are indications for involuntary treatment/transport. Assess patient for above, and utilize law enforcement if needed. If there is doubt as to patient compentence, or if patient refuses care, contact medical control. If patient is agitated /combative, consider ALS for sedation

Medical Emergencies

CARDIOVASCULAR EMERGENCIES – Revised 5/25/2007

I. Scene Size-Up & Initial Patient Assessment

II. Focused History & Physical Exam

A. **O**nset/**P**rovocation/**Q**uality/**R**adiation/**S**everity/**T**ime

B. **Signs & Symptoms**

1. Chest pain, Difficulty breathing, Skin changes, Nausea/vomiting
2. Anxiety/irritability (feeling of impending doom)
3. Circulatory (irregular pulse or BP, shock, no pulse)

III. Management

A. **Patient responsive**, complaining of chest pain/pressure/SOB/sweating

1. Provide supplemental oxygen and/or ventilation assistance as necessary
2. Patient's own physician prescribed Nitroglycerin available; assist patient with self administration of Nitroglycerin.

B. **Contraindications for Nitroglycerin**

1. Use of medication for erectile dysfunction medication Viagra (sidenifil) or other (i.e. Cialis) within 36 hours. Contact medical control BEFORE administering if any question regarding previous use of ED drugs by patient
2. Baseline systolic BP is below 100 mm/Hg
3. Head injury suspected
4. Patient is infant or child
5. Three doses have already been taken by the patient

C. **Medication Form**

1. Tablet, sublingual spray

D. **Dosage**

1. One tablet or one spray under the tongue. May repeat every five (5) minutes, up to 3 times if no relief.
2. Check patient's blood pressure prior to each repeated dose
3. If patient's own physician prescribed Nitroglycerin not available or appropriate;
   a) Continue Oxygen
   b) Allow patient to achieve safe position of comfort
4. **Aspirin**
   a) Be sure that the patient is alert and responsive
   b) Have the patient chew two baby aspirin (162mg).
   c) Record your actions, including the dosage and the time of administration.

Contraindications for use of aspirin

1) Patient is allergic to aspirin or ibuprofen (Motrin®, Advil®).
2) If they have just taken aspirin for this event, do not administer aspirin.

B. **Patient unresponsive**

1. Check respirations and pulse
2. Begin CPR if not provided during Initial Patient Assessment (follow current national standards). If Do Not Resuscitate, order, follow protocols on Do Not Resuscitate (DNR)
3. Provide supplemental oxygen and/or ventilator assistance as necessary, if not done during Initial Patient Assessment.
4. Attach Automatic External Defibrillator (AED).
5. Follow general defibrillation protocol

IV. Ongoing Assessment

V. ALS/BLS Transport as appropriate

Medical Emergencies

AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

EMT/First Responder Skill

Skagit County EMT and First Responder trained personnel will follow the most current American Heart Association/American Red Cross or equivalent guidelines for AED use, with the following Modifications.

The expectation is that every provider receives, at a minimum, annual training and testing on American Heart Association's current CPR and AED guidelines.

Procedure: You are authorized to perform the following:

A. Upon arrival, **verify respiratory and circulatory arrest** by the absence of consciousness, respirations and pulse.

B. Initiate CPR. Continue with defibrillation protocol. The AED is configured to shock patients over 20 kg (45 lbs), with adult electrode pads. Patients less than 20 kg (45lbs) without a pulse use pediatric electrode pads.

C. **GENERAL DEFIBRILLATION PROTOCOL**:
Emergency personnel are authorized to deliver electric shocks with an 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 an unwitnessed collapse, 2 minutes of CPR before delivering first shock. If responder can verify good CPR was being performed for 2 to 4 minutes prior to their arrival, treat as a witnessed arrest and apply electrodes immediately. The exact details of sequencing can vary as long as the following overall goals are met:
   1. CPR is interrupted for a minimum of time.
   2. Overall patient care and EMS personnel safety are never neglected.

Medical Emergencies

DEFIBRILLATION GUIDELINES

WITNESSED COLLAPSE

1. Assess ABCs
2. Perform effective CPR (see attached guidelines)
3. Attach electrodes as quickly as possible
4. Clear Patient

UNWITNESSED COLLAPSE

1. Assess ABCs
2. Perform effective CPR for 5 cycles (see attached guidelines)
3. Attach Electrodes
4. Clear Patient

#5. ANALYZE

SHOCK ADVISED

Deliver Shock
Perform 2 minutes of CPR
Check Pulse
Repeat No. 5 (Analyze)

NO SHOCK ADVISED

Perform 2 minutes of CPR
Check Pulse
Repeat No. 5 (Analyze)

Pulse present

Check Airway
Provide Rescue Breathing
Provide Oxygen
Check Blood Pressure
Continue with Patient Care

Medical Emergencies
CLINICAL GUIDELINES

1. **Pediatric Considerations:** The AED is configured to shock patients over 20 kg (45 lbs). Patients less than 20 kg (45lbs) use pediatric pads.

2. **Rapid defibrillation:** No prescribed period for initial CPR in a witnessed collapse. The first shock should be delivered within 60-90 seconds of the provider's arrival at the patient's side. Do CPR for 2 minutes if down time of 4 or more minutes is suspected unless responder can verify good CPR was performed for 2 to 4 minutes before their arrival.

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 adequate circulatory pressure.**

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 one. Continue with core warming efforts and contact medical control.

8. **Written documentation:** In accordance with SCEMS policies, written documentation must be made on all cases in which an AED attempt was made whether successful or unsuccessful. **The EMT/FR who is in charge of patient care is responsible for the written reports**. *In addition to standard MIR reports kept at the user's agency, reports of AED use, for statistical and quality assurance purposes, will be forwarded to the EMS Commission office. This report needs to be done for **ALL** events including those initiated by the lay public. Standard MIR and electronic records of AED use should be forwarded to the MPD at the **EMS Commission office.***

Medical Emergencies
CPR STANDARDS

Maneuver	Adult	Child	Infant
ACTIVATE EMS (lone rescuer)	As soon victim found HCP: Asphyxial arrest likely do 2 min of CPR first	After performing 5 cycles of CPR For Sudden witnessed collapse active after verifying unresponsiveness	See Child
AIRWAY	Head tilt-chin-lift	For all (HCP: trauma	use jaw thrust)
Breaths initial	2 breaths at 1 sec/breath	2 effective breaths 1 sec/breath	2 effective breaths 1 sec/breath
HCP rescue breathing	10-12 breaths/min (1 breath 5 to 6 sec)	12-20 breath/min (1 breath 3 to 5 sec)	See child
HCP rescue breath with advanced airway	8-10 breaths/min	For all	
FBAO	Abdominal Thrust For conscious patient	See adult	Back slap-chest thrust
Circulation HCP	Carotid	Carotid (femoral optional)	Brachial or femoral
Compression Landmarks	Center of chest between nipples	See adult	Just below nipple line
Compression method	2 hands: heel of 1 hand with other on top	2 hands: as adult -or- 1 hand: heel of 1 hand	1 rescuer: 2fingers HCP: 2 rescuer: 2 thumbs- encircling hands
Compression Depth	1 ½ to 2 inches	1/3 to ½ depth of chest	See child
Compression Rate	100/ min for all		
Compression/ventilation ratio	30:2	30:2 (single rescuer) HCP:15:2 (2 rescuer) *Corrected 3/06	See child
Ventilation without advanced airway	1 breath every 5 sec for adult and child		
AED	Use adult pads HCP: 5 cycles of CPR before shock if response > than 4 minutes and arrest not witnessed	HCP: after 5 cycles of CPR use child pad/system if available or use adult pads	HCP: after 5 cycles of CPR if the pads fit there is no harm and could potentially save them

Note: HCP= Health Care Provider

Medical Emergencies

DIABETIC EMERGENCIES

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms

1. Hypoglycemia (Develops rapidly)
   a) Dizziness and headache
   b) Abnormal, hostile or aggressive behavior
   c) Fainting, convulsions
   d) Full rapid pulse
   e) Skin pale, cold and clammy
   f) Copious saliva, drooling
2. Hyperglycemia (Develops slowly)
   a) Dry mouth, and intense thirst
   b) Abdominal pain and vomiting
   c) Restlessness
   d) Weak, rapid pulse
   e) Dry, red, warm skin

III. Management

A. If **patient is able to swallow**, administer oral glucose, or substance high in simple sugar; i.e., honey, orange juice with 2-3 tsp. of sugar. ALS if patient is not alert or unable to swallow and hypoglycemia is suspected

B. Be prepared for patient to vomit

C. Provide supplemental oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment

D. Maintain body temperature

E. Place patient in position of comfort, preferably lying on their side, and be prepared for patient to vomit.

IV. Ongoing Assessment

V. ALS/BLS Transport

Gynecological Emergencies

EXCESSIVE VAGINAL BLEEDING

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

III. Management

A. Provide supplemental oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment, (see Oxygen Delivery protocol)
B. If bleeding due to trauma to external genitalia, place appropriate external dressings to any wounds
C. Do not place dressings inside vagina
D. If hypotensive, treat for shock (see Shock protocol)

IV. Ongoing Assessment

V. ALS/BLS Transport

Gynecological Emergencies
SEXUAL ASSAULT

Note: Protect Potential Crime Scene and any Evidence as Much as Possible.

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

III. Management

A. Provide supplemental oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment
B. Follow treatment protocols for victims of trauma
C. Advise patient not to wash, douche, urinate or defecate prior to physician exam
D. Do not examine genitalia unless obvious bleeding requires the application of a dressing
E. Do not place dressings inside vagina
F. If hypotensive, treat for shock

IV. Ongoing Assessment

A. Provide non-judgmental emotional support

V. ALS /BLS Transport

Obstetrical Emergencies
EMERGENCY DELIVERY

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Determine
1. Date of expected birth
2. Onset of contractions/pain
3. Any bleeding or discharge
4. Number of pregnancies/births
5. Duration and frequency of contractions

B. Signs and symptoms of imminent delivery
1. Perineum bulging or baby crowning
2. Contractions < 2 minutes apart
3. Mother expresses the need to "push" or "bear down"

III. Management

A. Have mother lie supine with knees drawn up and spread apart
B. Prepare OB kit
C. When the infant's head appears during crowning, place fingers on bony part of skull and exert very gentle pressure to prevent explosive delivery
D. When head is delivered, suction infant's nose and mouth with bulb syringe
E. Assist delivery of shoulders and body; do not pull on infant
F. When baby is delivered;
1. Wipe blood and mucus from mouth and nose, suction mouth and nose again
2. Assure patent airway, stimulate cry by tapping soles of feet
3. Do APGAR assessment on infant one minute after delivery (appearance, pulse, grimace, activity, respiratory effort (see APGAR protocol)
4. Wrap infant in warm blanket and place on its side, head slightly lower than trunk
5. Keep infant level with vagina until the cord is cut
6. As pulsations cease; double clamp, tie and cut cord between two clamps

G. Record time of delivery
H. Let placenta deliver normally - Note: Do not pull on cord.
1. Place placenta in plastic bag and transport with mother
2. Massage mother's lower abdomen until firm

I. Place sterile pad over vaginal opening

IV. Ongoing Assessment

A. Estimate blood loss, treat for shock as necessary

V. ALS/BLS Transport

Obstetrical Emergencies

COMPLICATIONS OF DELIVERIES

(Page 1 of 3)

MISCARRIAGE - SPONTANEOUS ABORTION

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Cramp-like lower abdominal pain similar to labor
2. Moderate to severe vaginal bleeding, which may be bright or dark red
3. Passage of tissue or blood clots

III. Management

A. Provide supplemental oxygen and/or ventilatory assistance as necessary
B. Treat for shock
C. Place sterile pad over vaginal opening
D. Prepare fetal tissues for transport to the hospital

IV. Ongoing Assessment

V. ALS/BLS Transport

PROLAPSED CORD

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Cord presents through the birth canal before delivery
2. Generally occurs early in labor

III. Management

A. Provide supplemental oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment
B. Position mother in knee chest position or extreme Trendelenburg
C. Insert sterile gloved hand into vagina pushing the presenting part of the fetus away from the pulsating cord
D. Keep pressure on presenting part and monitor pulsations in the cord
E. Continue monitoring pulsations until relieved at the hospital

IV. Ongoing Assessment

V. Transport

Obstetrical Emergencies
COMPLICATIONS OF DELIVERIES
(Page 2 of 3)

(Continued)

BREECH BIRTH AND/OR LIMB PRESENTATION

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam
- A. Signs and symptoms
  - 1. Buttocks or extremities present first during the delivery process

III. Management
- A. Provide supplemental oxygen and/or ventilatory assistance as necessary
- B. Allow delivery to progress spontaneously
- C. Support infant's body as it is delivered
- D. If head delivers spontaneously, proceed as with normal delivery - If head does not deliver within 4-6 minutes, insert gloved hand into vagina, create an airway for the baby
- E. Place mother in head down position with pelvis elevated
- F. Do not remove hand from inside vagina until relieved by ALS or hospital staff

IV. Ongoing Assessment

V. ALS/BLS Transport

MECONIUM STAIN

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam
- A. Signs and symptoms
  - 1. Greenish or brownish-yellow amniotic fluid rather than clear
  - 2. Discoloration/staining on infant's face
  - 3. Often indicates possible fetal distress during labor

III. Management
- A. Do not stimulate infant to breath prior to suctioning
- B. Thoroughly suction oropharynx and nasopharynx
- C. Maintain infant's airway

IV. Ongoing Assessment

V. ALS/BLS Transport

Obstetrical Emergencies

COMPLICATIONS OF DELIVERIES

(Page 3 of 3)

(Continued)

PRE-DELIVERY SEIZURES

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Mild pre-eclampsia
a) Hypertension (moderate, above 140 and below 160 systolic)
b) Edema
c) Rapid weight gain
2. Moderate to severe
a) Hypertension above 160 systolic
b) Headache
c) Changes in behavior
d) Visual disturbances
e) Dyspnea
f) Cyanosis
3. Eclampsia (any of the above plus)
a) Seizure
b) Postictal

III. Management

A. Provide supplemental oxygen and/or ventilatory assistance as necessary
B. Take seizure precautions
C. Prepare patient for Transport, preferably lying on left side
D. **ALS** for moderate or severe complications (see II 2.)

IV. Ongoing Assessment

V. ALS/BLS Transport

POISONING/OVERDOSE

(Page 1 of 2)

CAUTION: Do not expose yourself to toxic atmospheres or substances without proper training, PPE and other equipment. If caregiver or patient is exposed, consider primary HAZMAT decontamination. Consider need for additional resources.

Note: Life threatening airway/respiratory compromise or shock may develop as the reaction progresses.

INGESTED SUBSTANCES

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms: history of ingestion (reason for ingestion, who/why was EMS called) nausea, vomiting, diarrhea, altered mental status, abdominal pain, chemical burns around the mouth, different breath odors

III. Management

A. Remove pills, tablets or fragments from patient's mouth, prevent access to additional pills, etc.

B. Provide oxygen and/or ventilatory assistance as necessary. (see Oxygen Delivery protocol)

C. Asymptomatic patients with accidental ingestion, contact poison control (1-800-222-1222) if patient is with a reliable adult they may not require transport.

1. Contact medical control for non-transport if poison control recommends leaving patient at home.
2. **ALS** for altered mental status, HR>110, <60, and standard ALS indicators

IV. Ongoing Assessment

V. ALS/BLS Transport

INHALED SUBSTANCES

I. Scene Size-Up/Initial Patient Assessment

A. Ensure scene is secure to avoid exposure of personnel

II. Focused History and Physical Exam

A. Signs and symptoms: history of inhalation of toxic substance, difficulty breathing, chest pain, cough, hoarseness, dizziness, headache, confusion, seizures, altered mental status

III. Management

A. Provide oxygen and/or ventilatory assistance as necessary

B. Contact poison control for asymptomatic patients, non-transport requires med control contact

IV. Ongoing Assessment

V. ALS/BLS Transport

POISONING/OVERDOSE

(Page 2 of 2)

(Continued)

TOXIC INJECTION

I. Scene Size-Up/Initial Patient Assessment

A. Ensure scene is secure to avoid exposure of personnel

II. Focused History and Physical Exam

A. Signs and symptoms: weakness, dizziness, chills, fever, nausea, vomiting

III. Management

A. Provide oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment (see Oxygen Delivery protocol)

B. Treat open wounds

IV. Ongoing Assessment

V. ALS/BLS Transport

ABSORBED SUBSTANCES

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms: history of exposure, liquid or powder on patient's skin, burns, itching, irritation, redness

III. Management

A. Provide oxygen and/or ventilatory assistance as necessary

B. Skin - remove contaminated clothing while protecting self from contamination

1. If powder present, brush off patient
2. Irrigate with water for at least 20 minutes, continuing enroute to the hospital, if possible

C. Eye - irrigate with clean water away from unaffected eye for at least 20 minutes, continuing enroute to the hospital if possible

D. Be prepared for vomiting, seizures or further deterioration of the patient

E. Bringing all containers, bottles, labels, etc. of poison agents to receiving facility

IV. Ongoing Assessment

V. ALS/BLS Transport

RESPIRATORY EMERGENCIES

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Assess Onset/Provocation/Quality/Radiation/Severity/Time

B. Signs and symptoms

1. Anxious/restless
2. Shortness of breath (air hunger, increased/decreased/absent respirations)
3. Skin color changes (cyanotic, pale/clammy, redness/flushing)
4. Abnormal airway noises (wheezing, stridor, gurgling, snoring)
5. Mechanics of respiration (fatigue due to breathing effort, diaphragmatic breathing, retractions, irregular breathing pattern)
6. Patient position (upright, feet dependent; tripod)
7. Drooling, difficulty swallowing, seal bark cough

C. Allergies/medications/pm Hx/last oral intake/events prior

III. Management

A. Patient c/o SOB/inadequate respirations

1. Remove obstruction, if any (follow current national standards for foreign body airway obstruction)
2. Provide supplemental oxygen and/or ventilatory assistance as necessary
3. Allow patient to achieve position of comfort (POC)
4. Prepare to manage/assist respirations as necessary
   a) patient not breathing
   b) patient unable to maintain adequate breathing on their own

B. Patient c/o SOB with wheezing

1. Provide supplemental oxygen and/or ventilatory assistance as necessary
   Assist patient with self administration of inhaler if available and prescribed for patient

C. Pediatric Considerations

1. Airway obstruction (follow current national standards for foreign body airway obstruction)
   a) Use infant/child foreign body airway procedures if complete obstruction
   b) If incomplete obstruction
      (1) do not agitate patient
      (2) allow patient position of comfort
      (3) oxygen/limited exam
2. Patient drooling, with difficulty swallowing, or seal bark cough
   Note: **Do not** attempt to visualize oropharynx.
   a) Assist ventilations as needed.
   b) Provide supplemental oxygen and/or ventilatory assistance as necessary
   c) Allow patient to achieve position of comfort (parent's lap as appropreate)

D. Be prepared to provide positive pressure ventilation should patient deteriorate

IV. Ongoing Assessment

A. Monitor patient and vital signs closely

V. ALS/BLS Transport

COMBITUBE

(Page 1 of 3)

EMT/COMBITUBE TECH SKILL

Use of the Esophageal Tracheal Combitube (ETC) by EMT/First Responder.

I. Indications
Patient is apneic and without a gag reflex and,

A. Combitube SA (Small Adult)
Patient is between four feet and five feet (4' to 5') tall or,

B. Combitube Standard Size:
Patient is over five (5') tall.

NOTE: Patients between 5' 6" and 5' 9" tall may get either size tube. If unable to insert large adult tube in patient over 5' 9", try small adult.

II. Contraindications
The Combitube is contraindicated and should not be used in the following situations:

A. An intact gag reflex

B. Under four feet (4' 0") tall

C. Cases of known or suspected caustic poisoning

D. Known esophageal disease, or esophageal trauma

III. General items

A. For patients in cardiopulmonary arrest, early defibrillation takes precedence over the placement of the Combitube.

B. The Combitube is not a replacement for standard endotracheal (ET) intubation.
If ALS intervention is less 5 minutes from arrival and the patient can be ventilated do not place the Combitube.

C. Written documentation must be made on all cases in which a Combitube 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 Skagit County Medical Program Director at the **SCEMS Commission office**.

COMBITUBE

(Page 2 of 3)

(Continued)

D. Before releasing a patient with a Combitube in place to another level of care (i.e., emergency physician, nurse, paramedic), the EMT must be certain that the receiving person is knowledgeable about proper use and function of the device and is aware that it is in place.

E. In the event that a Combitube has been placed and an aid unit that will transport the patient is not staffed with personnel trained to use the device, the EMT who performed the procedure will accompany the patient to the emergency room, or until personnel with equal or higher level of certification can assume patient care.

1. When facial trauma has resulted in sharp, broken teeth or dentures, remove dentures and exercise extreme caution when passing the Combitube into the mouth to prevent the cuff from tearing.
2. The Combitube is a single patient use device, once it has been used, it should not be reused or recycled.

IV. Procedure

A. Verify cardiac and/or respiratory arrest.

B. Initiate CPR and ventilate via pocket mask or bag valve mask with high flow oxygen.

C. If appropriate (i.e. respiratory arrest) Ventilate 30-60 seconds prior to Combitube intubation attempt.

D. If the patient is in cardiopulmonary arrest and an automatic defibrillator is immediately available, first proceed with defibrillation as per protocols.

E. Placement of the Combitube may be done at any point during the defibrillation protocols where a shock is not indicated or rhythm analysis is not being performed.

F. Continue ventilations while preparing the Combitube.

G. Place the head in a neutral position.

H. Insert the Combitube into mouth and advance gently until the teeth or gums are aligned between the two black rings on the tube.

I. Inflate proximal and distal cuffs per manufacturer's recommendations and adjust cuff volumes as needed to achieve and maintain seal.

K. Attach a bag-valve-mask to the Number 1 Tube and begin ventilations.

L. Using a stethoscope, listen for breath sounds in both lateral lung fields and over the epigastrium.

1. If breath sounds are present, with equal chest rise and condensation noted in the Number 1 Tube – Continue ventilations.

COMBITUBE

(Page 3 of 3)

(Continued)

2. If breath sounds are absent and air exchange is heard over the epigastrium, tracheal placement has been accomplished.

   - Remove the bag-valve-mask from the Number 1 Tube, attach the bag-valve-mask to the Number 2 Tube and begin ventilations.

   - Again, using a stethoscope, listen for breath sounds in both lateral lung fields and over the epigastrium.

   - If breath sounds are absent and air exchange is heard over the epigastrium – deflate both cuffs, remove the Combi/Easy-tube, and continue ventilations through a bag-valve-mask or pocket mask.

   - If unsuccessful after the second attempt to insert the Combitube discontinue the procedure and continue ventilations via a bag-valve-mask or pocket mask.

Periodically check for appropriate placement of the Combitube and adequate ventilations.

V. Removal of the Combitube

If the patient regains consciousness or begins to fight the tube, restrain if necessary, and immediately remove the Combitube as follows:

A. Turn the patient on to their side.

B. Deflate both the pharyngeal and distal cuffs through Lines 1 and 2.

C. Gently remove the Combitube.

D. Be prepared, for the patient may vomit; suction as necessary.

E. Assure the patient's respirations are adequate; assist as necessary giving supplemental oxygen per protocols.

SEIZURES

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. May experience sensory changes
a) Aura
b) Abnormal twitch
c) Anxiety
d) Dizziness
e) Smell, vision, taste
2. Sudden unresponsiveness
3. Convulsions
4. Loss of bowel and bladder control
5. Postictal (recovery phase)
a) Confusion, disoriented and possibly combative
b) Exhausted and weak

III. Management

A. Maintain airway
B. Provide oxygen and/or ventilatory assistance as necessary
C. Suction as needed
D. Prevent injury to the patient
E. Pediatric Considerations - Febrile Seizure
1. Signs and symptoms
a) Oral or rectal temperature > 100°
b) Convulsions
2. Emergency Medical Care
a) Remove heavy or swaddling clothes, keep lightly dressed
b) Maintain airway
c) Provide oxygen and/or ventilatory assistance as necessary
d) Suction as needed

IV. Ongoing Assessment

V. ALS/BLS Transport

A. Transport patient on their side

NOTE: Conditions that may cause seizures:
• Epilepsy • Fever • Infections • Poisoning • Hypoglycemia (low blood sugar) • Stroke
• Head trauma • Hypoxia (oxygen starvation) • Dysrhythmia (abnormal heart rhythms)
• Eclampsia (Pre-delivery seizure, usually related to severe high blood pressure)

Environmental

BITES AND STINGS - VENOMOUS

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. History of bite (spider, snake) or sting (insect, scorpion or marine animal)
2. Pain
3. Redness and/or swelling
4. Weakness and/or dizziness
5. Chills or fever
6. Nausea and vomiting
7. Bite marks or stinger

III. Management

A. If stinger is present, scrape the sting site to remove the stinger
Note: Do not attempt to pull the stinger.
B. Wash area gently
C. Remove jewelry from the affected limb before swelling begins, if possible
D. Keep limb immobilized and below the level of the heart and keep patient at rest
E. Do not apply cold to a snakebite
F. Consult medical direction regarding constricting band for snakebite
G. Observe for development of signs and symptoms of an allergic reaction (see Anaphylaxis/Allergic Reaction protocol)

IV. Ongoing Assessment

V. ALS/BLS Transport

Environmental

DROWNING AND NEAR DROWNING - WATER RELATED EMERGENCIES

I. Scene Size-Up/Initial Patient Assessment

A. CAUTION: Assure the safety of the rescue personnel.

II. Focused History and Physical Exam

A. Signs and symptoms

1. Consider length of time in cold water drowning. Any pulseless, non-breathing patient who has been submerged in cold water should have resuscitation efforts initiated (See Hypothermia protocol)
2. Suspect spinal injury

III. Management

A. All drowning and near-drowning patients

1. In-line immobilization and removal from water with a backboard if spine injury is suspected or the patient is unresponsive
2. If there is no suspected spinal injury:
   a) Pace patient on left side to allow water, vomitus and secretions to drain from the upper airway
   b) Suction as necessary
3. Provide supplemental oxygen and/or ventilatory assistance as necessary
4. If gastric distention interferes with artificial ventilation
   a) Place patient on their left side, while continuing to protect the c-spine
   b) Place hand over the epigastric area of the abdomen
   c) Apply firm pressure to relieve the distention

      Note: This procedure should only be done if the gastric distention interferes with the ability to artificially ventilate the patient effectively.

      Suction as necessary

B. For pulseless and non-breathing drowning patients, follow the Cardiovascular Emergencies protocol

IV. Ongoing Assessment

V. ALS/BLS Transport

Environmental

HEAT EMERGENCIES

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Muscular cramps
2. Weakness or exhaustion
3. Dizziness or faintness
4. Skin
   a) Moist, pale, normal to cool temperature
   b) Hot, dry or moist
5. Rapid heart rate
6. Altered mental status or unresponsive
7. Oral Or rectal temperature if situation permits

III. Management

A. Patient with normal mental status
1. Remove patient from the hot environment and place patient in a cool environment (back of an air conditioned ambulance)
2. Provide oxygen and/or ventilatory assistance as necessary
3. Loosen or remove clothing
4. Cool patient by fanning
5. Place patient in supine position with legs elevated
6. If patient is responsive and not nauseated, have patient drink water
7. If the patient is unresponsive or is vomiting, transport to hospital with patient on left side

B. Patient altered mental status
1. Remove patient from the hot environment and place patient in a cool environment (back of an air conditioned ambulance with air conditioner running on high)
2. Provide supplemental oxygen and/or ventilatory assistance as necessary
3. Remove clothing
4. Apply cool packs to neck, groin and armpits
5. Keep skin wet by applying water by sponge or wet towels
6. Fan aggressively

IV. Ongoing Assessment

V. ALS/BLS Transport

Environmental

HYPOTHERMIA

(Page 1 of 2)

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Environmental conditions of cold exposure
2. Cool to cold skin temperature
3. Decreased mental and/or motor status
4. Stiff or rigid posture or muscles
5. Shivering may be present or absent (absent when temp below 90°)
6. Abnormal breathing
   a) Early/rapid
   b) Late/slow or absent
7. Low to absent blood pressure
8. Slowly responding pupils
9. Inappropriate judgment
10. Complaints of joint or muscle stiffness
11. Skin may be red (early), pale, cyanotic, and/or stiff/hard

III. Management

A. Obtain temperature using hypothermia thermometer if situation permits
B. Remove patient from the cold environment and protect the patient from further heat loss
C. Remove patient's wet clothing and wrap the patient in blankets. Keep patient out of draft
D. Handle with extreme care (rough handling may cause ventricular fibrillation)
E. Care for shock and provide oxygen (warm and humidify the oxygen, if possible)
F. Assess pulses for 30 to 45 seconds before starting CPR
1. If no pulse, begin CPR (follow current national standards)
2. Place AED if advised administer single shock only
3. Continue efforts to rewarm
4. If pulseless, continue CPR and warming throughout transport
5. Although patients suffering from hypothermia should be evaluated on an individual basis, in general, patients should be warmed to normal temperatures before stopping resuscitation

G. If the patient is alert and responding appropriately, with temp >94°, actively rewarm
1. Warm blankets
2. Heat packs or hot water bottles to groin, axillary and cervical regions
3. Turn up heat high in the patient compartment of the ambulance
4. Give warm fluids, preferably containing carbohydrates
5. Do not allow the patient to walk or exert themselves

H. If the patient is unresponsive or not responding appropriately, with temp 94° to 84°, rewarm passively
1. Warm blankets
2. Turn up heat high in the patient compartment of the ambulance

Environmental
HYPOTHERMIA
(Page 1 of 2)

(Continued)

I. Do not allow patient to have any stimulants (caffeine, chocolate, etc.)
J. Do not massage extremities
K. Care for other life threatening injuries including frostbite

IV. Ongoing Assessment

A. Check and record pulse and vitals, including temperature
B. Do not allow patient to remain in or return to a cold environment
C. Transport all but the very mildest cases
D. Handle patient gently (ventricular fibrillation may result from rough handling)
E. Do not allow patient to become exposed

V. ALS/BLS Transport

Environmental

LOCAL COLD INJURIES

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Local injury with clear demarcation
2. Early or superficial injury
   a) Blanching of the skin
   b) Loss of feeling and sensation in the injured area and the skin remains soft
   c) If rewarmed, tingling sensation
3. Late or deep injury
   a) White, waxy skin which feels firm to frozen on palpation
   b) Swelling and/or blisters may be present
   c) If thawed or partially thawed, the skin may appear flushed with areas of purple and blanching or mottled and cyanotic

III. Management

A. Remove patient from the cold environment and protect the patient from further heat loss
B. Protect the cold injured part from further injury
C. Remove wet or restrictive clothing from patient
D. If early or superficial
1. If the injury is to an extremity, splint and cover the extremity
2. Do not rub, massage, or re-expose to the cold
E. If the injury is late or deep frostbite
1. Remove jewelry
2. Cover with dry clothing or dressings
3. Do not rub, massage, apply heat, or rewarm
4. Do not allow the patient to walk on the affected extremity
F. Do not allow patient to remain in or return to a cold environment
G. When an extremely long or delayed transport is inevitable, then active rapid rewarming should be done as follows:
1. Obtain medical direction prior to initiating rewarming
2. Use warm water (104° F - 108° F) check to see you can tolerate immersion of your own hand
3. Fill container with water. Remove clothing, jewelry, bands, or straps from the injured extremity
4. Fully immerse the injured part
5. Continuously stir the water
6. When water cools to below 100° F, remove limb and add more warm water
7. When extremity is rewarmed (it is soft and the color and sensation has returned)
   a) gently dry affected area and apply a dry sterile dressing
   b) be sure fingers and toes are separated by sterile dressings
H. Keep area warm and do not put any pressure on the site
I. Keep patient at rest and protect the part from refreezing
J. Expect the patient to complain of severe pain

IV. Ongoing Assessment

V. ALS/BLS Transport

Trauma

GENERAL TRAUMA ASSESSMENT

I. Scene Size-Up

A. Assess for number of multiple trauma patients
B. Assess need for additional resources

II. Initial Patient Assessment

A. A.B.C.
B. Establish patient care priorities as soon as possible
    1. Triage multiple patients
        a) Notify receiving facility
    2. Follow the Trauma Triage Procedures
        a) Notify the trauma center as soon as possible

III. Rapid Or Focused History And Physical Exam (Trauma)

A. Deformities, Contusions, Abrasions, Punctures - Burns, Tenderness, Lacerations, And Swelling - DCAP-BTLS)
B. Pulse, Movement, Sensation (PMS)
C. Vital Signs
D. SAMPLE History
E. Glasgow Coma Scale (GCS)

IV. Management

A. Provide appropriate care according to specific treatment protocol

V. Ongoing Assessment

A. Re-evaluate Initial Patient Assessment Items
    1. Unstable patient a maximum of every 5 minutes
    2. Stable patient every 15 minutes

VI. Transport

A. Prioritize patient transport

Trauma

ABDOMINAL INJURY

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
   1. Tender, rigid or distended abdomen
   2. Position (guarding)
   3. Signs and symptoms of shock
   4. Consider abdominal spinal injury
   5. Wounds, (entrance/exit), bruising
   6. Consider pregnancy (see Obstetrical Emergencies protocol)

III. Management

A. Assure patent airway
B. Provide oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment
C. Do not touch or try to replace exposed organs
   1. Cover exposed organs with sterile/moist dressing
D. Control bleeding
E. Treat for shock
F. Pregnancy (see Obstetrical Emergencies protocol)
G. Consider use of the MAST/PASG if available
H. Mechanical head and spine immobilization as necessary
I. Give nothing by mouth
J. Position supine with flexed knees, if no contraindications

IV. Ongoing Assessment

V. ALS/BLS Transport

Trauma

BURN INJURY

CAUTION: Identify source of burning and take appropriate safety precautions.
Note: Stop the burning process.
Note: For burns involving chemicals, refer to the Poisoning/Overdose protocol.
Note: Burns may be more severe than they first appear.

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
   1. Evaluate depth and area by using Rule of Nines appendix
   2. Carefully evaluate respiratory tract for involvement
   3. Shock

III. Management

A. Assure patent airway
B. Provide oxygen and/or ventilatory assistance as necessary
   1. continuously reassess respiratory status
C. Remove jewelry and non-adhered clothing as necessary
D. Cover burns with dry sterile dressing
E. Control bleeding
F. Treat for shock
G. Consider use of the MAST/PASG if available

IV. Ongoing Assessment

V. ALS/BLS Transport

Trauma

CHEST INJURY

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Changes in respiratory rate/quality
2. Breath sounds diminished, unequal, or absent
3. Flail chest
4. Use of accessory muscles
5. Distended neck veins (JVD)
6. Consider thoracic spinal injury
7. Shock
8. Penetrating wounds (check for both entrance & exit wounds)
9. Bruising/blunt trauma injuries
10. Complains of pain with inspiration or expiration

III. Management

A. Assure patent airway
B. Provide oxygen and/or ventilatory assistance as necessary (see Oxygen Delivery protocol)
1. continuously reassess respiratory status
C. Pneumothorax
1. Cover immediately
2. When time allows, place an occlusive dressing
B. Tension Pneumothorax
1. If a result of a sealed an open chest wound, partially remove the occlusive dressing to relieve the tension
2. If a result of a closed chest wound:
a) Support ventilation with high-flow oxygen
b) Request ALS support
D. Flail Chest
1. Strapping, if pain is significant
E. Control bleeding
F. Treat for shock (see Shock protocol)
G. Mechanical head and spine immobilization as necessary

IV. Ongoing Assessment

V. ALS/BLS Transport

Trauma

EXTERNAL BLEEDING AND AMPUTATIONS

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Spurting/steady flowing or oozing blood
2. Bright red or dark blood
3. Separation or displacement of tissue or body part
4. Shock

III. Management

A. Assure patent airway
1. Provide oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment (see Oxygen Delivery protocol)

B. Control bleeding
1. Direct pressure/pressure point
2. Elevation
3. Splints
4. Consider use of the MAST/PASG if available (see MAST Protocol)
5. Pressure dressing i.e. blood pressure cuff as needed
6. Apply dressing and bandage

C. Do not remove impaled objects
1. Unless impaled in cheek and airway is compromised by the object
2. Secure in place

D. Amputations
1. Rinse the body part with normal saline(quick rinse) to remove debris; do not scrub
2. Wrap or bag amputated part gauze moistened with saline
3. Place part in plastic bag and seal with tape. Label with name date and time.
4. Place bag in container filled with ice (cold pack okay, NOT dry ice) Label with name date and time.

E. Treat for shock (see Shock protocol)

IV. Ongoing Assessment

V. ALS/BLS Transport

Trauma

EXTREMITY INJURY

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
   1. Exposed bone ends
   2. Joints locked in position
   3. Loss of feeling or movement
   4. Loss of distal pulse
   5. Bruising/swelling
   6. Pain
   7. Shock
   8. Multiple long bone fracture

III. Management

A. Assure patent airway
B. Provide oxygen and/or ventilatory assistance as necessary
C. Consider alignment with gentle traction if pulses absent or gross deformity noted
D. Mechanical immobilization
   1. Reassess distal PMS after applying splint
   2. Consider application of cold pack to painful or swollen area
   3. Consider elevation of extremity
E. Control bleeding
F. Treat for shock
G. Consider use of the MAST/PASG if available

IV. Ongoing Assessment

V. ALS/BLS Transport

Trauma

HEAD AND SPINE INJURY

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms

1. Cerebrospinal fluid or blood from nose, ears, mouth
2. Glasgow Coma Scale score
3. Bruising around eyes, or behind ears
4. Altered mental status
5. Irregular breathing
6. Changes in pulse rate
7. Changes in blood pressure
8. Neurologic disability
9. Loss of bowel or bladder control
10. Unequal pupils with altered mental status
11. Seizures

III. Management

A. Immediate manual head and C-spine immobilization
B. Assure patent airway
C. Provide oxygen and/or ventilatory assistance as necessary
D. Control bleeding
E. Treat for shock
F. Mechanical head and spine immobilization

IV. Ongoing Assessment

V. Prioritize Transport

For patients who have a head injury with decreased level of consciousness, multi-system trauma with obvious head injury, consider airlifting from the scene. Contact inbound ALS unit prior to calling airlift if possible. Neuro/spinal patients airlifted from the scene should be routed to Harborview Medical Center.

Trauma

MULTI-SYSTEM/TIME CRITICAL TRAUMA

I. Scene Size-up And Initial Patient Assessment

A. Begin extrication (if necessary) and treatment simultaneously if possible
   1. Immediate manual head and c-spine immobilization
B. Treat life threatening injuries as they are found
C. On-scene time should be limited to 10 minutes, barring extrication or rescue
D. Notify the trauma center as soon as possible

II. Focused History and Physical Exam

A. Assess for other signs and symptoms
   1. Provide rapid survey of head, chest, abdomen

III. Management

A. Provide any urgent treatment required

IV. Ongoing Assessment

A. Assess response to treatment provided and document
B. Immobilize patient

V. Prioritize Transport

If ALS unit is > than 5 min. out at the time patient packaging is complete, initiate BLS transport with ALS rendezvous. If ground transport to Island or Skagit Valley Hospital is > 30 min. consider airlift. Contact inbound ALS unit if possible. Multi-system trauma transported by airlift should be routed to Harborview Medical Center.

Trauma

SHOCK

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

Note: (For anaphylaxis, refer to Anaphylaxis/Allergic Reaction).

A. Signs and symptoms
1. Altered mental status
2. Shallow/rapid breathing
3. Restlessness/anxiety
4. Cyanosis or pale skin color
5. Cool/clammy skin
6. Weak rapid pulse
7. Decreasing blood pressure
8. Nausea/vomiting
9. Dilated pupils
10. Thirst

III. Management

A. Assure patent airway
B. Provide oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment
1. Continuously reassess respiratory status
C. Control bleeding
D. Consider use of the MAST/PASG if available
E. Give nothing by mouth
F. Elevate lower extremities, if no contraindications
G. Splint fractures
H. Prevent heat loss

IV. Ongoing Assessment

V. ALS/BLS Transport

PEDIATRIC/GERIATRIC

PEDIATRIC ASSESSMENT

I. Scene Size-up And Initial Patient Assessment

A. Assess ABC

1. Airway - do not hyperextend or hyperflex child's neck
2. Breathing - check for obstructions
3. Circulation - check capillary refill

B. Consider possible domestic violence or abuse by adults

II. Focused Assessment And Physical Examination

A. Consider the patient's developmental stage when assessing signs and symptoms

B. Physical exam may be better tolerated if conducted from trunk to head

C. Be alert for signs of child abuse and neglect

III. Management

A. Provide appropriate care according to specific treatment protocol.

IV. Ongoing Assessment

V. Transport

PEDIATRIC/GERIATRIC
FEVER

CAUTION: Consider full body substance isolation procedures

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms
1. Flushed, warm dry skin
2. Restless
3. May have rash or stiff neck
4. Seizures
5. Dehydration, decreased urine output

III. Management

A. Provide supplemental oxygen and/or ventilatory assistance as necessary, if not done during Initial Patient Assessment

B. If prolonged transport is necessary
1. Undress child to the underwear
2. Use tepid water to cool patient

IV. Ongoing Assessment

V. ALS/BLS Transport

PEDIATRIC/GERIATRIC
FEBRILE SEIZURE

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms

1. Oral or rectal temperature > 100°
2. Convulsions

III. Management

A. Remove heavy or swaddling clothes, keep lightly dressed
B. Maintain airway
C. Provide oxygen and/or ventilatory assistance as necessary
D. Suction as needed

IV. Ongoing Assessment

V. ALS/BLS Transport

PEDIATRIC/GERIATRIC

GERIATRIC EMERGENCIES

I. Scene Size-Up/Initial Patient Assessment

A. General cleanliness of the environment
B. Availability of food and water
C. Hazards in the home
D. Observe for signs of physical abuse/neglect
E. If many medications, take them or a list of them to the hospital

II. Focused History and Physical Exam

A. Establish quick and effective rapport with patient and family
B. Level of function with his/her own function prior to problem
C. Past medical history to assess present condition and anticipate effect of one disease on another
D. If in long-term care, determine reason for their being there and present condition requiring EMS

III. Management

A. Medical
    1. Altered Mental Status
    2. Behavioral Emergencies
    3. Cardiovascular Emergencies
    4. Diabetic Emergencies
    5. Environmental Emergencies
    6. Gynecological Emergencies
B. Trauma
    1. Cause of trauma may be medical
    2. Age > 60 at higher risk for mortality and morbidity
    3. Treat according to trauma treatment protocols for specific trauma

IV. Ongoing Assessment

V. ALS/BLS Transport

PEDIATRIC/GERIATRIC
PHYSICAL ABUSE AND NEGLECT

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Physical Exam

A. Signs and symptoms of suspected abuse and neglect

1. Multiple bruises in various stages of healing
2. Injury inconsistent with mechanism described
3. Repeated calls to the same address
4. Fresh burns
5. Parents or care giver seem inappropriately unconcerned
6. Conflicting stories
7. Fear on the part of the patient to discuss how the injury occurred
8. Lack of adult supervision
9. Malnourished appearance
10. Unsafe living environment
11. Untreated chronic illness

III. Management

A. Follow appropriate treatment protocol

IV. Ongoing Assessment

V. ALS/BLS Transport

A. Notify appropriate authorities if abuse is suspected (abuse hotline 1- 866-363-4276)

Appendices

APGAR SCORING

Sign	0	1	2	Points
Appearance (Color)	**Blue, pale**	**Body pink, extremities blue**	**Completely pink**	
Pulse Rate (Heart rate)	**Not detectable**	**Slow (below 100)**	**Over 100**	
Grimace (Irritability)	**No Response**	**Grimace**	**Cry**	
Activity (Muscle Tone)	**Limp**	**Some Flexion**	**Active Motion**	
Respirations (Respiratory effort)	**Absent**	**Slow, irregular**	**Good, crying**	
			TOTAL	

SCORE		
Point Total	**Infant's Condition**	**Treatment Considerations**
10	**Very Good**	**Routine**
7 - 9	**Good**	**Routine**
4 -6	**Fair**	**May need stimulation and oxygen**
0 - 3	**Poor**	**May need oxygen by bag-valve-mask and CPR**

Appendices
CHARTING

1. **S.O.A.P.**
   - Subjective - What is reported by the patient and others?
   - Objective - What is observable, objective, measurable, or verifiable
   - Assessment - What is your appraisal of the patient's condition
   - Plan - What was done for the patient while in your care

2. **C.H.A.R.T.**
   - Chief Complaint - The major problem with the patient
   - History - Subjective information told to you by patient, family, etc. Follow the S.A.M.P.L.E.D. guideline
     - Symptoms
     - Allergies
     - Medication
     - Past medical history
     - Last Food\Beverage
     - Events prior
     - Description of patient
   - Assessment - Physical findings, including vital signs
   - Rendered Treatment - What you did for the patient and its effect
   - Transport/Transfer - How, where, who transported. Changes during transport

Appendices

CORE BODY TEMPERATURE

Note: Use A Hypothermia Thermometer.

CORE BODY TEMPERATURE		SYMPTOMS
99 F-96 F	37.0 C-35.5 C	Shivering
95 F-91 F	35.0 C-32.7 C	Intense shivering. If conscious patient has difficulty speaking.
90 F-86 F	32.0 C-30.0 C	Shivering decreases. Strong muscular rigidity. Thinking is less clear, general comprehension is dulled, possible total amnesia. Muscle coordination erratic and jerky. Patient generally able to maintain the appearance of psychological contact with surroundings.
85 F-81 F	29.4 C-27.2 C	Irrational. Loses contact with environment drifts into a stuporous state. Muscular rigidity continues. Pulse and respirations are slow and cardiac arrhythmias may develop.
80 F-78 F	26.6 C-20.5 C	Patient loses consciousness and does not respond to spoken words. Most reflexes cease to function. Heart-beat becomes erratic.

Appendices

DEAD ON ARRIVAL (DOA)

I. EMS personnel shall not initiate resuscitation measures when a patient is determined to be:

A. The "obviously dead" are victims who, in addition to absence of respiration and cardiac activity, have suffered one or more of the following:
   1. Decapitation
   2. Evisceration of the heart or brain
   3. Incineration
   4. Rigor Mortis
   5. Decomposition

B. Do Not Resuscitate orders and no pulse or respirations
   1. DOA victims will be reported to the appropriate authorities (i.e. dispatch).
   2. **DO NOT** leave body unattended
   3. Consider critical incident stress debriefing for EMS personnel when involved with sudden, unexpected, accidental, traumatic and/or unexplained deaths, particularly if children are involved.

Appendices

DO NOT RESUSCITATE (DNR) ORDERS

(Page 1 of 3)

I. Scene Size-Up/Initial Patient Assessment

II. Focused History and Detailed Physical Exam

A. Determine the patient is in a Do Not Resuscitate status in one of the following ways:
1. The patient has an original, valid **POLST** Form at the bedside, on the medicine cabinet, on the back of the bedroom door, or on the refrigerator, OR
2. The patient has an EMS-No CPR bracelet that is intact and not defaced. The bracelet can be located on either wrist, either ankle, or on a necklace or neck chain, and worn by the patient, OR
3. The patient has an **original** EMS-No CPR Form at the bedside, on the medicine cabinet, on the back of the bedroom door, or on the refrigerator.
4. The patient has other DNR Orders: We encourage medical facilities to use the **POLST** Form.
   a) Sometimes health care facilities prefer to use their own health care DNR orders. When encountering other DNR orders, perform the following:
      (1) Verify that the order has a physician signature requesting "Do Not Resuscitate."
      (2) Verify the presence of the patient's name on the order.
   b) Contact on-line medical control for further consultation. In most cases, on-line medical control will advise to withhold CPR following verification of a valid physician-signed DNR order.
5. In extended or intermediate care facilities, look for the DNR form in the patient's chart.

III. Management

A. Begin resuscitation when it is determined:
1. No valid DNR order exists.
2. In your medical judgment, your patient has attempted suicide or is a victim of a violence

B. Do Not initiate resuscitation measures when:
1. The patient is determined to be "obviously dead".
   a) The "obviously dead" are victims who, in addition to absence of respiration and cardiac activity, have suffered one or more of the following:
      (1) Decapitation
      (2) Evisceration of heart or brain
      (3) Incineration
      (4) Rigor Mortis
      (5) Decomposition

C. When the patient has an existing, valid DNR order:
1. POLST:
   a) Provide resuscitation based on patient's wishes identified on the form
   b) Provide medical interventions identified on the form
   c) Always provide comfort care
2. EMS-No CPR:
   a) Do not begin resuscitation measures
   b) Provide comfort care
   c) Contact patient's physician or on-line medical control if directed by local protocols or if questions or problems arise.

Appendices

DO NOT RESUSCITATE (DNR) ORDERS

(Page 2 of 3)

(Continued)

3. Other DNR orders:
   Follow specific orders contained in the DNR order based on the standard of care allowed by your level of certification/licensure and communications with on-line medical control.
4. **Remember** – Do Not Resuscitate does not mean Do Not provide comfort care when necessary.

D. If resuscitative efforts have been started before learning of a valid DNR order, STOP these treatment measures unless continuation is requested by the DNR order and provide comfort care:
1. Basic CPR.
2. Intubation (leave the endotracheal tube in place, but stop any positive pressure ventilations).
3. Cardiac monitoring and defibrillation.
4. Administration of resuscitation medications.
5. Any positive pressure ventilation (through bag valve masks, pocket face masks, endotracheal tubes).

E. Revoking the DNR order. The following people can inform the EMS system that the DNR order has been revoked:
1. The patient (by destroying the order, drawing a diagonal line or the word VOID across the front of the form, or by verbally revoking the order).
2. The physician expressing the patient's revocation of the directive.
3. The legal surrogate for the patient expressing the patient's revocation of the directive. (The surrogate cannot verbally revoke a patient executed directive).

F. Documentation
1. Complete the Medical Incident Report (MIR) form approved by your Medical Program Director.
2. State in writing in the upper left hand corner of the narrative summary:
   a) "Patient identified as DNR by POLST, EMS-No CPR, or Other directive."
3. Record the name of the patient's physician, and state whether you contacted the physician.
4. Record the reason why the EMS system was activated.
5. Comfort the family and bystanders when patients have expired
6. For patients who have expired actions may include contact of the local coroner's office, the local law enforcement agency, the local chaplain service, or funeral home. The MIR form must still be completed.

G. Comfort Care Measures - Providing comfort care is an important responsibility and service you provide to patients and their families at a crucial moment in their lives.
1. Comfort care measures for the dying patient may include:
   a) Manually open the airway (do not provide positive pressure ventilation with a bag valve mask, pocket mask or endotracheal tube).
   b) Clear the airway (including stoma) of secretions with appropriate suction device.
   c) Provide oxygen per nasal cannula at 2-4 l/min.
   d) Positioning for comfort.
   e) Splinting.
   f) Controlling bleeding.
   g) Providing pain medications pertinent to the level of certification/licensure.
   h) Providing emotional support.
   i) Provide emotional support to the family.

Appendices

DO NOT RESUSCITATE (DNR) ORDERS

(Page 3 of 3)

(Continued)

2. Contact patient's physician or on-line medical control or if questions or problems arise.

H. Special situation:

1. The patient's wishes in regard to resuscitation should always be respected. Sometimes, however, the family may vigorously and persistently insist on CPR even if a valid DNR order is located. These verbal requests are not consistent with the patient's directive. However, in such circumstances:
   a) Attempt to convince family to honor the patient's decision to withhold CPR/treatment. If family persists, then
   b) Initiate resuscitation efforts until relieved by paramedics (for First Responders and EMTs).
   c) Advanced life support personnel should continue treatment and consult medical control.

I. **Remember: -** Once a death has occurred, the family and relatives become your patients.

IV. Ongoing Assessment as appropriate

V. Transport if necessary

Appendices

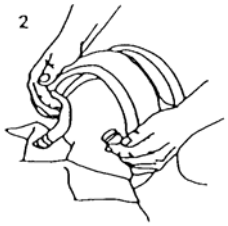
GLASGOW COMA SCALE

Eye Opening				
Score	Adult	Pediatric - Greater Than 1 year	Pediatric - Less Than 1 Year	
4	Spontaneous	Spontaneous	Spontaneous	
3	To Voice	To Voice	To Shout	
2	To Pain	To Pain	To Pain	
1	No Response	No Response	No Response	
Best Motor Response				
Score	Adult	Pediatric - Greater Than 1 year	Pediatric - Less Than 1 Year	
6	Obeys Commands	Obeys Commands	Spontaneous	
5	Localizes Pain	Localizes Pain	Localizes Pain	
4	Withdraws To Pain	Withdraws To Pain	Withdraws To Pain	
3	Flexion To Pain	Flexion To Pain	Flexion To Pain	
2	Extension To Pain	Extension To Pain	Extension To Pain	
1	No Response	No Response	No Response	
Best Verbal Response				
Score	Adult	Pediatric - Greater Than 5 years	Pediatric 2 to 5 Years	Pediatric 0 to 23 Months
5	Oriented	Oriented and converses	Appropriate Words and Phrases	Smiles, Coos
4	Confused	Disoriented and Converses	Inappropriate Words	Cries, Consolable
3	Inappropriate Words	Inappropriate Words	Persistent Cries and/or Screams	Persistent Inappropriate Crying and/ or Screaming
2	Incomprehensible Words	Incomprehensible Sounds	Grunts	Grunts, Agitated/ Restless
1	No Response	No Response	No Response	No Response
USE THE **BEST** PATIENT RESPONSE FOR EACH CATEGORY. Note: Lowest possible score = 3; Highest possible score = 15				

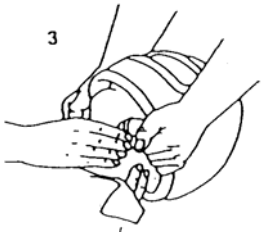
Appendices **HELMET REMOVAL**

1. One rescuer applies in-line stabilization by placing his or her hands on each side of the helmet with the fingers on the victim's mandible. This position prevents slippage if the strap loosens.

2. The rescuer cuts or loosens the straps or the D-rings while maintaining in-line stabilization.



3. A second rescuer places one hand on the mandible, at the angle, with the thumbs on one side and the long and index fingers on the other. With the other hand, the second rescuer also applies pressure from the occipital region. This maneuver transfers the in-line stabilization responsibility to the second rescuer.



4. The rescuer at the top removes the helmet, considering these three factors: A. The helmet is egg shaped and must be expanded laterally to clear the ears, B. Glasses must be removed prior to helmet removal, C. If the helmet provides full facial coverage, it must be raised over the nose and moved backwards.

5. The second rescuer must maintain in-line stabilization from below in order to prevent head tilt.

6. After the helmet is removed, the rescuer at the top places his or her hands on either side of the victim’s head with the palms over the ears.

7. In-line stabilization is maintained from above until a backboard and cervical collar are securely in place.

Appendices
MAST TROUSERS

MAST trousers (Military Anti-Shock Trousers) may be useful in the treatment of shock in the field by BLS and ALS personnel. MAST trousers work through the application of circumferential compression around the abdomen and lower extremities which results in an increased peripheral resistance in the vascular system in this part of the body. Bleeding may be slowed or stopped in the area covered by the MAST trousers and blood pressure may be supported.

MAST trousers may also have a FOCUSED/DETAILED use as a pneumatic splint for certain injuries to the pelvis and lower extremities.

INDICATIONS FOR USE:

A. SHOCK: Systematic patients with systolic blood pressure <80 mmhg.
B. MULTI-SYSTEM TRAUMA: Inflate if signs and symptoms of shock are present.
C. NON-TRAUMATIC PATIENTS IN SHOCK: Apply if internal bleeding is suspected, **except if chest pain is present**.
D. SPLINTING: May be used to splint fractures of the pelvis and lower extremities. MAST trousers alone are not the splint of choice for most femur fractures.

CONTRAINDICATIONS FOR USE:

A. Pulmonary edema.
B. Penetrating chest trauma.
C. Hypothermia: <90 degrees F. or 32 degrees C.
D. Children under 12 years of age weighing less than 80 pounds should be treated with pediatric MAST suit.
E. **Relative contraindication:** Suspected spinal injuries (due to movement of the spine by inflating the abdominal segment.

ABDOMINAL SECTION- INFLATION CONTRAINDICATED:

A. Abdominal evisceration.
B. Impaled objects in the abdomen.
C. Suspected tension pneumothorax.
D. Pregnancy
E. Suspected spinal injuries (due to the movement of the spine by inflating the abdominal segment; inflate the legs only) **If in doubt about application or use of MAST contact Medical control.**

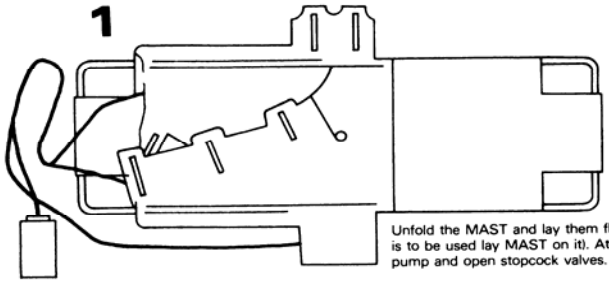
***PATIENT WITH BURNS: 2nd or 3rd Degree in area under trousers.**

1. Dress burns and inflate all chambers if supine blood pressure is <80 mmHg.
2. Inflate legs only if burns are on abdomen when supine blood pressure is between 80 and90 mmHg, and pulse>100.

Appendices

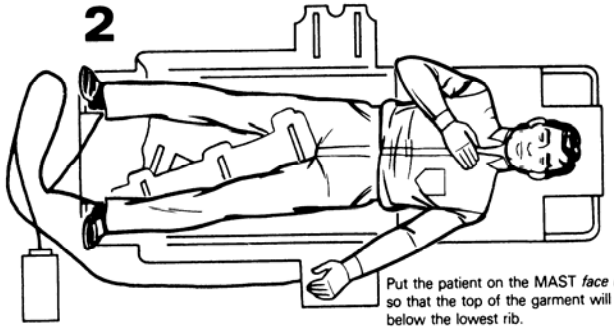
MAST/PASG - INFLATION STEPS

1. **Unfold the MAST and lay them flat (if stretcher is to be used lay MAST on it). Attach foot pump and open stopcock valves.**



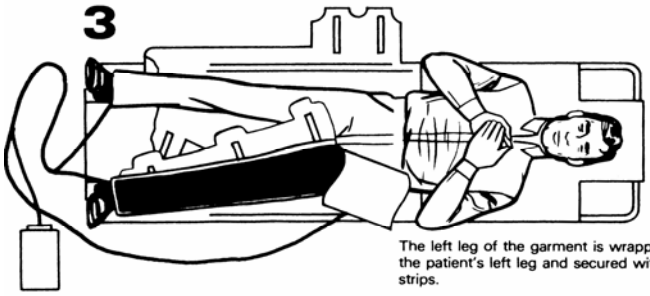
Unfold the MAST and lay them flat (if stretcher is to be used lay MAST on it). Attach foot pump and open stopcock valves.

2. **Put the patient on the MAST face up (supine) so that the top of the garment will be just below the lowest rib.**



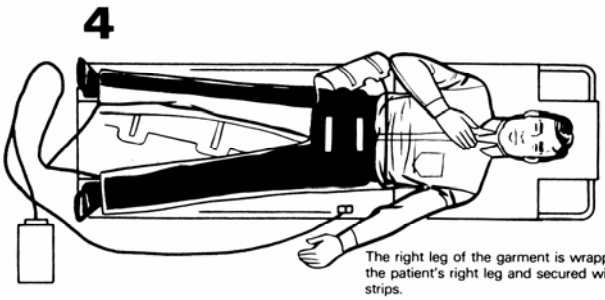
Put the patient on the MAST *face up (supine)* so that the top of the garment will be just below the lowest rib.

3. **The left leg of the garment is wrapped around the patient's left leg and secured with Velcro strips.**



The left leg of the garment is wrapped around the patient's left leg and secured with Velcro strips.

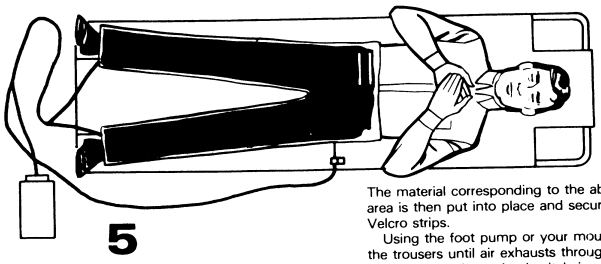
4. **The right leg of the garment is wrapped around the patient's right leg and secured with Velcro strips.**



The right leg of the garment is wrapped around the patient's right leg and secured with Velcro strips.

5. **The material corresponding to the abdominal area is then put into place and secured with Velcro strips.**

Using the foot pump or your mouth, inflate the trousers until air exhausts through the relief valves and/or the patient's vital signs become stable. Close the stopcock valves.



The material corresponding to the abdominal area is then put into place and secured with Velcro strips.

Using the foot pump or your mouth, inflate the trousers until air exhausts through the relief valves and/or the patient's vital signs become stable. Close the stopcock valves.

Appendices

MEDICATION REFERENCE: ALBUTEROL

Assisting with <u>Patient's Own</u> Prescribed Inhaler

1) Medication Name
   a) Generic: Albuterol
   b) Trade: Proventil, Ventolin
2) Action
   a) Relaxes bronchial smooth muscle
3) Indications
   a) Bronchospasm from emphysema or asthma
   b) Reversible bronchospasm associated with chronic bronchitis and emphysema
4) Contraindications
   a) Hypersensitivity
   b) Cardiac arrhythmias associated with tachycardia
5) Side Effects
   a) Arrhythmias
   b) Tachycardia
   c) Tremors
   d) Nervousness
   e) Nausea/Vomiting
6) Medication Form
   a) Aerosol inhaler: 90 ug/metered spray, 100 ug/metered spray
7) Dosage
   a) Two puffs via metered dose inhaler, use spacer if available, or 1unit dose vial via patient's own home nebulizer
8) Route of Administration
   a) Metered-dose inhaler or home nebulizer

Appendices

MEDICATION REFERENCE: ASPIRIN

INDICATIONS FOR USE IN AN ACUTE CORONARY EVENT

1) Patient exhibits any of the following signs or symptoms:
   a) Uncomfortable pressure, fullness, squeezing or pain in the center of the chest that lasts more than a few minutes, or goes away and comes back.
   b) Pain that spreads to the shoulders, neck or arms.
   c) Chest discomfort with lightheadedness, fainting, sweating, nausea or shortness of breath.

-OR-

2) Patient exhibits any **two** of the following signs or symptoms, and you think it is of cardiac origin:
   a) Atypical chest pain, stomach or abdominal pain. This may include discomfort that can be localized to a point, which is "sharp" in nature, that is reproducible by palpation, or that is in the "wrong" location (such as the upper abdomen).
   b) Unexplained nausea (without vomiting) or lightheadedness (not vertigo) without chest pain.
   c) Shortness of breath and difficulty breathing (without chest pain).
   d) Unexplained anxiety, weakness or fatigue.
   e) Palpitations, cold sweat or paleness.

CONTRAINDICATIONS FOR USE

3) Patient is allergic to aspirin or ibuprofen (Motrin®, Advil®).
4) If they have just taken aspirin for this event, do not administer aspirin.

PROCEDURE:.

1) Be sure that the patient is alert and responsive.
2) If the patient has his/her own nitroglycerin and meets the criteria for administration, do not delay in administer nitroglycerin.
3) Have the patient chew two baby aspirin (162mg).
4) Record your actions, including the dosage and the time of administration.

Appendices

MEDICATION REFERENCE: EPINEPHRINE AUTO-INJECTOR

1) Medication Name
   a) Generic: Epinephrine
   b) Trade: Adrenaline, Epi-Pen, Epi-Pen Jr.,
2) Actions
   a) Dilates the bronchioles
   b) Constricts blood vessels
3) Indications
   a) Patient exhibits signs of a severe allergic reaction, including either respiratory distress or shock.
4) Contraindications
   a) No contraindications when used in a life-threatening situation
5) Dosage
   a) Adult: (30 kg or 66 lbs and higher) - one adult auto-injector (0.3 mg)
   b) Infant and child: (Under 30 kg or 66 lbs) - one pediatric auto-injector (0.15 mg)
6) Actions
   a) Dilates the bronchioles
   b) Constricts blood vessels
7) Side Effects
   a) Increased heart rate, chest pain, cardiac arrhythmias, cardiac arrest
   b) Pallor
   c) Dizziness
   d) .Chest pain
   e) Headache
   f) Nausea
   g) Vomiting
   h) Excitability, anxiety
8) Medication Form
   a) Liquid administered via a commercially pre-loaded, measured dose, auto- injectable syringe system
9) Dosage
   a) Adult: (30 kg or 66 lbs and higher) - one adult auto-injector (0.3 mg)
   b) Infant and child: (Under 30 kg or 66 lbs) - one pediatric auto-injector (0.15 mg)
10) Route of Administration
   a) IM

Appendices

MEDICATION REFERENCE: NITROGLYCERIN

Assisting with Patient's Prescribed Nitroglycerin

1) Medication Name
   a) Generic: Nitroglycerin
   b) Trade: Nitrostat, Nitrobid, Nitrolingual Spray
2) Indications
   a) Chest pain, thought to be of cardiac origin
3) Contraindications
   a) Use of medication for erectile dysfunction medication Viagra (sidenifil) or similar (i.e. Cialis) within 36 hours. Contact medical control **BEFORE** administering if any question regarding previous use of ED drugs by patient
   b) Baseline systolic BP is below 100 mm/Hg
   c) Head injury suspected
   d) Patient is infant or child
   e) Three doses have already been taken by the patient
4) Medication Form
   a) Tablet, sublingual spray
5) Dosage
   a) One tablet or one spray under the tongue
   b) May be repeated in three to five minutes if no relief, not contraindicated, and medical direction authorizes
   c) Check patient's blood pressure prior to each repeated dose
   d) May not give more than three dosages Action
   e) Dilates blood vessels
   f) Decreases heart workload
6) Side Effects
   a) Headache
   b) Decreased blood pressure
   c) Changes in pulse

Appendices

MEDICATION REFERENCE: ORAL GLUCOSE

1) Medication Name
   a) Generic: Glucose, oral
   b) Trade name: Glutose, Insta-glucose, etc.
2) Actions
   a) Increases blood sugar
3) Indications
   a) Patient with an altered mental status and a known history of diabetes.
4) Contraindications
   a) Unconsciousness
   b) Known diabetic who has not taken insulin for days
   c) Unable to swallow
5) Side Effects
   a) None when properly administered (May be aspirated by patient without a gag reflex)
6) Medication Form
   a) Gel in toothpaste-type tubes
7) Dosage
   a) One tube
8) Route of Administration
   a) po - between the cheek and gums

Appendices **OXYGEN DELIVERY**

OXYGEN ADMINISTRATION REFERENCE CHART		
Method	Flow Rate (in liters per minute)	% Oxygen Delivered
Room Air		21
Nasal Cannula (prongs)	1 2 4	24 28 31
Face Mask (simple)	6 10	35-40 40-50
Nonrebreather Face Mask *(1)	12 15	80 90
Face Mask with Oxygen Reservoir Bag	10-12	90
Pocket Mask	10 15 30	50 80 100 *(2)
Bag Valve Mask	Room Air 12	21 40 - 90 *(3)
Positive Pressure Device (demand valve) *(4)	100	100

*(1)Delivery system of choice for patients with inadequate breathing and patients who are cyanotic, cool clammy, short of breath, or suffering chest pain, suffering severe injuries, or displaying an altered mental status, or being transported.
*(2) This is accomplished by occluding breathing port with thumb.
*(3) Depends on brand of bag valve mask and provisions for occluding room air inlet.
*(4) Should not be used on children under 12 years old.

NOTES:
1. Administration rates by nasal cannulae of over 4 L/min. are uncomfortable.
2. Use humidified oxygen, when possible, on infants, children, suspected respiratory tract burns, and transports exceeding one hour duration.
3. Bag Valve mask is not recommended for use in patients in transport situations.
4. Most hypoxic patients will feel better with an increase in delivered oxygen from 21% to 24%.
5. Pressure cycled ventilators are NOT acceptable alternatives to oxygen therapy.
6. Percentages of delivered oxygen listed above are based on optimal conditions. Altitude, equipment, etc., may decrease percentages of delivered oxygen.

OXYGEN BOTTLE VOLUME AND FLOW				
Bottle Size	Volume in Liters	Time @ 5 L/min.	Time @ 10 L/min.	Time @ 15 L/min.
D	360	1 hr. 12 min.	36 min.	24 min.
E	625	2 hrs. 5 min.	1 hr. 3 min.	42 min.
M	3,200	10 hrs.	5 hrs.	3 hrs. 20 min.
G	5,300	17 hrs. 40 min.	8 hrs. 50 min.	5 hrs. 53 min.
H	6,900	23 hrs.	11 hrs. 30 min.	7 hrs. 40 min.

1. The above values are based on full bottle (2,000 to 2,200 p.s.i.) @ 70 degrees F.
2.Allow for pressure drop of 5 p.s.i. for every 1 degree drop in temperature below 70 degrees F.

Appendices

PERIPHERAL INTRAVENOUS INFUSION MAINTENANCE

Transport of patients with IV access: Patients may be transported by BLS unit with IV that is saline locked. IV infusions **are NOT** to be running when patient is transported BLS. Exception is made when patient has home IV infusions such as TPN or pain medications which are previously set up **and will not** require alteration of flow during transport.

Effective 09/28/07

1. Check patency and type of infusion solution

2. Stabilization
   A. Dressing over insertion site
   B. Stabilize limb on armboard if necessary
   C. Stabilize tubing with two stress loops

3. Fluids
   A. **Note:** No medications in IV or to be given enroute - no blood products
   B. Start with full bag of prescribed solution hung by hospital staff.
   C. Adjust flow rate to prescribed rate
   D. Replace bag with sterile technique when 50cc remain in current bag and readjust flow rate
   E. Adjust flow rate as needed and at least hourly

4. Patency
   A. Observe for patency as necessary and record
   B. Avoid kinks in tubing, pressure over or near insertion site
   C. Observe insertion site for infiltration and extravasation
   D. Consider possibility of clot occlusion if not patent and no other reason for lack of flow

5. Discontinuing an infiltrated or occluded IV:
   A. Turn infusion off via roller clamp
   B. Gently and systematically remove tape
   C. Remove catheter and quickly cover with sterile 2x2
   D. Immediately observe for intact catheter
   E. Hold direct pressure over insertion site for 1-2 minutes until bleeding stops
   F. Secure 2x2 over site with tape or Band-Aid
   G. If catheter is not intact and a portion is missing, assume catheter embolus and immediately tourniquet limb well above insertion site, keep limb in dependent position and immediately seek medical intervention

6. Patient Assessment
   A. Respiratory and cardiovascular status assessed at start and as necessary throughout transport
   B. Fluids in and out, fluid remaining in bag checked and recorded hourly
   C. Condition of infusion site checked frequently and recorded at least hourly

STATE OF WASHINGTON
PREHOSPITAL TRAUMA TRIAGE (DESTINATION) PROCEDURE

Purpose

The purpose of the Triage Procedure is to ensure that major trauma patients are transported to the most appropriate hospital facility. This procedure has been developed by the Prehospital Technical Advisory Committee (TAC), endorsed by the Governor's EMS and Trauma Care Steering Committee, and in accordance with RCW 70.168 and WAC 246-976 adopted by the Department of Health (DOH).

The procedure is described in the schematic with narrative. Its purpose is to provide the prehospital provider with quick identification of a major trauma victim. If the patient is a major trauma patient, that patient or patients must be taken to the highest level trauma facility within 30 minutes transport time, by either ground or air. To determine whether an injury is major trauma, the prehospital provider shall conduct the patient assessment process according to the trauma triage procedures.

Explanation of Process

A. **Any certified EMS and Trauma person can identify a major trauma patient and activate the trauma system.** This may include requesting more advanced prehospital services or aero-medical evacuation.

B. **The first step (1) is to assess the vital signs and level of consciousness.** The words "Altered mental status" mean anyone with an altered neurologic exam ranging from completely unconscious, to someone who responds to painful stimuli only, or a verbal response which is confused, or an abnormal motor response.

C. The "and/or" conditions in Step 1 mean that any one of the entities listed in Step 1 can activate the trauma system.

D. Also, the asterisk (*) means that if the airway is in jeopardy and the on-scene person cannot effectively manage the airway, the patient should be taken to the nearest medical facility or consider meeting up with an ALS unit. These factors are true regardless of the assessment of other vital signs and level of consciousness.

E. **The second step (2) is to assess the anatomy of injury.** The specific injuries noted require activation of the trauma system. Even in the assessment of normal vital signs or normal levels of consciousness, the presence of any of the specific anatomical injuries does require activation of the trauma system.

F. Please note that steps 1 and 2 also require notifying Medical Control.

G. **The third step (3) for the prehospital provider is to assess the biomechanics of the injury and address other risk factors.** The conditions identified are reasons for the provider to contact, and **consult with, Medical Control** regarding the need to activate the system. They do not automatically require system activation by the prehospital provider.

H. Other risk factors, coupled with a "gut feeling" of severe injury, means that Medical Control should be consulted and consideration given to transporting the patient to the nearest trauma facility.

I. Please note that certain burn patients (in addition to those listed in Step 2) should be considered for immediate transport or referral to a burn center/unit.

Patient Care Procedures

To the right of the attached schematic you will find the words "according to DOH-approved regional patient care procedures. "These procedures are developed by the regional EMS and Trauma council in conjunction with local councils. They are intended to further define how the system is to operate. They identify the level of medical care personnel who participate in the system, their roles in the system, and participation of hospital facilities in the system. They also address the issue of inter-hospital transfer, by transfer agreements for identification, and transfer of critical care patients.

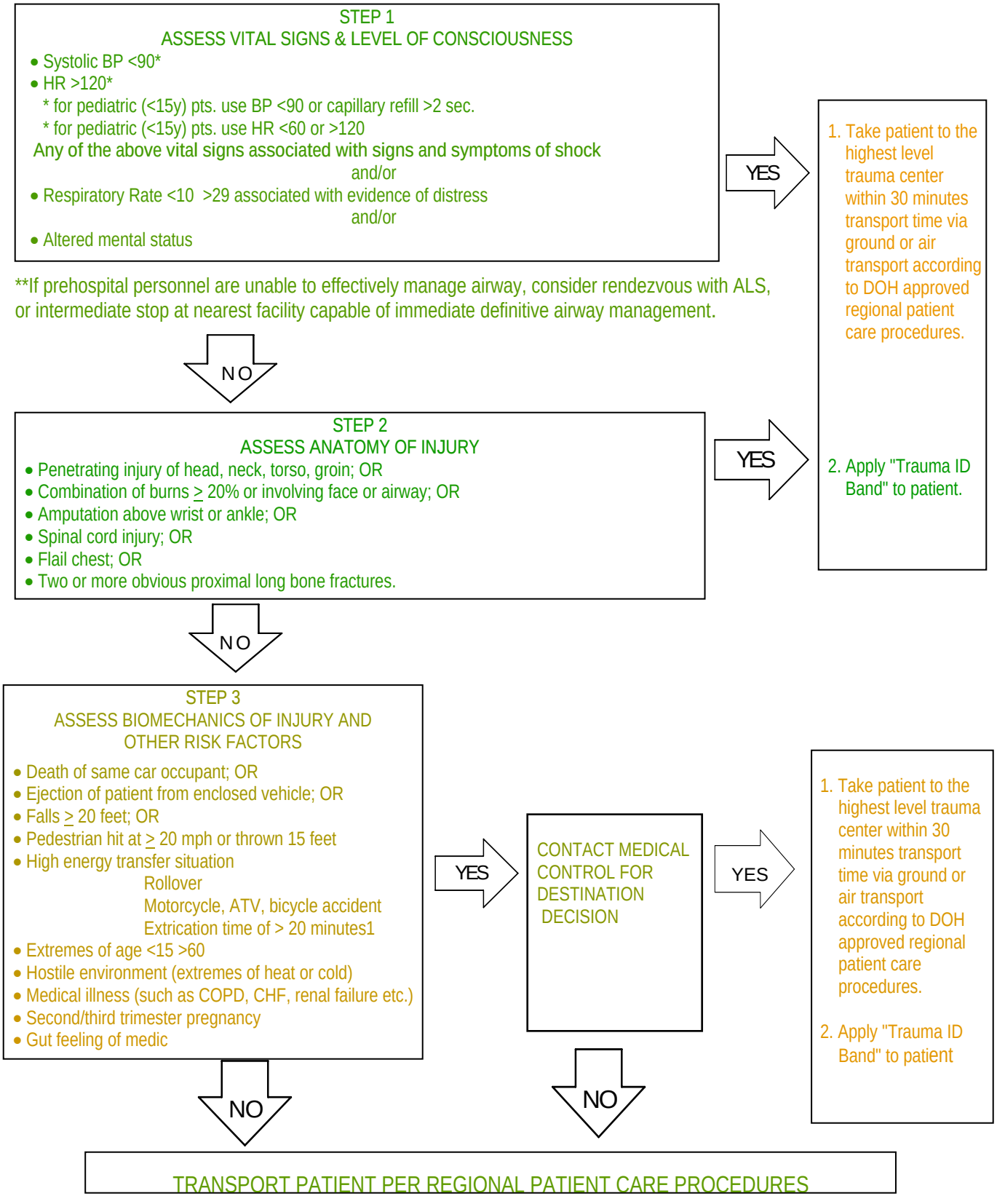
In summary, the Prehospital Trauma Triage Procedure and the Regional Patient Care Procedures are intended to work in a "hand in glove" fashion to effectively address EMS and Trauma patient care needs. By functioning in this manner, these two instruments can effectively reduce morbidity and mortality.

If you have any questions on the use of either instrument, you should bring them to the attention of your local or regional EMS and Trauma council or contact 1-800-458-5281.

1994/Disc 1/triage.exp

STATE OF WASHINGTON
PREHOSPITAL TRAUMA TRIAGE (DESTINATION) PROCEDURES

- **Prehospital triage is based on the following 3 steps: Steps 1 and 2 require prehospital EMS personnel to notify medical control and activate the Trauma System. Activation of the Trauma System in Step 3 is determined by medical control****



Appendices

PULSE, BLOOD PRESSURE, AND RESPIRATION - RANGES

NORMAL RANGES OF ARTERIAL BLOOD PRESSURES (mm/Hg)			
Newborn	80 / 46	8-9 Years	106 / 58
6-12 Months	89 / 60	9-10 Years	108 / 58
1 Year	96 / 66	10-11 Years	112 / 58
2 Years	98 / 64	11-12 Years	114 / 60
3 Years	100 / 68	12-13 Years	116 / 60
4 Years	98 / 66	13-14 Years	118 / 60
5 Years	94 / 56	Male Adult	Systolic: Patient's Age + 100 (Up to 150 mmHg) Diastolic: 60 to 90 mmHg
6-7 Years	100 / 56	Adult Female	Systolic: Patients Age + 90 (Up to 140 mmHg) Diastolic: 50 to 80 mmHg

Note:

The systolic values given above may vary up or down from the mean significantly, and still remain in the normal range as follows:

Newborn	+ or - 16
6 Mos. - 4 Years	+ or - 25
4 Years - 10 Years	+ or -16
10 Years - 14 Years	+ or -18

The diastolic values given above (for Newborn through 14 Years old) may vary up to + or - 24 mm/Hg from the mean and still remain in the normal range.

NORMAL PULSE RATES (HEART BEATS PER MINUTE)			
Newborn	110 - 150	6 Years	80 - 100
11 Months	100 - 140	8 Years	76 - 90
2 Years	90 - 110	10 Years	70 - 110
4 Years	80 - 120	Adult	60 - 100

NORMAL RESPIRATORY RATES (RESPIRATIONS PER MINUTE)			
Neonate	30 - 50	10 Years	14 - 22
2 Years	20 - 30	Adolescent and Adult	12 - 20

Appendices

REPORTING CHILD AND DEPENDENT ADULT ABUSE

(Page 1 of 4)

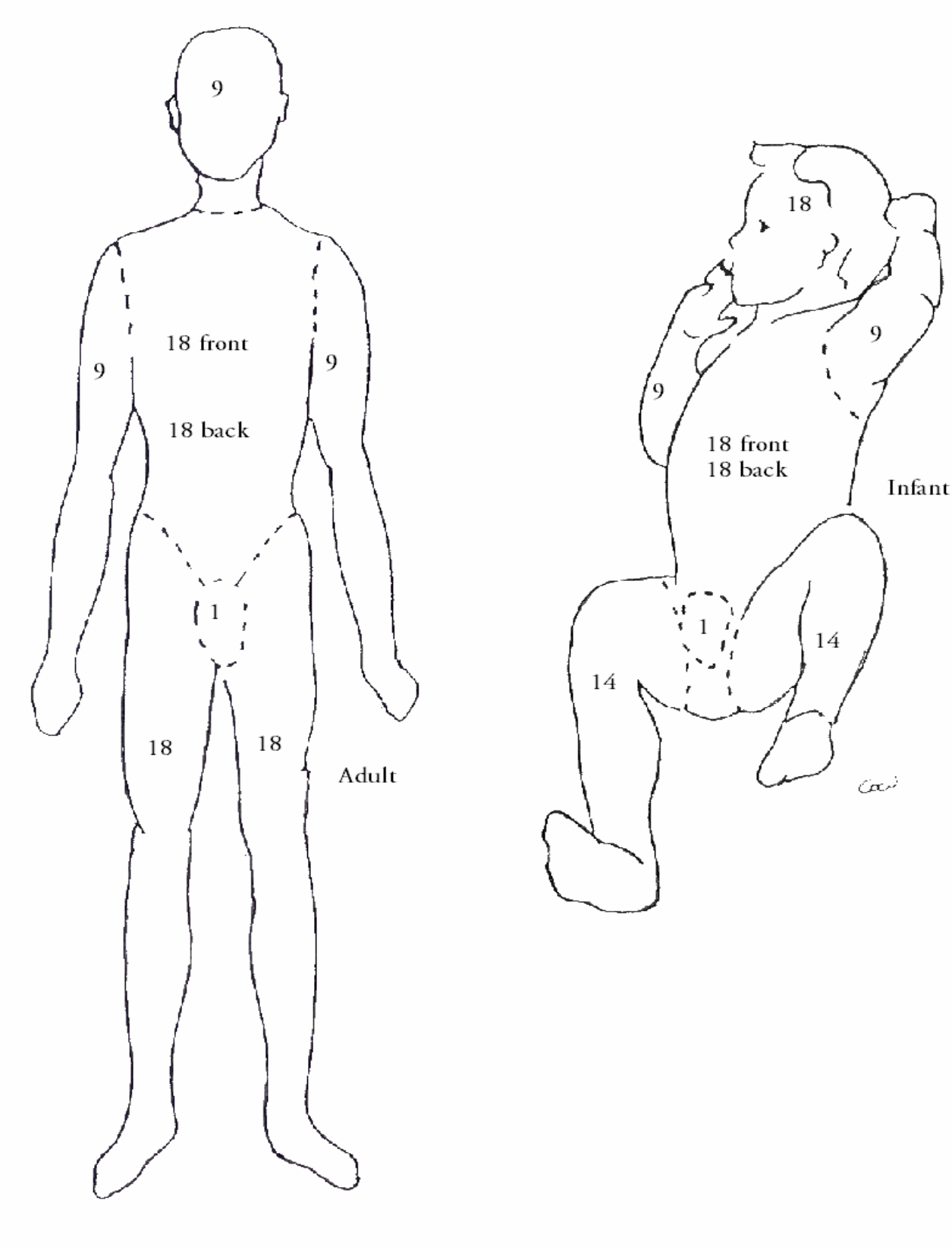
Revised 1998

26.44.030 Reports--Duty and authority to make--Duty of receiving agency--Duty to notify--Case planning and consultation--Penalty for unauthorized exchange of information--Filing dependency petitions--Interviews of children--Records--Risk assessment process--Reports to legislature.

(1)(a) When any practitioner, professional school personnel, registered or licensed nurse, social service counselor, psychologist, pharmacist, licensed or certified child care providers or their employees, employee of the department, or juvenile probation officer has reasonable cause to believe that a child or adult dependent or developmentally disabled person, has suffered abuse or neglect, he or she shall report such incident, or cause a report to be made, to the proper law enforcement agency or to the department as provided in RCW 26.44.040. AS stated EMTs have a duty to report suspected abuse or neglect of a child, elder or disabled adult. Such reports should be made to law enforcement, or Child and Adult Protective Services **(1-866-363-4276)** with in 24 hours.

Appendices

RULE OF NINES – ESTIMATING BURNS



Appendices
START TRIAGE

Simple Triage And Rapid Treatment

I. RPM method of identifying immediate patients; (Respirations, Perfusion, Mental status)

II. Triage Criteria
- A. Immediate (Red)
  1. Respirations >30 per minute or absent until head repositioned, or
  2. Radial pulse absent or capillary refill > 2 seconds, or
  3. Can not follow simple commands
- B. Delayed (Yellow)
  1. Respirations present and < 30 per minute, and
  2. Radial pulse present and can follow simple commands
     - The saying is 30 - 2 - can do, represents a delayed patient.
- C. Minor (Green)
  1. Anyone that can get up and walk when instructed to do so.
- D. Deceased (Black)
  1. Anyone not breathing after you open the airway

III. This system is limited to use in the incident where needs exceed resources immediately available

IV. Frequently reassess patients and perform a more in-depth triage as more rescuers become available

Appendices
SUCTIONING
(Page 1 of 2)

I. Purpose of suctioning
- A. Remove blood, other liquids and food particles from the airway.
- B. Some suction units are inadequate for removing solid objects like teeth, foreign bodies and food.
- C. A patient needs to be suctioned immediately when a gurgling sound is heard with artificial ventilation.

II. Types of equipment
- A. Suction devices
  1. Mounted
  2. Portable
     a) Electrical
     b) Hand operated
- B. Suction catheters
  1. Hard or rigid ("Yankauer," "tonsil tip")
     a) Used to suction the mouth and oropharynx of an unresponsive patient.
     b) Should be inserted only as far as you can see.
     c) Use rigid catheter for infants and children, but take caution not to touch back of airway.
  2. Soft (French)
     a) Useful for suctioning the nasopharynx and in other situations where a rigid catheter cannot be used.
     b) Should be measured so that it is inserted only as far as the base of the tongue.

III. Techniques of use
- A. Suction device should be inspected on a regular basis before it is needed. A properly functioning unit with a gauge should generate 300 mm Hg vacuum. A battery-operated unit should have a charged battery.
- B. Turn on the suction unit.
- C. Attach a catheter.
  1. Use rigid catheter when suctioning mouth of an infant or child.
  2. Often will need to suction nasal passages; should use a bulb suction or French catheter with low to medium suction.
- D. Maintain body substance isolation
- E. Use with extreme caution in patients with epiglottitis.
- F. Insert the catheter:
  1. Into the oral cavity without suction, if possible. Insert only to the base of the tongue.
  2. Into the stoma or trach tube
     a) Use French catheter
     b) Measure length of catheter for insertion to length of little finger (approximately 3 inches)
     c) Suction
- G. Apply suction. Move the catheter tip side to side.

Appendices
SUCTIONING
(Page 2 of 2)

(Continued)

H. Suction airway until clear, and observe for bradycardia in children. Suction for no more than 15 seconds at a time. (15 seconds is the maximum recommended suction duration per insertion.)
   1. In infants and children, shorter suction time should be used.
   2. If the patient has secretions or emesis that cannot be removed quickly and easily by suctioning, the patient should be log rolled and the oropharynx should be cleared.
   3. If patient produces frothy secretions as rapidly as suctioning can remove, suction for 15 seconds, artificially ventilate for two minutes, then suction for 15 seconds, and continue in that manner. Consult medical direction for this situation.

I. If necessary, rinse the catheter and tubing with water to prevent obstruction of the tubing from dried material.

Appendices
COMMON MEDICAL ABBREVIATIONS

1°	Primary, first degree
2°	Secondary, second degree
3°	Tertiary, third degree
<	Less than
≤	Less than or equal to
>	Greater than
≥	Greater than or equal to
≡	Approximately equal to
α	Alpha
a	Before
abd	Abdomen
ASA	Aspirin
c	With
c/o	Complaining of
CA	Cancer
CAO	Conscious, alert, orientated
CHF	Congestive heart failure
COPD	Chronic obstructive pulmonary disease
cx	Chest
Dx	Diagnosis
♀	Female
Fx	Fracture
g,gm	Gram
Ga.	Gauge
GI	Gastrointestinal
gr	Grain
gtt	Drop
HA	Headache
HTN	Hypertension
Hx	History
LOC	Level of consciousness
♂	Male
MI	Myocardial infarction
min	Minute
N&V	Nausea, vomiting
NTG	Nitroglycerin
p	After
po	By mouth, orally
p.r.n.	As needed
q	Every
Rx	Prescribed for
s	Without
Sz	Seizure
↓	Decreased
↑	Increased
Δ	Change
∅	No, none