Patient Care Guidelines 2019-2020

This document is intended for use at all ski resorts of The Summit at Snoqualmie.

The intent of these guidelines is to enhance coordination amongst and between public service agencies and medical providers at all levels of certification and licensure at The Summit at Snoqualmie and King County EMS. More detailed information and specific treatment measures are available in the source material referenced below. Topics have been selected based on relevance to the winter environment, time and distance from urban centers, local terrain constraints, adverse weather, and potential need for detailed coordination with EMS agencies and receiving hospitals and staff. The reference documents used are indicated below.

These guidelines intentionally cover a very broad range of skills and formal disciplines. In reading and using them, all practitioners must be aware of their individual level of certification, training, licensure, liability, and in particular their individual scope of practice. **All practitioners should provide patient care and interventions at their personally appropriate and context-specific level of licensure, certification, and scope of practice.**

All practitioners regardless of training, licensure, experience, or certification, are strongly reminded that the default mode of care is rapid and efficient transport of critically injured and/or sick patients to definitive care. These guidelines are not intended, nor should they be interpreted as such, to change or circumvent this basic and important principle. Interventions should be undertaken only when such action, in the judgment of the practitioner, is required in order to preserve life or limb, facilitate extrication and injury management, or decrease the chance of temporary or permanent disability. However, as with all medical practice, use of these guidelines should not preclude the appropriate application of sound medical judgment…or indeed common sense.

References

[4] Outdoor Emergency Care / National Ski Patrol; ed. McNamara, Johe, & Endly, 5th Edition, 2011
[5] Seattle and King County EMT Patient Care Protocols, 2019
[8] King County Paramedic Pocket Guide, 2017

These guidelines are offered to the members of the Summit at Snoqualmie Ski Patrol with thanks and admiration for your dedication and tireless efforts in the emergency medical care of the Snoqualmie Pass community.

With our very best regards,

Geoffrey Ferguson MD Robert Gibson EMT

Note: Sections in italics apply specifically to Summit at Snoqualmie and are not taken directly from one of the above references

Quick Links

(Double click on a topic to go directly there)

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Acute Coronary Syndrome
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ALS Indicators For All Patients
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Aspirin in ACS
Asthma
Avalanche resuscitation
Behavioral
Bleeding Control
Blow By oxygenation
Burns
Cardiac Arrest
Chest Discomfort
Cold Related
Cold Water Submersion
Concussion card
Concussion aid room guidelines
COPD
CPR in the ski area
CVA
Diabetes
Documentation
Electrical Injury
Epineprine (check and inject)
Eye Injuries
FAST exam
Glasgow Coma Scale
Head and Neck Injuries
Helicopter Use
Hypothermic Cardiac Arrest
LAMS score
Long Spine Board elaboration
Medical Control
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NARSID
Nasopharyngeal airway
Normal Vital Signs
OEC medication administration
Oropharyngeal Airway
Orthopedic Injury
Oxygen Delivery Devices
Pain Management
Pelvic Fracture
Phone Numbers
Posterior SC Joint Dislocation
Respiratory Distress
Rule of Nines
Seizures
Shoulder Dislocation
Sick / Not Sick
Snow Immersion Suffocation
Soft Tissue Injury
Stroke
Stroke (Code CVA)
Spinal Motion Restriction
Summit SMR elaboration
Temperature Conversions
Tourniquets
Transport Issues
Triage
Volume Replacement
Wilderness CPR

ALS INDICATORS FOR ALL PATIENTS [5]

This summary of ALS transport indicators is offered here as a convenient condition-specific guide to information that should be obtained PRIOR to your call to 911. During this call, you should use this detailed information in conjunction with your patient assessment and mechanism of injury / nature of illness to collaboratively agree upon the most appropriate transport modality. More detailed information is included in the subsequent individual sections of this guidelines document.

The following list is offered as a summary guide and is not comprehensive. Nor does it take into account your index of suspicion or the MOI/NOI.

Abdominal Pain

- Discomfort or pain or unusual sensations between the navel and jaw if the patient is > or = to 40 y/o and/or has cardiac history
- Severe unremitting abdominal pain

Breathing

- Respirations > 30/min
- Failure to respond to repeated inhalers
- Asthma attack with history of previous intubation
- Audible wheezing not improved with inhaler
- Abnormal respiratory patterns
- Respiratory related with patient in the tripod position

Burns

- Burns with possible airway involvement
- Burns with associated injuries: electrical shock, fracture, airway
- Deep partial thickness of full thickness burns to face/head, genitals, or > 20% TBSA
- Full thickness circumferential burn to extremity (excluding fingers)

Quick Links

Cardiac

- Suspected Acute Coronary Syndrome

CVA

- LAMS score of 4 or greater
- Other ALS indicators (Vitals, LOC)

Diabetic

- Diabetic that is unable to swallow
- Diabetic with rapid respirations
- Diabetic that fails to respond to oral glucose
- Suspected ketoacidosis

Hypothermia

- Temperature <95 degrees oral or tympanic
- Hypothermia with significant co-morbidity (e.g. elderly, illness, circumstances, trauma, alcohol, drugs)

LOC/Neuro

- GCS < or = 12

- Hypoglycemia with decreased LOC
- Abnormal behavior with unstable vitals
- Abnormal behavior associated with possible drug or alcohol overdose

Pulse / BP

- Hypotension (systolic <90 with appropriate clinical settings)
- Signs of shock: pulse >120/ minute in appropriate clinical settings
- Positive posturals (decrease in systolic BP >20 or increase in pulse >20)
- Sustained tachycardia (generally >120/ minute in appropriate clinical setting)
- Systolic >200 or diastolic >110 with associated symptoms
- Pregnancy with systolic <90 or >140
- Severe bradycardia: HR<40 in appropriate clinical setting
- RR>30 or <8 in appropriate clinical setting

OB/GYN

- Female with severe unremitting pelvic pain
- Excessive vaginal bleeding
- Possible ectopic pregnancy
- Dispatched to birthing center/midwife
- Pregnancy complications: placenta previa, abruptio placenta, diabetes, multiple birth, breech or limb presentation, prolapsed cord, shoulder dystocia, uncontrolled postpartum hemorrhage
- Imminent birth
- 3rd Trimester pregnancy with abdominal trauma
- Pregnancy with significant MOI

Other

- Use of intramuscular epinephrine EMT or healthcare professional
- Suspected meningitis

Sepsis

- Decreased LOC
- Respiratory distress
- Respiratory distresss or RR > 30 per minute
- Signs and symptoms of shock

Seizure

- Multiple seizures
- Single seizure >5 minutes or >15 minutes postictal with no LOC improvement
- Pregnant female
- Severe headache
- Associated with trauma, drugs, alcohol, or hypoglycemia

Trauma

- Falls >2 times the body height *
- Thrown >10-15 feet
- Penetrating injury to the head, eyes, chest, abdomen, or pelvis
- Pelvic fx, bilateral femur fx, or multisystem fx
- Femur fx with excessive swelling
- Open fx except hands and feet
- Severe pain with significant MOI
- Any underwater rescue
- Paresis (weakness) and or paresthesia (abnormal sensation) due to trauma

***** Note: ALS transport requirement for falls > 2 x body height may be relaxed when the fall is on to the intended landing zone in a designated terrain park or onto an inclined soft snow surface, and there are no other ALS indicators present.

Quick Links

SICK / NOT SICK [5]

SICK — Someone who appears physiologically unstable as indicated by clinical indicators: inadequate respirations, weak pulse, altered mental status, poor skin signs or an inappropriate body position. Other terms that mean SICK include critical, urgent or unstable.

NOT SICK — Someone who appears physiologically stable as indicated by adequate respirations, pulse, mental status, skin signs and an appropriate body position. Other terms that mean NOT SICK include non-critical, non-urgent or stable. NOT SICK does not mean not ill or injured...only that the condition does not appear life threatening at the current moment.

The SICK/NOT SICK approach to rapid patient assessment has become a mainstay in determining the physiologic status of a patient in Seattle/King County. Whether it is medical or trauma, adult or pediatric, SICK/NOT SICK is the tool of choice for rapid patient assessment and appropriate patient care.

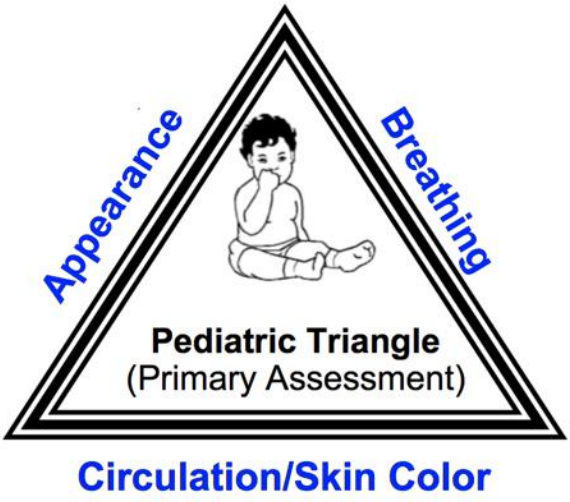
The clinical indicators used in the adult SICK/ NOT SICK approach provide clarity and offer clear and CONCISE indicators for determining a patient's physiologic stability. Often, these indicators are observable from across the room without even touching the patient. Additional considerations that need to be incorporated into your SICK/NOT SICK decision- process include: mechanism of injury (MOI), nature of illness (NOI) and index of suspicion (IOS). These CONSIDERATIONS will help you in determining SICK/NOT SICK and may alone determine into which category the patient is placed.

Adult SICK/NOT SICK Clinical Indicators:

Chief complaint and MOI/NOI/IOS
Respirations
Pulse (circulation)
Mental status
Skin signs (color, moisture, temperature)
Body position/obvious trauma

Pediatric SICK/NOT SICK:

Use the Pediatric Assessment Triangle for primary evaluation



Appearance	Breathing	Circulation
Alertness	Retractions	Color
Color	Nasal flaring	Temperature
Distractiblity	Body position	Capillary refill time
Consolability	**Abnormal sounds**	Pulse
Eye contact		
Motor activity		
Speech/cry		

Quick Links

Airway and oxygenation[5]

A. *Use of airway adjuncts (oropharyngeal airway and bag-valve mask) should be reserved for:*

- *Unconscious patients requiring airway protection when jaw thrust is ineffective or is not possible or practical*
- *Airway secretions or debris interfere with adequate ventilation*
- *Unconscious patients requiring assisted ventilation*
- *Inadequate respiratory rate or depth*

C. Nasopharyngeal airway: this device is not approved for use in Summit at Snoqualmie

B. Oropharyngeal airway, suctioning, bag valve mask

OROPHARYNGEAL (OP) AIRWAY

An oropharyngeal airway rests in the patient's oropharynx, lifting the tongue away from the back of the throat preventing it from occluding the airway. The OP airway is used only on unconscious patients and generally those without respirations.

Do not use this device if a patient gags when inserted. Use of an airway on a patient with a gag reflex may cause retching, vomiting, or spasm of the vocal cords.

To size an oropharyngeal airway:

Choose correct size by measuring from the corner of the mouth to the ear lobe or from the chin to the angle of the jaw.

In infants and children, insert the airway tip down or sideways along with a tongue blade. Rotate down when you are halfway in the mouth or approaching the curve on the tongue.

An oropharangeal (OP) airway is not necessary if ventilation via BVM is easily accomplished.

SUCTIONING

The Yankauer suction tip is preferred for most suctioning. If the holes on the Yankauer get plugged repeatedly, remove the tip and use larger bore tubing.

To suction with a Yankauer tip:

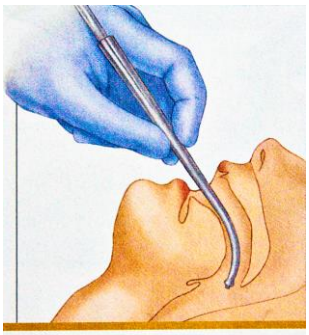
Measure the same as for an oropharyngeal airway—approximately from the corner of the mouth to the ear lobe.

Do not suction while inserting; suction only after the Yankauer (or similar device) is in place and as you withdraw.

Suction for no more than 15 seconds at a time.

In rare cases, copious vomiting that threatens the airway may require a longer period of suctioning.

Oxygenate the patient well before and after suctioning.



Insert the tip of the catheter no farther than the base of the tongue, making sure you can still see the tip of the catheter.

BAG-VALVE MASK

Successful ventilation with a BVM requires a good seal between the mask and the patient's face and maintaining an open airway.

Correct ventilation generates only modest chest rise.

To properly place a BVM:

- Choose appropriate size for the patient.
- Place the apex of the mask on the bridge of the nose (between the eyebrows).
- Settle the base of the mask between the lower lip and the prominence of the chin.

TECHNIQUE

- Kneel with a knee on each side of the patient's

Quick Links

D. Oxygenation [5]

- Conscious patient without respiratory distress
  - Begin with 2 liters per minute via nasal cannula as history is obtained.
  - If no contraindications, you may increase to 4 liters per minute.

- Conscious patient with respiratory distress
  - Increase oxygen delivery according to the patient's condition moving from nasal cannula to non-rebreathing mask.
  - Use respiratory rate, effort, exchange, ease of speaking, skin signs, and level of consciousness as a guide.
  - When using a non-rebreathing mask, remember to use a liter flow that is high enough to keep the bag inflated at least 1/3 full with the patient's deepest inspiration.

- Unconscious patient with sufficient respiratory effort
  - Oxygen delivery may range from low-flow with a nasal cannula to high-flow with a non-rebreathing mask.
  - Patient's level of consciousness and vital signs (especially respiratory rate and effort), color, and nature of illness should determine oxygen flow level.
  - Continually evaluate respiratory rate and effort and do not hesitate to assist respirations if necessary.

- Unconscious patient with insufficient or no respiratory effort
  - Ventilate patient or assist ventilations with a BVM and high flow oxygen.
  - If the patient resists the attempts to ventilate, try to time breaths with the patient's by compressing the bag as the patient inhales.

E. Oxygen delivery devices [4, 5]

Quick Links

Indications for supplemental oxygen:

1. *Pulse Oximetry (optional) less than 95%*
2. *Conscious patients with respiratory distress*
3. *Head injury with any neurological signs or symptoms*
4. *Suspected or confirmed spinal cord injury*
5. *Unresponsive patient*
11. *Apparent stroke*
12. *Extensive soft tissue injury*

6. *Shock from any cause*
7. *Cyanosis*
8. *Smoke inhalation*
9. *Carbon monoxide poisoning*
10. *Ongoing acute coronary syndrome*

Device and flow rate selection:

As a general rule, use enough oxygen to achieve the desired clinical effect. If the patient is exhibiting further signs and symptoms of respiratory distress or has not responded as you would expect, increase the flow rate and/or move up to a nonrebreather mask. If oxygenation and ventilation are still not effective with a nonrebreather at 15 LPM, then move on to assisted ventilations using a bag-valve mask with high flow oxygen.

Nasal Cannula: flow rates (LPM) and O_2 percentage [4]

2 LPM = 28%
4 LPM = 36%
6 LPM = 44%

Nonrebreather mask: flow rates (LPM) and 0_2 percentage [4]

10 LPM = 80%
12 LPM = 84%
15 LPM = 90%

* Bag should be inflated to at least 1/3 full with the patient's deepest inspiration. [5]

"Blow-by"

For an infant or young child with mild to moderate respiratory distress consider the "blow-by" technique. Hold the end of a supply tube or nonrebreather mask approximately two inches away from the patient's face. Another method is supply "blow-by" is with a paper cup. This can be done by pushing a supply tube through the bottom of the cup. Set the flow rate to 4-6 liters per minute. [5]

Quick Links

SPECIAL NOTE: COPD (emphysema, bronchitis, asthma) [5]

The physiology of a person with COPD differs from that of a healthy person in that the primary stimulus to breathe comes from a decrease of oxygen in the blood rather than an increase in carbon dioxide. Providing the COPD patient with high concentrations of oxygen can depress their respiratory drive. Therefore, it is advisable to start COPD patients with lower levels of oxygen, as long as they are not in severe respiratory distress. Two liters per minute by nasal

cannula is usually sufficient. If the COPD patient does not improve with low levels of oxygen, increase oxygen up to 4 and then 6 liters per minute.

A COPD patient whose respiratory drive is diminished due may present with increasing lethargy, confusion, and decreasing respiratory rate and effort. If this occurs, be prepared to assist ventilations.

If a COPD patient becomes unresponsive and/or stops breathing, ventilate via BVM with high flow oxygen

Quick Links

BLEEDING CONTROL [4,5,7]

Active external bleeding:

- Apply direct pressure on the open wound with sterile gauze or clean material
- Apply additional pressure if bleeding continues
- If blood soaks through the dressings, add new dressings
- A "pressure device" (e.g. BP cuff or military pressure dressing) may be used if available
- If active bleeding continues despite all efforts, apply a tourniquet (below)

Quick Links

Tourniquet guidelines in uncontrolled extremity bleeding

1. USE THESE STEPS FIRST:

- ***Direct pressure***
- ***Compression dressing with continued pressure over bleeding site***

2. If bleeding is still not controlled, immediately apply a tourniquet:*

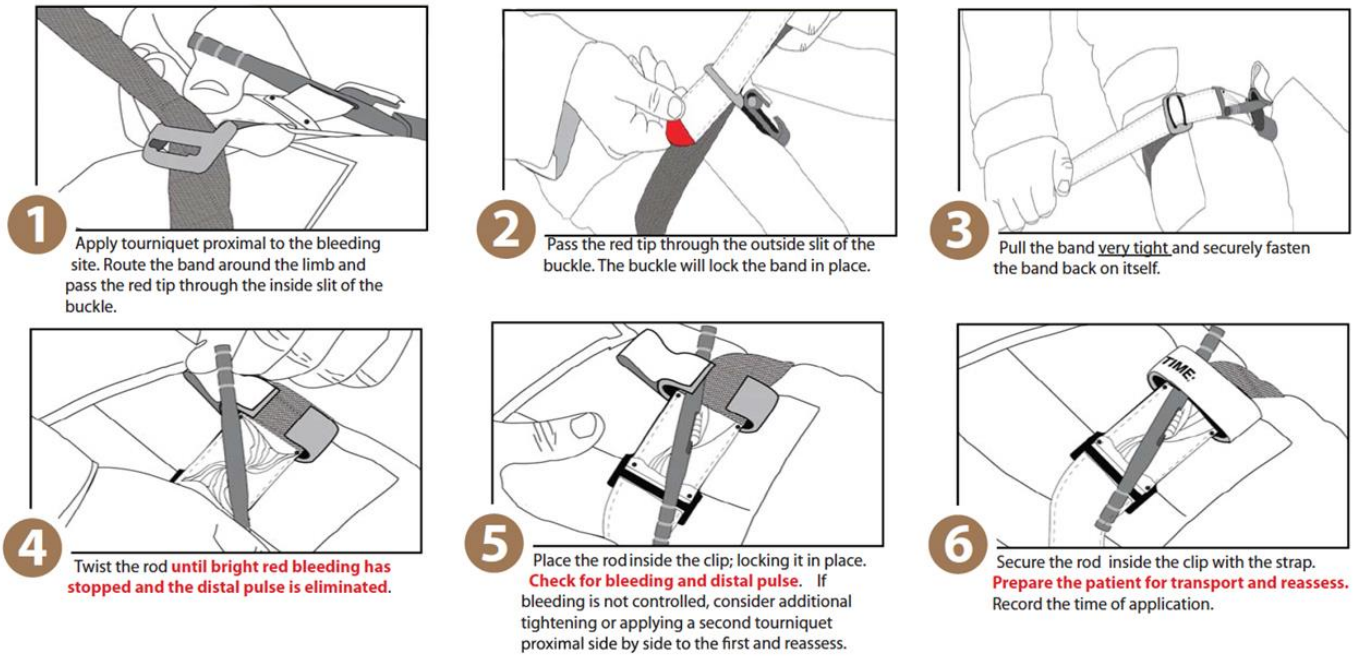
- *Inform dispatch of your intent to apply a tourniquet (911 call for early EMS response)*
- *Reassure the patient, emphasizing favorable survival statistics and lack of ischemic limb loss*
- *Anticipate absent distal pulse and progressively severe limb pain*
- *About 2-4 inches above the bleeding site*
- *At least 2 inches away from joints*

- *A commercial tourniquet is preferred*
- *If using an improvised tourniquet, choose wide (2" or more) material and use a windlass for tension*
- *Tighten just enough to control the bleeding*
- *Write the time somewhere clearly visible on the patient and/or on the tourniquet itself*
- *Obtain serial vital signs, but do not delay transport*
- *Do NOT remove the tourniquet*
- *If bleeding resumes, apply a second tourniquet*
- ***URGENTLY transport to definitive care***

** If possible, apply tourniquet prior to onset of shock.*

Quick Links

C-A-T Tourniquet:



Quick Links

Improvised Tourniquet:

Cravat or bottom 5-6" of a shirt and scissors

Keep the cravat as wide as possible and
tie ***tightly*** 2-4" above wound, but not on a joint

Use the scissors for a windlass

Secure the scissors windlass with another cravat

Write the time you applied the tournequet
on the patient's forehead or on the tournequet.
Initiate URGENT transport to definitive care facility.

Quick Links

Acute Coronary Syndrome (ACS) [5]

CODE ACS
(ACUTE CORONARY SYNDROME)

Acute coronary syndrome (ACS) requires rapid assessment by EMTs and paramedics and expedited transport to a cath-ready hospital.

This policy applies to all patients presenting with possible ACS and who are initially evaluated by EMTs.

Evaluation for ACS

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 of the **two** following signs or symptoms, when ACS is suspected:
   a. Atypical chest pain, stomach, or abdominal pain. This may include discomfort that can be localized to a point, that is "sharp" in nature, that is reproducible by palpitation, 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, sensation of impending doom, weakness, or fatigue.
   e. Palpitations, cold sweat, or paleness.

Administer Aspirin (Not authorized for Seattle EMTs)

1. Administer one 325 mg aspirin tablet (or four 81 mg baby aspirins) for patients with suspected ACS. Patients may chew or swallow (with a small amount of water) the aspirin(s). Do not use enteric coated aspirin.
2. Be sure that the patient is alert and responsive, meets indications and has no contraindications.

Contraindications For Use

1. Patient is allergic to aspirin.
2. Patient has taken 325 mg aspirin within 60 minutes for this event,
3. Blood pressure SBP>180 or DBP>110.
4. Active or suspected GI bleeding.
5. Suspected simultaneous complicating stroke/CVA

Additional Procedures

1. If the patient has his/her own nitroglycerin and meets the criteria for administration, please assist the patient with nitroglycerin administration.
2. Request paramedics if not already dispatched.
3. Record your actions, including the dosage and the time of administration.
4. Record the time of onset of symptoms. The time of onset should be the time that symptoms began which prompted the patient to call 911.
5. The goal for otal EMS on scene time should be <15 minutes.

Quick Links

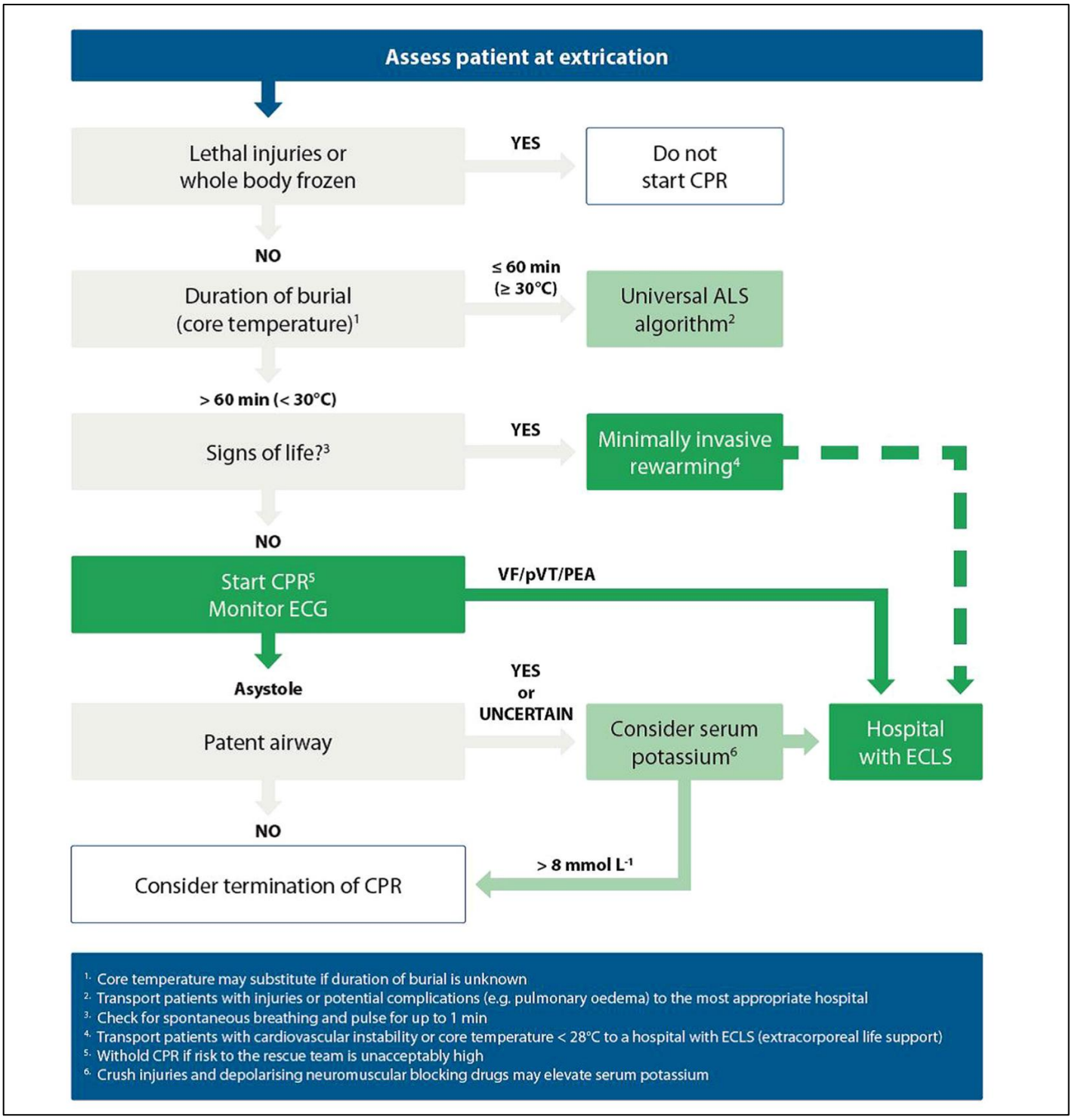
Cardiac arrest within the ski area: [5]

CPR For Adults

MANUVER	ADULT HCP: Adolescent and older
RECOGNITION	Unresponsive (for all ages)
	No breathing or no normal breathing (ie, only gasping)
	No pulse palpated within 10 seconds for all ages (HCP only)
ACTIVATE: Emergency Response Number (lone rescuer)	Assure ample support from BLS Activate ALS if not already enrote
CPR Sequence	C-A-B
Compression Rate	100-120/min
Compression Depth	At least 2 inches (5cm)
Chest Wall Recoil	Allow complete recoil between compressions Rotate compressors every 2 minutes
Compression Interruptions	Minimize interruptions in chest compressions Attempt to limit interruptions to <10 seconds
Airway	Head tilt-chin lift (HCP suspected trauma: jaw thrust)
Compression-to-ventilation ratio (until advanced airway placed)	30:2 Prioritize compressions
Ventilations:	BVM ventilations just to achieve chest rise. Each breath is provided in ~1 second
Ventilations with advanced airway (HCP)	1 breath every 6-8 seconds (8-10 breaths/min) Asynchronous with chest compressions About 1 second per breath Visible chest rise
Foreign-body airway obstruction	**Responsive:** Abdominal thrusts **Unresponsive:** CPR with airway check
AED Defibrillation	Attach and use AED as soon as possible. Minimize interruptions in chest compressions before and after shock; resume CPR beginning with compressions immediately after each shock.

Quick Links

Snow burial resuscitation (Wilderness Medical Society 2017)



WILDERNESS & ENVIRONMENTAL MEDICINE, 28, 23–42 (2017)

Pain Management

Pain relief is an elemental facet of patient care and wellbeing. Adverse effects of uncontrolled pain include hypertension, cardiac dysrythmias, anxiety, inadequate ventilation due to painful breathing, and increased difficulty of effective immobilization of the injured parts. Adequate pain control is associated with greater patient and family satisfaction, improved perception of quality of care, and can often significantly facilitate management of musculoskeletal injuries. ***However, administration of analgesics of any class must not unreasonably or significantly delay transport to definitive care.***

Traditionally, narcotic analgesics have been administered when required for pre-hospital pain management. This is a time honored and acceptable practice if, in the judgment of the physician, such medication is in the patient's best interest. However, current King County EMS transport protocols require simultaneous dispatch of ALS and BLS resources to the scene if narcotic analgesics are administered and EMS transport is requested. If in the judgment of the responding medics the patient does not require ALS interventions or monitoring, then the medics are authorized to down-grade the response to BLS transport.

Alternatively, the physician or licensed independent practitioner may accompany the patient in a suitably equipped and staffed BLS unit until transfer of the patient to either a responding ALS unit or the receiving facility. On going patient monitoring and possible additional medications can be administered en route if required.

Ketorolac may be considered as an alternative to narcotic analgesics, but the physician should be aware that subsequent transportation by private vehicle is NOT recommended, and not all transporting agencies or receiving hospitals will be comfortable with this approach. With either Ketorolac or narcotic analgesics, prospective consultation with the receiving hospital physician and direct communication with the transporting agency is strongly recommended.

1% lidocaine without epinephrine will be available in the secure medication safes this season. Its intended use is for intra-articular injection for analgesia in shoulder dislocation reduction and for hematoma block in long bone fracture. Use of lidocaine for pain management associated with long bone fracture and shoulder relocation is considered an acceptable technique for analgesia, providing that such use does not unduly delay transport to definitive care. At physician discretion, oral acetaminophen or ibuprofen may also be dispensed prior to transport, assuming there are no contraindications. Even though these are OTC medications, they will be in the secure locked box. Thorough documentation is of course required.

Selected Transport Issues

All patients on whom ALS treatment has been initiated must be accompanied by the attending practitioner or transported by an appropriate ALS transport agency to an approved medical treatment facility. If the method of patient transportation is not ALS, the involved provider must accompany the patient until handoff to another qualified ALS unit or emergency department staff. "Downgrading" an ALS response to a BLS response is possible, but communication and/or consultation with the receiving hospital and/or transporting agency is strongly recommended in this event. Please note that administering pain medication to a BLS patient will automatically convert that response to ALS. See Pain Management *for more details.*

If you want or need to talk to the individual medic unit responding to your patient, first determine which ALS unit is responding. Then refer to Phone Numbers *section for the cell phone number of that rig. If in doubt regarding which*

EMS units are responding and you need to talk with them, contact 911and request that the responding unit call the aid room.

Quick Links

Communication with "Medical Control"

For a major event that is evolving on the hill with clear need for EMS transport, early telephone contact with the 911 dispatcher or the actual responding EMS unit is appropriate and encouraged. Prior to contacting 911 or a responding EMS unit, the caller is strongly advised to aggressively gather the condition-specific information that will be needed to make a collaborative and educated transport decision. See the "Condition-Specific Transport Criteria" sections below for details.

Patrol physicians and OEC techs can contact the Overlake ER doc for consultation. The number is 425-688-5100. Identify yourself and ask for the trauma doc on duty. Providers can also contact the Harborview Trauma doc at 206-744-3074. Whenever possible, contact the specific hospital to which the patient will be transported. ***If a patrol doctor is caring for a patient who is going to be transported to a hospital, it is strongly advised that the patrol doctor contact either the ED charge nurse or ED physician at the receiving hospital.***

(Please see Phone Numbers section for additional phone contact information)

Quick Links

Guidelines for Helicopter Evacuation

"In King County, Airlift Northwest is the primary medical helicopter service. The use of medical helicopters may be considered when estimated ground transport times are likely to be excessive, due to traffic, *weather, road conditions, or* distance. Use of medical helicopters may be considered for any critical ill of injured patient requiring care at a facility outside of the local area when transport times are likely to be excessive. A medic unit must be dispatched anytime a medical helicopter is being considered. It is suggested that consultation with the responding medic unit take place prior to requesting a medical helicopter. Requests for helicopters are made through dispatch. Normally, there should only be one patient per helicopter. If two patients need to be flown, request a second helicopter." [5]

Refer to "ALS Indicators for All Patients" for general guidelines in the selection of patients requiring urgent evacuation. The required procedure to decide if aeromedical transport is indicated is to have a direct conversation with the 911 dispatcher and/or the responding Medic unit via their cell phone (see "Selected Transport Issues" above).

When considering or requesting ALS transport or helicopter evacuation, the required procedure is to call 911, identify yourself (e.g. "This is <name and role> from the <fill in the blank>Ski Patrol. We have a medical emergency requiring urgent evacuation.") You will be connected to a dispatcher who will discuss the case with you and dispatch appropriate units. Helicopter evacuation is obviously weather and terrain

dependent. The pilot(s) and /or agency (King County Sheriff's Office, military, Airlift NW) have the final authority to accept, decline, or abort the mission.

Use of a BLS ground unit to transport to a suitable helicopter rendezvous point may be the fastest option. In this case, the Patrol Physician or other qualified attendant should accompany the patient in the BLS unit until the ALS air or ground unit can accept the patient.

Primary and secondary air to ground radio communication frequencies should be established prior to aircraft arrival on scene. A staging area may be required as well. The Snoqualmie Pass Fire department will be the ground contact for Airlift Northwest and will dispatch resources to the landing zone to provide scene safety and assist in the event of a mishap.

Quick Links

Helicopter hoist evacuation

Helicopter hoist operations may be considered for expedited transport or extrication of a critically injured patient from a remote location or a situation requiring prolonged technical ground-based rescue with associated risk to the patient or rescuers. Airlift NW requires a flat landing zone and does not perform hoist operations, but the King County Sheriff's Office currently operates a hoist-capable and FAA certified rescue helicopter with an EMT air crew and paramedic available for urgent patient extraction from remote locations or challenging terrain. King County Air Support Unit should be the first choice for air search, hoist-assisted helicopter evacuation, or field insertion of qualified personnel. Contact is via 911. King County SAR units will be dispatched to provide air to ground communication and coordination with EMS units.

Federal (military) hoist-capable helicopter support is currently very limited, but may be available in the event of a mass casualty incident or if local resources have been exhausted or are unavailable. Requests for such support is also via 911.

Ground-to-air communication with the King County Sheriff's helicopter (call sign "Guardian Two") will generally be coordinated via SPART ("Ski Patrol Rescue Team") members or other King County personnel.

Quick Links

Documentation and Communication

Documentation of the patient's exam and treatment in the AID rooms must be done on the appropriate report forms supplied by the ski area. At an absolute minimum, verbal report should be given to the transporting BLS or ALS personnel by the attending staff. ***Physician-to-physician communication with the receiving facility prior to ALS transport is strongly encouraged. Cell phone communication with the responding medic unit is also appropriate.*** Phone Numbers

Cold Water *(also Snow)* Submersion [1,3,5]

See also Snow Immersion Suffocation (SIS), previously termed NARSID

ALS Indicators

- Any underwater rescue
- Altered LOC or Respiratory distress
- Labored breathing
- Hypotension (systolic BP less than 90 mmHg)
- with an appropriate clinical setting
- Temperature less than 95°F
- Significant co-morbidity (e.g., injury, intoxication)

BLS Indicators

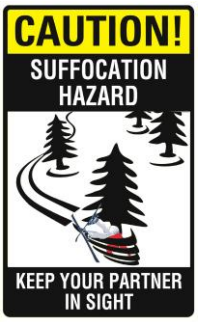
- Water-related accident including aspiration of water, injury in diving or swimming, with normal CNS function and vital signs

BLS Care

- Request paramedics if indicated.
- Remove the victim from the water; do not
- become a victim.
- Neutral in-line cervical stabilization during
- removal from water with spinal mobility restriction if a spine injury is suspected or patient is unresponsive.
- If there is no suspected spinal injury, consider recovery position.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Prepare suction, expect vomiting.
- Warm aid unit and monitor vital signs.

All immersion incidents should be transported to the hospital for further evaluation.

Quick Links



SIS (Snow Immersion Suffocation)

(Previously termed NARSID)

- *Reports of persons buried in deep snow (tree well or open slope) are true emergencies and require immediate patrol response*
- *Rapid deployment of patrollers and equipment to the scene is paramount*
- *On scene witnesses should be advised to make themselves visible and be prepared to respond to searchers by voice or whistle*
- *If possible, advise the reporting party to STAY ON SCENE, attempt to uncover the patient's head, and maintain an open airway*
- *Equipment: AED unit, oxygen, suction devices, and extrication aids*
- *BLS and ALS care as per* Cold Water Submersion
- *Patients who require any form of on-scene resuscitation should be transported to definitive care*

Shock secondary to trauma requiring immediate volume replacement [2]

A. General

- Employ necessary immediate first aid measure (e.g. control of hemorrhage)
- Establish one and when possible two or more large bore intravenous lines.
- Begin rapid infusion of two or more liters of LR using pressure infusion bags if possible. Titrate SBP to 90 mmHg [or to signs of good perfusion (e.g. normal mentation, skin warm and dry)], but not higher due to risk of worsened bleeding from increased tissue perfusion.
- *With concordant head injury, vigilant maintenance of systolic BP > 90mmHg and adequate oxygenation has been associated with improved long term outcomes (see below). Early consultation with 911 and the responding medic units is strongly suggested. Refer to "Selected Transport Issues" for Medic units direct cell phone numbers.*

A. Transport issues:

If an IV is infusing for volume replacement or medications, the patient must be transported by an ALS unit. If the line can be hep-locked, BLS transport may be sufficient, but direct communication with the transporting agency prior to transport is required.

Quick Links

Head and Neck Injury [5]

ALS Indicators

- Abnormal respiratory patterns
- Compromised airway
- Major mechanism of injury
- Penetrating injury to neck
- Glasgow Coma Scale of 12 or less
- Decreased LOC, unstable vital signs
- Paresis (partial or complete paralysis) and/or paresthesia (abnormal sensation)
- *Evidence of injury to cervical spinal cord (see below for concussion)*
- Significant drug or alcohol use

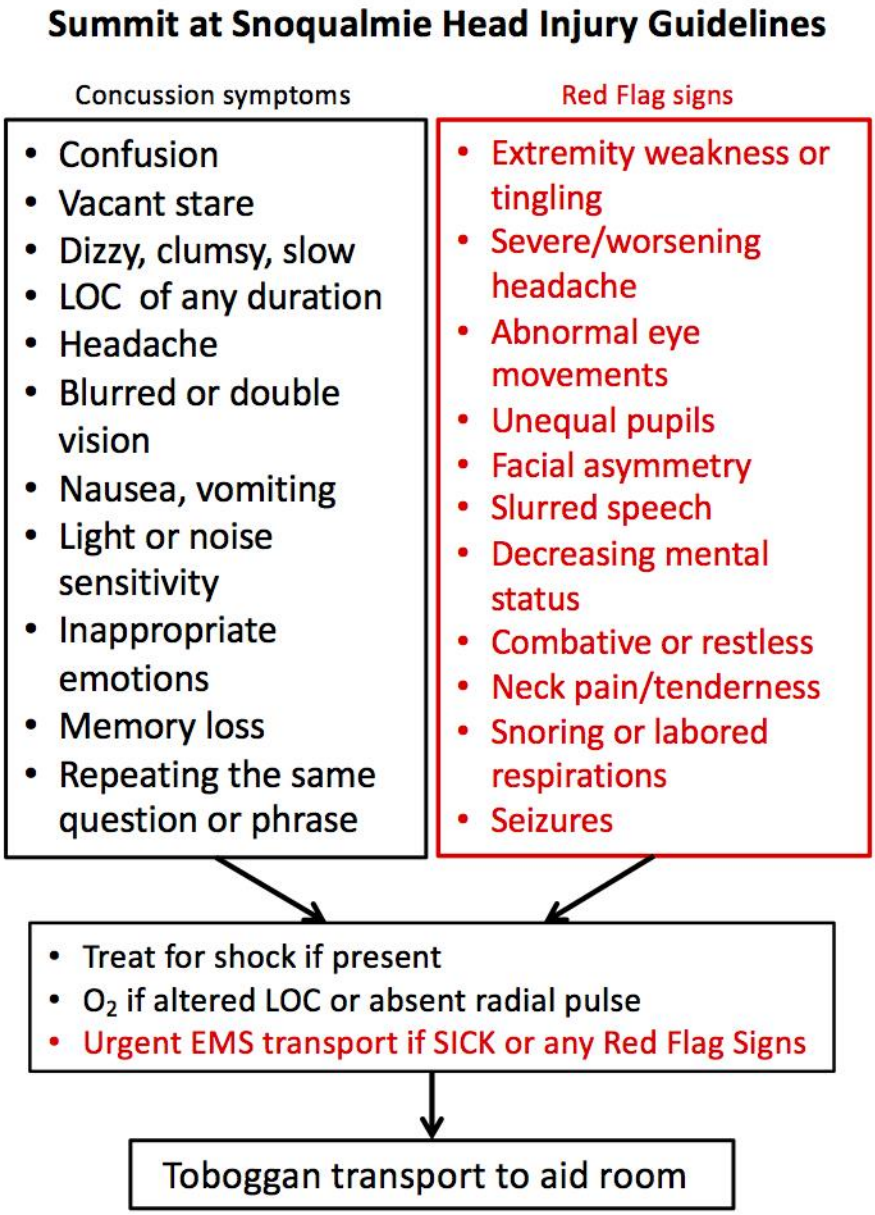
BLS Indicators

- Minor mechanism of injury
- Intact airway, stable vital signs
- *No evidence of injury to cervical spinal cord (see below for concussion)*
- No significant drug or alcohol use

BLS Care

- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Request ALS transport if indicated (above)
- Ensure a patent airway
- Provide neutral, in-line cervical stabilization with proper sized cervical collar and padding
- Bandage as necessary.
- Monitor vital signs and neurologic status.

Concussion (Mild Traumatic Brain Injury)



Quick Links

Summit at Snoqualmie Aid Room Concussion Guidelines

Patients brought to the aid room following head injury should be considered at risk for concussion. Note that head injury may not have been part of the initial on-scene impression. Detailed interviews with patient and witnesses/companions may be needed to understand the full nature of the injury.

Concussion Symptoms:

- Confusion
- Vacant stare
- Dizzy, clumsy, slow
- Headache
- LOC of any duration
- Blurred or double vision
- Nausea, vomiting
- Light or noise sensitivity
- Inappropriate emotions
- Memory loss
- Repeating the same question or phrase

Red Flag Signs:

- Extremity weakness or tingling
- Severe/worsening headache
- Abnormal eye movements
- Unequal pupils
- Facial asymmetry
- Slurred speech
- Decreasing mental status
- Combative or restless
- Neck pain/tenderness
- Snoring or labored respirations
- Seizure activity

High risk mechanisms:

- "Double hit" to the head
- Rotational head trauma
- High energy event

Increased risk factors:

- History of previous concussion
- Previous same-day head injury
- Younger age
- Female gender

General considerations

1. Prolonged observation is NOT recommended. Early transport to an appropriate medical facility is the goal.
2. If concussion is possible or suspected, request patrol MD evaluation if promptly available.
3. Elevated index of suspicion with high risk mechanisms or risk factors (above)
4. Companions and witnesses may be the most reliable source of information.
5. If age ≤ 18, contact parent or guardian
6. Concussion signs and symptoms typically change rapidly in the first few hours. Frequent observation is key.
7. In suspected concussion, refusal of care should be discouraged. If adamant and competent responsible companions are present, detailed and thorough documentation including signed and witnessed refusal of care form is mandatory. Patrol leadership should be immediately be contacted for assistance.
8. Concussed patients without a driver: Try family contacts first. Consider patrol leadership/security assistance

Aid room care

1. Serial vital signs including mental status (AVPU or GCS) and eye exam.
2. Treat for shock if present, administer supplemental oxygen if SBP < 90mmHg or patient is SICK
3. Maintain patent airway, suction if needed
4. SAMPLE points of focus
    a. Symptoms may be difficult to elicit if altered LOC. Interview companions and witnesses for any loss of consciousness, confusion, decreased awareness, unusual behaviour or emotions.
    b. Specifically ask about aspirin, ibuprofen, or anticoagulants
    c. Search for any history of previous concussion or head injury including date(s) and outcome
    d. If nauseated, determine time and content of last meal.
    e. Try to elicit details of the mechanism of injury (more than one hit, head rotation, etc)
5. Secondary survey with particular attention to cervical spine evaluation
6. Thorough documentation, including disposition plans and patient/companion/guardian signature
7. Solo driver with concussion: Try family phone contact first. Consider contacting patrol leadership/security .

Disposition

1. All patients with suspected concussion should be evaluated at an appropriate medical facility on the same day of the head injury. No patient with suspected concussion may be allowed to resume snow sports on the day of injury. See above regarding refusal of care.
2. Initiate urgent EMS transport if any one or more Red Flag Signs (above) are present or pt. is SICK

Glasgow Coma Scale

Eye Opening Response	4 points: Spontaneous—open with blinking response at baseline 3 points: Opens to verbal command, speech, or shout 2 points: Opens to pain, not applied to face 1 point: None
Verbal Response	5 points: Oriented 4 points: Confused conversation, but able to answer questions 3 points: Inappropriate responses, words discernible 2 points: Incomprehensible speech 1 point: None
Motor Response	6 points: Obeys commands for movement 5 points: Purposeful movement to painful stimulus 4 points: Withdraws from pain 3 points: Spastic flexion of arms, wrists, and fingers. Hands held on chest 2 points: Rigid extension of arms and legs. Head and neck arched backwards 1 point: None
Score the BEST response for each category and add the points. The total is the Glasgow Coma Scale. The possible range is 3-15. Anything less than 15 is abnormal.	

*Note: Vigilant pre-hospital maintenance of systolic BP >90mmHg * and adequate tissue oxygenation has been associated with improved long term outcomes following traumatic brain injury. ***

* *A palpable radial pulse is a reasonable approximation of a systolic BP > 90 mmHg*

** Ghajjar, J • THE LANCET • Vol 356 • September 9, 2000

Quick Links

Orthopedic Injury [5]

ALS Indicators

- Decreased/altered LOC
- Signs or symptoms of shock
- Excessive uncontrolled bleeding
- Pelvic fracture, bilateral femur fracture, or multi-system injury/fractures
- Femur fracture with excessive swelling
- Open fractures, except for hands and feet
- Abnormal neurovascular exam distal to fracture
- Severe, unremitting pain (ALS for pain control)

BLS Indicators

- Single extremity fracture with stable vital signs
- Single joint injury with stable vital signs

BLS Care

- Request paramedics if indicated.
- Protect spinal mobility restriction if indicated
- Apply direct pressure and sterile dressing over major bleeding.
- Advise nothing by mouth.
- Gently support injured part and allow patient to choose position of comfort.
- Check for nerve function and vascular compromise distal to fracture by documenting circulation, motor function, and sensation/nerve function ("CMS") before and after splinting.
- Immobilize and splint if indicated
- Apply cold/ice pack to injured part (for closed tissue injury only).
- Monitor patient's vital signs
- Package patient for transport
- Attempt realignment *only* if neurovascular compromise exists

Realignment of Fractures/Dislocations with Neurovascular Compromise

- Attempt to realign open or closed injuries that are angulated with loss of distal pulses and pale/cool distal skin only if ALS arrival will be delayed by >15 mins
- Realign by applying gentle, in-line, distal traction until pulse returns or increased resistance or excessive pain occurs.
- Splint extremity after realignment
- Realignment may sometimes be necessary to facilitate packaging for transport.
- Always Check and document distal CMS before and after realignment and/or splinting.

Multiple Extremity Fractures

- These patients should be secured to a backboard which will serve as a general body splint for several sites.
- Rapid packaging and transport of the unstable patient takes priority over definitive on scene splinting

Shoulder Dislocation

Historically, the shoulder has been our most frequently encountered dislocation. If there is neurovascular compromise and clinically evident anterior dislocation and no crepitus, it is reasonable for an experienced and qualified personnel to attempt relocation in an effort to avoid neurovascular sequelae. Additionally, pain relief is often immediate and significant once the shoulder has been relocated and greatly facilitates extrication, splinting, and transport. However, prolonged efforts that delay transport to definitive care should not be undertaken.*

At Summit at Snoqualmie, shoulder relocation may be considered an application of the principle of returning a traumatic deformity to anatomical position. The intent is to relieve pain and reduce the risk of neurological or vascular injury during transport to definitive care at a suitable medical facility. Additionally, in-field shoulder relocation may be considered appropriate if doing so will increase team safety and speed of extrication and evacuation from remote or physically challenging accident scenes.

Shoulder relocation may be undertaken by qualified personnel if the following criteria are met:*

- *The dislocation is anterior*
- ***There is no crepitus upon physical examination***
- *In the judgment of the physician, early relocation to an anatomically correct position will decrease the risk of neurovascular sequelae*
- *The patient is competent and has been informed of the potential risks and benefits and agrees to attempts at relocation*
- *The attempts will NOT unduly delay transport to definitive care*
- *Documentation includes physical findings, rationale for relocation, informed consent, and the destination medical facility for definitive care*

* Qualified personnel: Licensed on-duty Summit at Snoqualmie advanced care providers who have appropriate training and experience in shoulder dislocation management. This is not considered an EMT or OEC level skill.

Quick Links

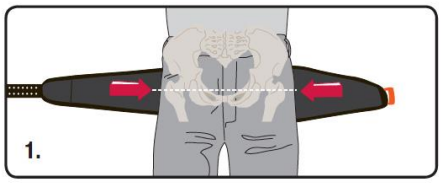
Long bone fracture [5]

- Attempt to realign (open or closed) long bones that are angulated in the middle 1/3 then splint.
- CMS should be checked before and after every attempt at manipulation or splinting.
- Long-bone fractures, which occur in the proximal or distal 1/3, that may or may not involve a joint, may be realigned if compromise of distal circulation or nerve function is detected and definitive care is delayed.

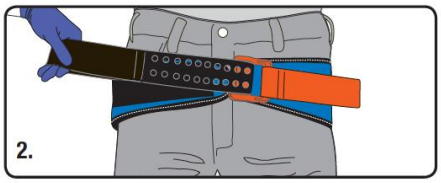
Pelvic Fractures or Multiple Extremity Fractures [5]

- These patients should be secured to a backboard which will serve as a general body splint for several sites
- Rapid packaging and transport of the unstable patient or patient with multiple fractures takes priority over definitive splinting at the scene.
- Stabilization of pelvic fracture with a commercial device or improvised compressive sheet may be considered.

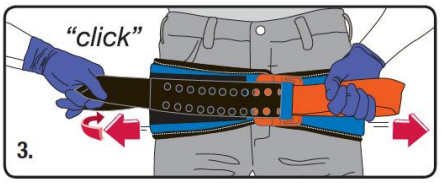
"SAM Pelvic Sling" application:



Remove objects from patient's pocket or pelvic area. Place SAM Pelvic Sling II black side up beneath patient at level of trochanters (hips).



Place **BLACK STRAP** through buckle and pull completely through.



Hold **ORANGE STRAP** and pull **BLACK STRAP** in opposite direction until you hear and feel the buckle click. Maintain tension and immediately press **BLACK STRAP** onto surface of SAM Pelvic Sling II to secure. You may hear a second click as the sling secures.

Improvised Pelvic sling application:

Pelvic sheeting technique

- Fold sheet lengthwise into 8” to 14” width
- Place beneath patient; twist then wrap ends around patient, crossing over pelvic area
- Tie sheet with square knot to apply moderated side-to-side and front to back pressure
- Secure the ends to the backboard

Quick Links

Special Statement regarding “Posterior Sternoclavicular Joint Dislocation”

Although methods for urgent reduction of this injury in the presence of life threatening respiratory distress are described in OEC 5, ***these interventions are NOT approved at Summit at Snoqualmie****. Patients presenting with this injury typically have suffered a high-energy mechanism of injury and should be considered SICK (refer to* Sick / Not Sick *). Treat for shock and hypoxia as required and transport urgently to definitive care.*

Quick Links

Soft Tissue Injury[5] *(including abdominal trauma)*

A. General precautions [4,5]

- Anticipate emesis
- Serial vital signs
- Oxygen and IV fluids as indicated
- Control bleeding
- Maintain normal body temperature
- Large, easily removed foreign bodies and debris can be removed prior to bandaging. Deeply imbedded fragments or projectiles should be left in place and secured by the bandage.

B. ALS indicators:

- Significant head injury
- Signs and symptoms of shock
- Soft tissue injuries that might compromise the airway
- Excessive uncontrolled bleeding
- Altered LOC
- High index of suspicion based on mechanism of injury

C. BLS indicators

- Conscious and alert
- Stable vital signs
- Soft tissue injuries limited to the superficial layer of the skin
- Single digit amputations
- Soft tissue injuries with bleeding controlled by direct pressure and/or elevation

Special Instructions for OPEN Soft Tissue Injuries and Removal of Foreign Objects:

- Control bleeding with direct pressure on the area or upon pressure points. Use pressure dressings or pressure device (like a BP cuff) for severe, uncontrolled bleeding.
- Large, easily removed debris, such glass, splinters, or gravel must be removed before bandaging.

Quick Links

ABDOMINAL COMPLAINTS [5]

ALS indicators

- Signs and symptoms of shock
- Unstable vital signs
- Positive postural changes
- Evidence of ongoing bleeding or open wound
- Severe unremitting pain

BLS indicators

- Stable cardiac and respiratory functions
- Stable vital signs

BLS Care

- Request paramedics if indicated
- Provide supplemental oxygen and/or ventilatory assistance as necessary
- Position of Comfort (Shock Position if hypotensive)
- Prepare to suction patient if vomiting estimate volume and describe character (color and consistency) of vomitus
- Reassure patient
- Monitor vital signs every five minutes

Quick Links

ALTERED LEVEL OF CONSCIOUSNESS [5]

ALS indicators

- Decreased LOC
- Respiratory distress or airway compromise
- Signs and symptoms of shock
- Unstable vital signs
- Multiple seizures
- Single seizure greater than five (5) minutes or with greater than 15 minutes postictal with no improvement in LOC
- Cyanosis
- Hypoglycemia with decreased LOC
- Seizure in pregnant female
- Seizure with severe headache
- Seizure associated with trauma
- Drug or alcohol related seizures

BLS indicators

- Adequate respirations
- Transient symptoms including seizure with stable vital signs
- First time or typical seizure pattern for the patient with stable vital signs

BLS Care

- Provide supplemental oxygen and/or ventilatory assistance as necessary
- Protect patient from injury, remove objects from mouth and upper airway, do not restrain patient during seizure, remove hazardous objects near patient.
- Position patient in position of comfort if alert and airway is secure; if not, then use recovery position.
- Perform blood glucometry if authorized
- Perform pulse oximetry if authorized
- Suspect opioid overdose
- Loosen restrictive clothing
- Retain relevant drug containers and notes for ransport with patient

Quick Links

ALLERGY / ANAPHYLAXIS [5]

ALS indicators

Allergic trigger plus:

- Unstable vital signs
- Signs or symptoms of shock

- Respiratory distress / compromise
- Progressive hives
- Use of epinephrine

BLS indicators

- Bite or sting with local reaction or usual reaction to medication or food
- Stable vital signs
- No anaphylaxis

BLS Care

- Oxygen as needed.
- Reassure patient.
- Remove stinger by scraping away from puncture site.
- *Use of an epinephrine requires transport to a definitive care facility*

EPINEPHRINE *(Check and Inject kit: EMT or MD only)*

Anaphylaxis is a severe life threatening allergic reaction. EMTs are authorized to administer Epinephrine 1:1,000 IM if the following conditions are present:

1. Known or suspected trigger (commonly food allergy, insect sting, drug allergy)
2. Plus one or more of the following symptoms must be present:
   a) Respiratory distress including oral swelling;
   b) Hypotension;
   c) Diffuse or progressive hives

If there is doubt or ambiguity about the diagnosis of anaphylaxis, call paramedics or local ED.

Dosages:

- **Adult** (> 30 kg / 66 lbs): 0.3 mg Epi 1:1,000 IM
- **Child** (< 30 kg/ 66 lbs): 0.15 mg Epi 1:1,000 IM

Use of Epinephrine by EMT or healthcare professional is an ALS indicator. Any patient who receives Epinephrine (pre or post EMS arrival) should be transported (mode of transport depends on clinical findings and symptoms) and evaluated in a hospital.

Injection Procedure

Confirm that patient is experiencing anaphylaxis and meets above criteria.

Assist with administration of patient's Epi auto injector if available.

1. Confirm correct medication and check expiration date.
2. Prep patient's skin.
3. Confirm medication is in syringe.
4. Confirm correct dose with partner.
5. Insert needle into medication vial, draw up desired dose and remove all air bubbles from syringe.
6. Insert needle into patient's anterior-lateral mid-thigh at a 90-degree angle to the skin surface. Retract plunger to check for blood.
7. Inject medication.
8. Remove needle and engage needle safety device and place needle/syringe into sharps container.
9. Massage injection site for at least 15 seconds.
10. Reassure patient and monitor for response/ side effects and vital signs every 5 minutes.
11. Document: Medication, dose, site, time, vitals before/after, and patient response to therapy.
12. May administer additional dose every 5-15 minutes if symptoms of anaphylaxis persist.

***** *See OEC use of EpiPen*

ASTHMA [5]

Quick Links

ALS indicators

- Decreased LOC
- Extreme anxiety and agitation
- Ashen color, cyanosis
- Failure to respond to repeated inhalers
- History of previous intubation
- Unable to speak normally due to respiratory distress
- Labored respirations regardless of rate
- Audible wheezing not improved with inhalers
- Sustained tachycardia

BLS indicators

- Responds to self-administered Metered Dose Inhaler (MDI)
- Normal vital signs
- Able to speak normally

BLS Care

- Assist patient with his or her medications including multi dose inhaler
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Reassure patient and urge calmness.
- Obtain pulse oximetry if authorized
- Monitor vital signs every five minutes

Quick Links

BEHAVIORAL [5]

ALS indicators

- Decreased LOC
- Abnormal behavior with unstable vitals
- Abnormal behavior with serious co-morbidity (e.g., trauma, drug or alcohol OD)

BLS indicators

- Abnormal behavior with stable vital signs

BLS Care

- Secure safety of personnel and patient.
- Provide support, reassurance to patient.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Wound or trauma care if indicated.
- Consider glucometry and pulse oximetry if authorized
- Call police if necessary (patient refuses transport but providers feel patient needs further evaluation).
- Use restraints when warranted

- Monitor patient behavior and physiological changes, do not leave patient alone or unobserved.

Note:
Incapacitated or impaired with mental or behavioral problems should be evaluated in local hospital emergency departments.

Quick Links

BURNS [4,5]

Burns can be caused by heat, electricity and chemicals. Burns of the soft tissue can be life-threatening particularly when they involve the respiratory tract or occur over extensive areas of the skin. Burns of the skin can lead to shock and sepsis which both occur hours after the trauma occurs.

Always be alert for possible airway involvement

Even if a patient has no signs of external burns, there can be inhalation injuries. These can pose a serious problem. Signs of burns involving the respiratory tract include:

- Burns of the face, nose, mouth or chest
- Singed eyebrows, lashes or nasal hair
- Abnormal breath sounds such as stridor, wheezes or rhonchi
- Inadequate chest expansion
- Sooty sputum
- Respiratory distress
- Hoarse voice or persistent cough
- History of confinement in toxic or smoky environment

ALS indicators

- Possible airway involvement (see above)
- Burns with associated injuries: electrical shock, fracture, or respiratory problems
- Second or third degree burns to face/head
- Deep partial thickness or full thickness burns of face/head, genitals, or covering greater than 20% of body surface area
- Severe pain (contact MD for pain control)

BLS indicators

- All other burns

BLS Care

- Remove rings if there are burns to extremities
- Superficial, partial thickness burns:
  - ✓ Remove easily removable debris
  - ✓ Apply cool, moist pads
- Deep partial thickness burns:
  - ✓ Cover with dry dressing (commercial burn sheets are acceptable)

- ✓ DO NOT apply ointments or creams

- Chemical burns:.
  - ✓ Remove wet chemicals, such as acid, with repeated flushing before dressing
  - ✓ Remove dry chemicals by brushing the area first and then flushing
  - ✓ If available, apply occlusive dressing to retain heat and moisture. Secure with tape

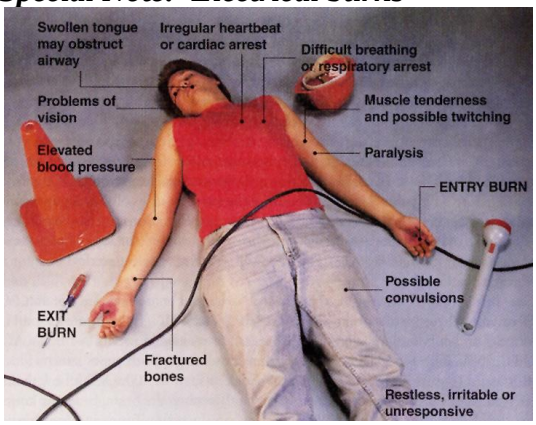
Transport guidelines: See above for King County ALS indicators for burns. The American Burn Association recommends urgent transport to one of the 125 national burn centers for the any of the following:* [4]

*Harborview Medical Center. See Phone Numbers for contact information.

- Burns to a child under 10 years old or an adult over 65 years old
- Burns involving more than one body part
- Burns involving the head, neck, hands, feet, genitals, or major joints
- Inhalation injury *or airway* burns
- Burns associated with difficulty breathing or hoarseness
- Chemical or electrical burns (including lightning injury)
- Partial-thickness (second-degree) burn greater than 10% total body surface area
- Any full-thickness (third or fourth degree burn) burn
- Burns associated with trauma
- Burns with a serious underlying medical disorder (e.g., diabetes, heart disease)
- Burns in a patient who has special social, emotional, or physical needs
- Exposure to radioactive materials

Quick Links

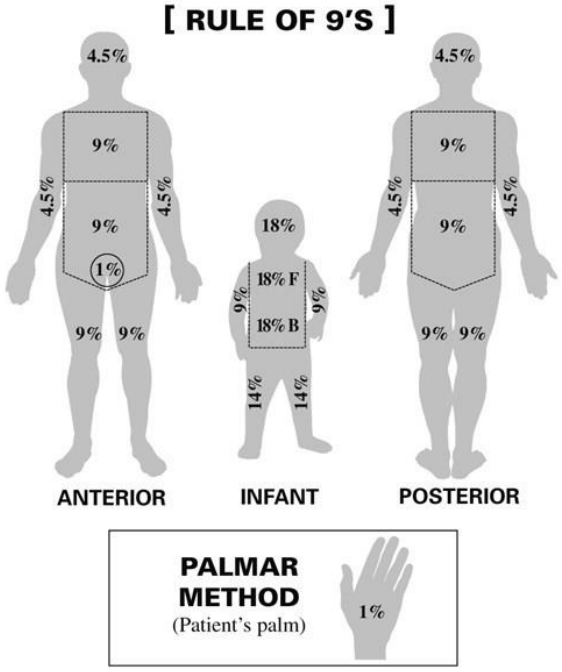
Special Note: Electrical burns



- ***Scene safety is paramount! Qualified personnel MUST confirm lack of energized wires and/or equipment within the incident scene prior to rescuers entering the scene.***
- *Suspect muscle and internal organ injury and cardiac affects including abnormal heart rhythm and blood pressure alterations*
- *Anticipate the need for assisted ventilations and supplemental oxygen*
- *Have an AED immediately available*

Rule of Nines:

Quick Links



CHEST DISCOMFORT [5]

ALS indicators

- Chest discomfort of suspected myocardial ischemia (angina)
- Altered LOC
- Use of nitroglycerin
- Unstable vital signs
- Signs and symptoms of shock
- Discomfort, pain, or unusual sensations between the navel and the jaw if the patient is 40 or over and/or has a history of heart problems

BLS indicators

- Apparent non-cardiac or minor traumatic chest pain **if** patient is less than 40 **and** has no cardiac history, and no associated symptoms
- Stable/normal vital signs

BLS care

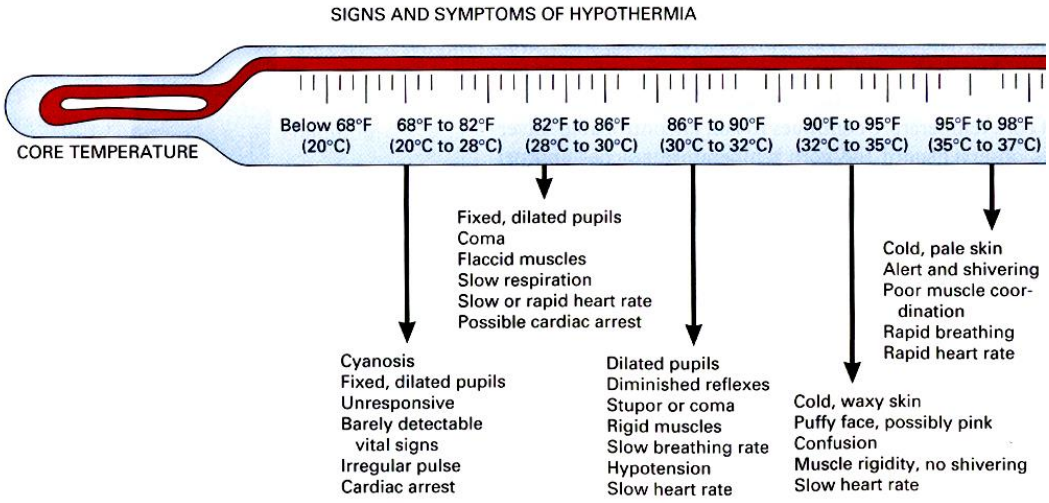
- Request ALS/MD if indicated
- Provide supplemental oxygen and/or ventilatory assistance as necessary
- Assist patient with nitroglycerin
- Provide aspirin if indicated
- Position of comfort
- Reassure patient
- Monitor vital signs every 5 minutes
- Monitor ECG if authorized, record rhythm strip

Special Instructions For Chest Pain

- **Patients with possible cardiac chest pain require ALS evaluation**
- **Maintain high index of suspicion that atypical chest pain may be cardiac in origin**
- **Elderly patients, women, and persons with diabetes may present with atypical findings such as fatigue, weakness, shortness of breath, or syncope**

Quick Links

COLD-RELATED [4,5]



Special Note: Cold-related signs and symptoms in rescuers

- *Be aware that the same conditions that caused the patient's problem will identically affect the rescue team members.*
- *Maintain <u>vigilant</u> awareness of shivering, decreased coordination, slowed responses, and confusion in yourself and your team members. If possible, rotate people out or assign them less critical tasks if they become symptomatic.*
- *Be particularly wary of repeated instances of delayed or unusual decisions or actions in yourself or others.*
- *Wear weather-appropriate dry clothing.*
- *Be adequately hydrated and fed before and during the mission.*
- *Do <u>not</u> tolerate numbness in your team member's hands or feet or your own. We come from the factory with 20 digits. It's best to keep all of them.*

ALS indicators

- Decreased/altered LOC
- Temperature less than 95 deg F (35 deg C) oral or tympanic
- Cessation of shivers in a cold patient
- Significant co-morbidities (e.g. elderly, illness, trauma, alcohol, drugs)
- Vital sign abnormalities (shock, inadequate respiration, altered LOC)

BLS indicators

- Cold exposure, temperature > 95 deg F, normal vital signs and no abnormal LOC
- Frostbite with temperature > 95 deg F, normal vital signs, and no abnormal LOC

BLS care (uncomplicated hypothermia)

- Remove patient from the cold environment and protect from further heat loss
- Provide supplemental oxygen and/or ventilatory assistance as necessary
- Provide high flow oxygen via facemask or bag-valve-mask
- Remove wet clothing
- Position of comfort. If decreased LOC, place in recovery position
- Warm the patient using a warm environment
- Monitor patient's vital signs, use ECG monitor if authorized, perform serial temperature measurements.

BLS care for Hypothermic cardiac arrest or profound Bradycardia (see also Avalanche resuscitation)

- If no pulse is detected after one full minute, begin CPR and apply AED. If breathing normally, assume there is cerebral perfusion. Therefore, "NO" CPR.
- If AED states "Shock Indicated", follow cardiac arrest protocol.
- **If pulse is present, withhold CPR regardless of heart rate or BP**

BLS care (Frostbite)

- Protect cold-injured part from further injury
- Remove any constricting or wet clothing or shoes and replace with a dry bulky dressing
- Splint the injury and do not let the patent walk or use affected extremity
- Remove constricting jewelry
- Do not rub or massage injured tissue
- Transport to an emergency room

Do not rewarm frozen tissue unless transport time will exceed two hours and it is certain that the thawed tissue will not refreeze. Obtain medical direction prior to initiating rewarming. Rewarming should be done with 100°F - 105°F water. If a thermometer is not available, appropriate temperature can be approximated using EMT's own bare hand, on which water should feel warm but not hot.

Do not use dry heat; it heats unevenly and may burn frozen tissue. Stop rewarming when the tissue turns red-purple and becomes pliable.

Quick Links

DIABETES [5]

ALS indicators

- Persistently altered LOC
- Absent or depressed gag reflex, as indicated by inability to swallow
- Patient unable to protect airway
- Unstable vital signs
- Rapid respirations
- Signs and symptoms of shock
- Failure to respond to oral glucose with glucometry <60 despite repeat treatment
- Suspected diabetic ketoacidosis (glucometry reading >400 and symptomatic)
- Seizures

BLS indicators

- Normal LOC
- Gag reflex intact as indicated by swallowing
- Patient can protect airway
- Normal vital signs
- Symptoms of hypoglycemia relieved by oral glucose*
- Hyperglycemia with normal vital signs

**OEC Administration of oral glucose without antecedent glucometry is not advised. Summit EMT's are authorized to perform glucometry per EMT protocols. That reading should guide subsequent treatment.*

BLS care

- Request MD/paramedics as indicated
- Perform blood glucometry if authorized*.
- *Glucometry is not currently in the scope of practice for OEC technicians but is authorized for Summit-registered EMT's.*
- Provide supplemental oxygen and/or ventilatory assistance as necessary
- If hypoglycemic and patient is able to swallow, position upright and give oral glucose
- If hypoglycemic and patient is unable to swallow, position on side, give oxygen, ventilation, as needed and await ALS/MD care
- Maintain normal body temperature
- Monitor vital signs in response to sugar

- Diabetic patients with symptoms of hyperglycemia should be evaluated in an emergency room. Transport decision based on clinical presentation.
- If in doubt whether symptoms are due to hypoglycemia and swallowing ability is intact, position upright and give oral glucose

Distinguishing hyperglycemia from hypoglycemia can be difficult without a blood glucose. Recent medical history can help.

History Suggesting Hypoglycemia

- Insufficient food intake
- Excessive insulin dosage
- Normal to excessive activity level
- Rapid onset
- Absent thirst
- Intense hunger
- Headache
- May have seizures

History Suggestion Hyperglycemia

- Recent infection
- Polyphagia (excessive food intake)
- Polydipsia (intense thirst)
- Polyuria (excessive frequency and amount of urine)
- Vomiting, abdominal pain
- "Flu-like" symptoms, nausea
- Insufficient insulin dosage
- Gradual onset
- Normal activity level

Signs and Symptoms of Hypoglycemia

Hypoglycemia may be due to excessive insulin or decreased food intake, or increased activity.

- Irritability, confusion, seizures or coma
- Pale, moist skin
- Normal or rapid pulse
- Low blood glucose (usually less than 60 mg/dl) with glucometry

Signs and Symptoms of Diabetic Coma (Hyperglycemia with Ketoacidosis)

- Altered LOC (restless to coma)
- Warm and dry skin
- Hypotension (systolic BP less than 90 mmHg)
- Sustained tachycardia
- Reduced circulation in extremities
- Vomiting
- Sweet, fruity breath
- Kussmaul breathing (deep, rapid breaths)
- High blood glucose
  - Greater than 200 mg/dl (mild hyperglycemia)
  - Greater than 300 mg/dl (moderate hyperglycemia)
  - Greater than 400 mg/dl (severe hyperglycemia)

- See Appendix A regarding Glucometry performance by OEC techs

Quick Links

EYE INJURIES [5]

ALS indicators

- Major mechanism of injury
- Penetrating injuries to the eye

BLS indicators

- Minor mechanism of injury
- Eyelid laceration with intact vision
- Ultraviolet burns

BLS care:

- Request ALS/MD if indicated
- Stabilize an impaled object in place and bandage both eyes
- Flush chemical burns to the eyes for 15 minutes with normal saline or water if saline is not available
- Ultraviolet burns to the eyes: treat with cool compresses over closed eyes

Quick Links

HEAT-RELATED [5]

ALS indicators

- Decreased/altered LOC
- Hot dry skin in the presence of elevated temperature
- Signs of shock
- Positive postural changes

BLS indicators

- Heat related cramps
- Minor to moderate heat related complaint with stable vital signs

BLS care

- Request ALS/MD as indicted
- Remove patient from the hot environment and place in a cool environment
- Reassure and cool patient
- Provide supplemental oxygen and/or ventilatory assistance as necessary
- Loosen or remove clothing

- Apply cool packs to neck, groin, and armpits for the heat-stroke patient
- Keep skin wet by applying cool water with sponge of wet towels
- Fan aggressively
- Place patient shock position
- If patient is responsive and not nauseated, have patient drink water
- If patient is vomiting, place in recovery position
- Monitor vital signs and temperature

RESPIRATORY [5]

ALS indicators

- Decreased LOC
- Extreme anxiety and agitation
- Tripod position
- Suspected anaphylaxis related
- Unable to speak normally due to respiratory distress
- Respirations > 30 per minute
- Ashen color, cyanosis
- Failure to respond to usual treatments
- Labored respirations regardless of rate when found with other symptoms
- Audible wheezing, rales when found with other indicators
- Use of epinephrine
- Sustained tachycardia

BLS indicators

- Respiratory complaints due to common causes such as cold, flu, bronchitis
- Respiratory complaints of a chronic but stable nature
- Respiratory complaints with normal vital signs and adequate oxygenation with treatment
- Patent airway

BLS Care

- Provide supplemental oxygen and/or ventilatory assistance as necessary
- Obtain pulse oximetry if authorized.
- Reassure patient and urge calmness.
- Assist patient with his or her medications
- Administer epinephrine if authorized
- Any patient who receives epinephrine must be urgently transported to a local hospital
- Monitor vital signs every 5 minutes depending on patient's condition

Quick Links

SEIZURES [5]

ALS indicators

- Multiple/serial seizures
- Single seizure greater than 5 minutes or with greater than 15 minutes postictal with no improvement in LOC

- Seizure due to hypoglycemia
- Seizure due to hypoxia
- Seizure following head trauma
- Drug or alcohol related seizures
- Pregnant and seizing

BLS indicators

- History of seizure and seizure is similar to prior episodes and patient is awake

BLS Care

- After patient awakens, perform exam to determine if any injuries occurred or if any neurologic abnormalities exist
- During seizure, position patient on side
- During and after seizure, provide oxygen
- Perform glucometry if authorized
- After seizure activity has stopped, obtain pulse oximetry if authorized

SPINAL MOTION RESTRICTION (SMR) [5]

These guidelines apply to application of a Long Spine Board to patients with trauma or suspected injury within the Summit at Snoqualmie ski areas (East, Central, West, and Alpental). They are intended for use by OEC and EMT providers on duty at Summit at Snoqualmie. As is the case with any other condition or injury, permission to treat patients less than 18 years of age should be obtained from parent, guardian, or a duly authorized adult chaperone. Pediatric patients often present unique challenges to spinal injury management. Case-by-case decision making and/or discussion with medical control (on duty Ski Patrol physician or destination Emergency Department physician) may be considered. See also Summit at Snoqualmie elaboration in the next section.

Long spine boards (LSB) and cervical collars (CC), which are the traditional mechanism for spinal mobility restriction (SMR), have both risk and benefits. Elderly patients and patients with respiratory diseases may do poorly with the application of these devices. Therefore, LSBs and CCs should be used only when indicated.

A LSB may most useful for extricating an unconscious or difficult to move patient or providing a firm surface for chest compressions. However, other devices may be appropriate for patient extrication and movement, e.g. a mega-mover.

If the patient would normally require SMR but has a previously existing condition that makes securing the patient to a LSB impractical (such as kyphosis), the EMT should use their best judgment to secure the patient to the stretcher with the goal of minimizing movement of the spine.

King County EMS Clinical Indications for Spinal Motion Restriction

1. Immobilize patients with a LSB (or similar spinal mobility restriction device, e.g. a full body vacuum splint) *and* cervical collar for any of the following conditions:
   - Blunt trauma & altered level of consciousness
   - midline thoracic or lumbar spinal pain or tenderness
   - Neurologic complaint (e.g. numbness or motor weakness) following trauma
   - Anatomic deformity of the spine following trauma
   - High energy MOI, AND:
     - Alcohol/drug induced impairment
     - Inability to communicate
     - Distracting injury
   - GSW to head or neck
   - Stab wound to head/neck/back with neurologic deficit
2. Patients complaining of isolated cervical pain or tenderness following trauma, who have a GCS of 15, can be managed by application of a cervical collar and securing the patient firmly to the stretcher, without applying a LSB. This may include patients who are found ambulatory at the scene following the accident.
3. Immobilization on a LSB and CC application is not necessary following trauma when **ALL** of the following conditions are met:
   - Normal level of conscious (GCS=15)
   - No midline cervical, thoracic or lumbar spine tenderness or anatomic abnormality
   - No acute neurologic findings or complaints
   - No intoxication or drug-induced impairment
   - No significant distracting injury is present

These guidelines do not preclude use of the LSB for extrication or moving the patient

Quick Links

Summit at Snoquamie Spinal Motion Restriction Elaboration

1. ***Suspected Thoracic or Lumbar Spine Injury***
   When the LSB is used per the Seattle and King County guidelines as specified above, precautionary Cervical Collar application is advised, especially with high thoracic signs/symptoms or compromised physical exam (e.g. intoxication, distracting injury, etc.)

2. ***Isolated Cervical Spine Injury***
   *Seattle and King County guidelines (above) state in part: "*Patients complaining of isolated cervical pain or tenderness following trauma who have a GCS of 15 can be managed by application of a cervical collar and securing the patient firmly to the stretcher."
   Such patients in our terrain may be managed by utilizing the LSB as transfer device to facilitate movement into and out of the toboggan and subsequently on to an EMS stretcher in the base area. Cervical spine motion restriction in this circumstance may be accomplished with a cervical collar and adjunctive vacuum splint (if available) or blanket roll horse collar.

3. ***Toboggan transport of spinal injury patients on long spine boards in challenging terrain***
   If extrication and transport is expected to be through adverse terrain (steep, bumpy, obstacles, holes, etc.) adjunctive use of "head bed" to secure the head to the LSB is not advised. In such terrain, a vacuum splint or blanket "horse collar" to secure the head to the thorax is preferred.

Quick Links

Other uses of the Long Spine Board at Summit at Snoqualmie

1. ***Extrication or transfer***
   The LSB (Long Spine Board) can serve as a temporary platform on which to secure the patient for short distance moves. If this is the ONLY reason the LSB was used and there is no suspicion of spinal injury in an alert and responsive patient with a normal good quality full spine examination, a cervical collar is not necessary and the patient may subsequently be removed from the LSB once the move is complete.

2. ***Immobilization of pelvic fracture, proximal 1/3 femur fracture, or hip fracture/dislocation***

These injuries are usually but not exclusively the result of high energy mechanisms of injury. Local pain may be sufficient to be considered a distracting injury. In these circumstances, cervical spine motion restriction is appropriate as specified in the King County LSB Guidelines (above). However, cervical spinal motion restriction in addition to using the LSB as a splint may be deferred if all the NEXUS low risk criteria (below) are met.

NEXUS Low-Risk Criteria for Cervical Spine Injury

- *Normal level of consciousness*
- *No midline cervical tenderness*
- *No focal neurologic deficit*
- *No painful distracting injury*
- *No intoxication*

STROKE [5]

ALS indicators

- Unconsciousness or decreased LOC
- Severe hypertension: SBP > 200 mmHg or DBP >110 mmHg, with neurologic signs)
- Hypotension or Bradycardia (pulse <50 bpm)
- Seizures
- Severe headache / vomiting
- Uncontrolled airway and respiratory problems
- Progression of stroke symptoms
- Severe stroke signs with LAMS of 4 or 5

BLS indicators

- Vital signs and condition stable
- Stroke history
- More minor stroke signs with LAMS 3 or less
- Airway secure

BLS Care

- Perform FAST screen exam (below)
- If FAST is positive, perform LAMS exam (below)
- Determine time of **"Last Known Well"** (time of symptom onset)
- Contact ALS providers if indicated (above)
- Activate Code CVA (below)
- Patient in upright position if possible
- Manage airway / provide oxygen and or assisted ventilations as needed
- Deliver oxygen and ventilatory assistance if necessary
- Protect paralyzed limbs
- Monitor vital signs
- Perform glucometry if authorized. Glucose should be over 60. Severe hypoglycemia can mimic stroke.

Quick Links

FAST exam

Face	*Ask the patient to show teeth or smile* Normal: Both sides of the face move equally. Abnormal: One side of the face does not move as well as the
Arm	*Ask the patient to close eyes and extend both arms straight out, palms up, for 10 seconds* Normal: Both arms move the same, or both arms do not move at all. Abnormal: One arm drifts down compared to the other.
Speech	*Ask the patient to say "The sky is blue in Seattle"* Normal: The patient says correct words with no slurring of words Abnormal: The patient slurs words, says the wrong words, or is unable to speak
Time	*Determine* the time of onset of symptoms or when the patient was last known normal.

LAMS

The stroke severity scale is the LA Motor Scale abbreviates LAMS. The LAMS is used to determine *severity* of a stroke if the FAST is positive.

Scale is 0-5. Patients get points based on abnormal results in 3 categories:

A. Facial Droop:	Absent	0 points
	Present	1 point
B. Arm Drift:	Absent	0 points
	Drifts Down	1 point
	Falls Rapidly	2 points
Grip Strength:	Normal, strong	0 points
	Weak	1 point
	No Grip	2 points

Total = _____
(max. 5 points)

If Stroke Severity Score is 4 or 5, the patient may have a Large Vessel Occlusion (LVO) stroke and requires rapid ALS evaluation and transport for specialized care

Patients with LVO strokes should be transported via ALS to a stroke center capable of endovascular clot retrieval therapy *unless* they have severe, chronic illness that makes them bedbound or dependent on others for basic life activities (e.g. advanced dementia). Those patients should proceed to local hospital, regardless of stroke severity.

Quick Links

STROKE: CODE CVA

If the FAST is positive, "Code CVA" should be called as the patient may be a candidate for thrombolytic therapy (TPA) and/or endovascular clot retrieval.

To be effective, TPA generally should be given within **4.5 hours** of the onset of the stroke (last known well); thus EMS arrival at hospital should generally be **<3.5 hours**. All hospitals in King County are capable of delivering TPA but only some provide emergency endovascular clot retrieval.

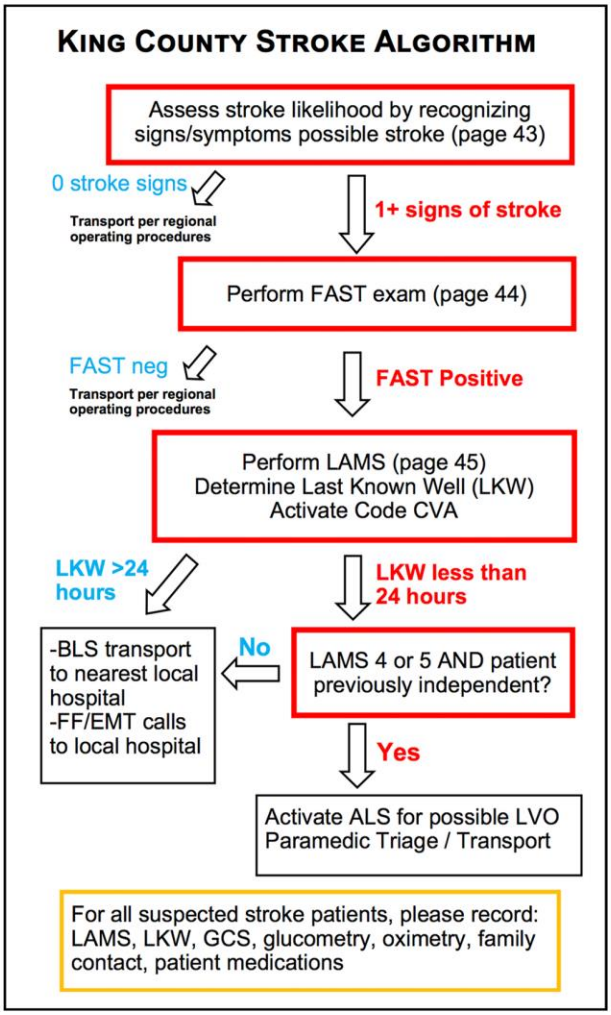
For the stable patient not requiring paramedic evaluation, EMTs should expedite transport to the hospital. This requires rapid decision making, patient loading into the aid vehicle, and notification of hospital of a code CVA patient. You may transport code red due to traffic / transport is >15 minutes.

Document stroke-specific information in the narrative

1. Face: Is it symmetrical? YES or NO
   Arm: Symmetrical strength? YES or NO
   Speech: Is it slurred or abnormal? YES or NO
   Time: What time was the patient last known well?
2. LAMS score
3. Glucometry reading.
4. Oximetry
5. Glasgow Coma Scale Score (see page 87)
6. Family phone contact
7. Patient medications (anticoagulants - page 55)
8. Time of hospital notification
9. Time you left the scene enroute to hospital

The following information must be provided to the destination hospital:

- Incoming CVA patient, age, gender
- Time of last known normal (LKW)
- Vital signs and symptoms
- ETA



See Appendix A for OEC Scope of Practice *regarding Glucometry*

Quick Links

Multi-Casualty Incident (MCI) and Triage

The principles and process of MCI management should be invoked whenever the number of patients exceeds the available resources. Each incident will be different, and the resources gathered to deal with the situation will of course be highly variable.

The Incident Command System (ICS) offers a scalable approach to organizing the responding resources to deal with a Multi-Casualty Incident. Each incident will be different, and the actual organization chart used will reflect that variability.

MEDICAL POSTIONS WITHIN THE MCI PLAN

The Medical team leaders include:

- Triage Team Leader
- Treatment Team Leader
- Transportation Team Leader

THE TRIAGE TEAM

Major Responsibilities:

- Triage may be accomplished using "Sick or Not Sick", or agency specific triage method.
- Obtain the initial patient count for the IC.
- Perform the initial triage of all patients and apply triage tape and unique patient identifier wristband
- Confirm patient count and triage colors.

TREATMENT TEAM LEADER

Major Responsibilities:

- Set up treatment areas: red, yellow, and green. Assign leaders to each.
- Assure that all patients are triaged and taped.
- Direct and supervise treatment area.
- Prioritize patients for transportation.

TRANSPORTATION TEAM LEADER

Major Responsibilities:

- Set up ambulance staging area.
- Designate an Ambulance Staging Manager.
- Maintain medical communications.
- Document patient destination.

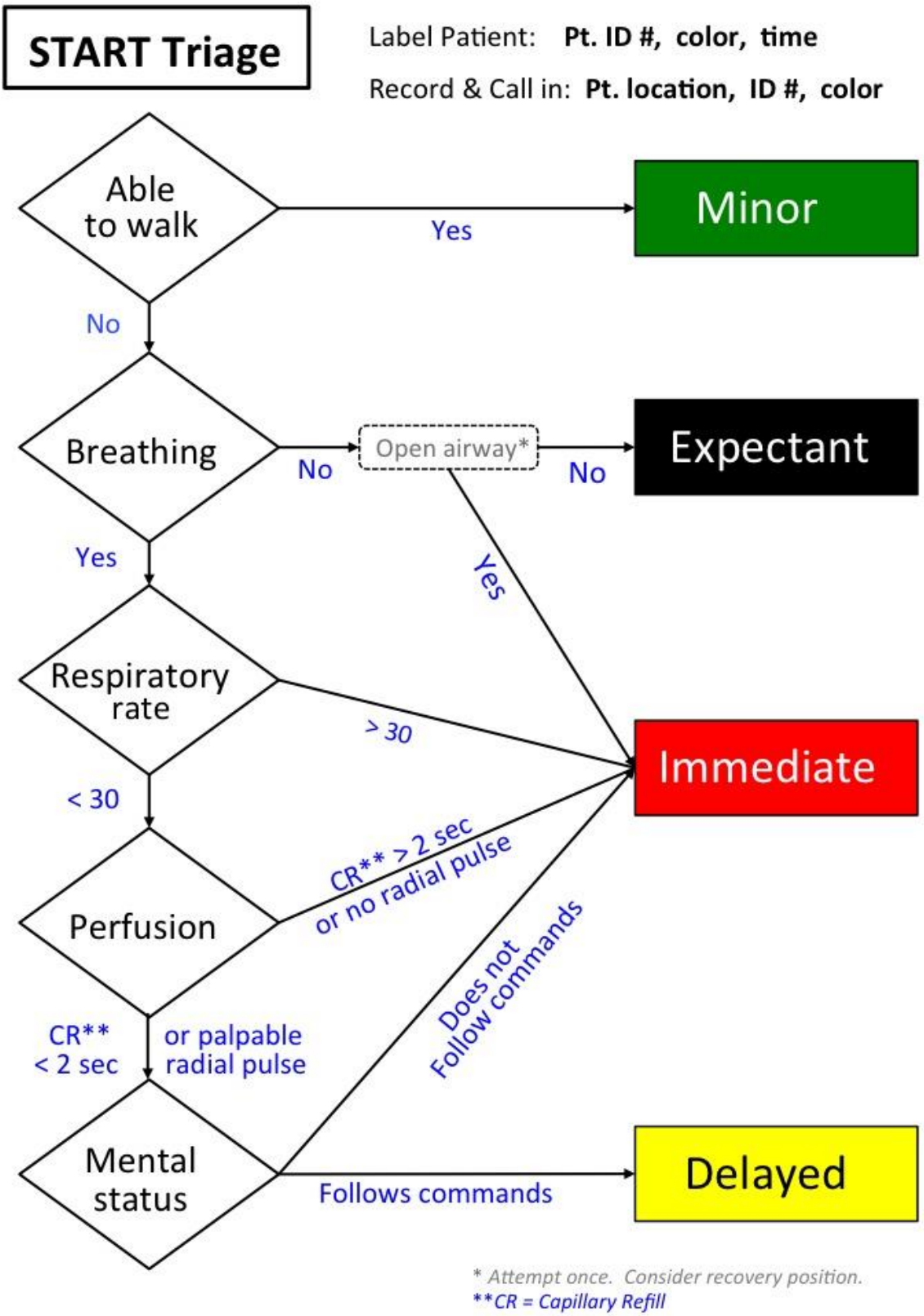
Communication should be brief but should include:

- Color(s) of patients that are loaded in transport vehicles awaiting destination
- Special information (pediatric, burns, or OB trauma).
- Confirm hospital destination

NOTE: Large scale MCI operations will require establishing joint command with responding agencies

Quick Links

Triage quick guide:



Quick Links

Abbreviations

AVPU	Alert, Verbal, Pain, Unresponsive
CHF	Congestive Heart Failure
CMS	Circulation, Motor, Sensory
CNS	Central Nervous System
COPD	Chronic Obstructed Pulmonary Disease
DNAR	Do Not Attempt Resuscitation
ETT	Endotracheal Tube
FBAO	Foreign Body Airway Obstruction
IOS	Index Of Suspicion
LOC	Level Of Consciousness
MDI	Metered-Dose Inhaler
MGS	Medical Group Supervisor
MOI	Mechanism Of Injury
NOI	Nature Of Illness
NRM	Nonrebreathing Mask
NTG	Nitroglycerin
OPA	Oropharyngeal Airway
OPQRST	Onset, Provocation, Quality, Radiation, Severity, Time
POLST	Physician Orders for Life Sustaining Treatment
SAMPLE	Signs/Symptoms, Allergies, Medication, Past history, Last oral intake (meal), Events leading up to complaint

Acronyms [4]

CHEATED

C—Chief complaint: The patient's primary problem.

H—History: SAMPLE history of the present illness and past medical history.
E—Examination: Physical exam.
A—Assessment: General impression of patient.
T—Treatment: All aspects of treat- ment rendered, including that provided by bystanders.
E—Evaluation: Changes in the patient's condition over time; the patient's response to treatment.
D—Disposition: Information indicating whether the patient refused treatment, was treated and released, or was taken to a higher level of care such as a hospital.

FACTUAL-OEC

F—Facts: Include only information that is true and can be documented.
A—Accurate: Describe what you saw, heard, and did accurately.
C—Complete: Include all relevant information regarding the incident and the patient.
T—Terms: Use only accepted medical terms and abbreviations.
U—Unbiased: Information should be objective; avoid personal opinions.
A—Avoid slang: Do not use informal words or words that have multiple meanings.
L—Legible/legal: All written reports should be written in clear, easy-to-read language, with black or blue ink.
O—Organized: The report should present information in a logical manner
E—Error free: Ensure that all words are spelled correctly and that proper grammar is used.
C—Checked: Proofread the document before submitting it.

AEIOU – TIPS

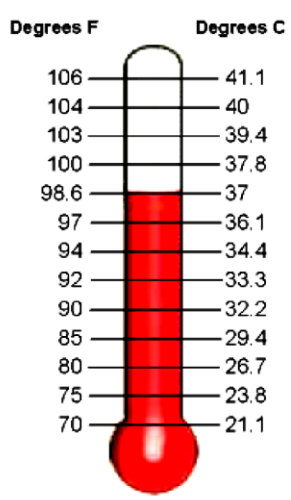
A—Alcohol and acidosis.
E—Epilepsy, environment, and electrolytes.
I—Insulin.
O—Oxygen (hypoxia) and over- dose.
U—Uremia (kidney failure).
T—Trauma and tumors.
I—Infection (CNS, sepsis).
P—Poisoning and psychiatric conditions.
S—Seizures, stroke, and syncope.

MIST hand off

M—Mechanism of injury
I —Injury or Illness
S—Signs and symptoms
T—Treatment

Quick Links

Normal vital signs by age and temperature conversions



Age	Respi-rations (breaths/ minute)	Pulse (beats/ minute)	Systolic Blood Pressure (mm Hg)
Newborn: 0 to 1 month	40 to 60	120 to 160	50 to 70
Infant: 1 month to 1 year	30 to 60	100 to 160	70 to 95
Toddler: 1 to 3 years	24 to 40	90 to 150	80 to 100
Preschool: 3 to 6 years	22 to 34	80 to 140	80 to 100
School age: 6 to 12 years	18 to 30	70 to 120	80 to 110
Adolescent: 12 to 18 yrs	12 to 16	60 to 100	90 to 140
Over 18 years	12 to 20	60 to 100	90 to 140

Phone Numbers

Regional Emergency Departments

Auburn Regional Medical Center	**253-872-5688**
Children's Hospital	**206-987-2222**
Evergreen Hospital	**425-899-1730**
Kaiser - Central	**206-326-3223**
Kaiser - Bellevue	**425-502-4120**
Northwest	**206-368-1981**
Overlake Hospital	**425-688-5100**
St. Francis	**253-368-1981**
Snoqualmie Valley Hospital	**425-831-3323**
Swedish Issaquah	**425-394-0610**

EMS Unit Cell Phones

(Always use appropriate discretion when calling responding EMS units)

Aid 146 (former 291) SPFR	**206-396-4522**
Aid 148 SPFR, Kachess village, or exit 62	**509-290-7607**
Engine 146 (former 291) SPFR	**206-396-4589**
Medic 931 Station 73, exit 79	**509-899-0074**
Medic 991 Cle Elum	**509-899-0059**
Medic 992 HD2 backup rig	**509-899-0053**
Medic 993 HD2 backup rig	**509-304-6039**
Medic 3 North Bed	**425-452-2748**
Medic 14 Issaquah	**425-864-2761**
Medic 1	**425-864-2700**
Medic 2	**425-864-2735**
MSO 5	**509-304-6039**

Other Resources

Eastside Fire and Rescue Dispatch	**425-577-5656**
King Co. Sheriff Search & Rescue Dispatch	**206-296-3311**
King Co. Sheriff Search & Rescue Office	**206-296-3853**
King County Medical Examiner	**206-731-3232**
Language Bank American Red Cross	**206-323-2345**
Norcom Communications Center	**425-577-5656**
Kitcom Communications Center	**509-925-8534**
National Poison Center	**800-709-0911**
Ski Patrol Rescue Team Cell	**206-289-0457**
Snoqualmie Pass Avalanche Control Office	**509-577-1909**
Snoqualmie Pass Cache (Not staffed)	**425-434-6123**
Snoqualmie Pass Fire and Rescue	**425-434-6333**
USFS North Bend Ranger Station	**425-888-8751**
USFS Visitor Center Snoqualmie Pass	**425-434-6111**

Quick Links

Summit at Snoqualmie Internal Numbers

(From an external phone, dial 425-434-7669 then enter 4 digit extension)

BARK (Backcountry Alpine Rescue K-9's)	**5551 or 5555**
Risk Manager (Rob Gibson)	**6752**
General Manager (Dan Brewster)	**6751**
Alpental Aid Room	**5552**
Alpental Dispatch 1 ("Top of 2")	**5555**
Alpental Patrol Base ("Top of 1")	**5554**
Alpental Patrol Office	**5551**
Central Aid Room	**4552**
Central Pro Patrol	**6731**
East Aid Room	**3552**
East Patrol	**3551**
Nordic Center	**4699**
West Aid Room	**6552**
West Pro Patrol	**6782**

Private Ambulance Companies

American Medical Response	**206-623-1111** **800-542-7701**
Rural Metro	**425-672-1111** **800-989-9993**

Tri Med	**206-243-5622** **888-487-4633**

Special statement: OEC use of albuterol, nitroglycerin, and epinephrine

Neither the WAC (Washington Administrative Code) nor the RCW (Revised Code of Washington) currently specify the exact Scope of Practice of OEC techs in Washington State. At Summit at Snoqualmie, timely adjunctive management of anaphylaxis with epinephrine and acute coronary syndrome with aspirin and nitroglycerin be performed by Summit EMTs or via the EMS system.

Summit OEC techs are allowed to assist patients with administering their own physician-prescribed EpiPens and nitroglycerin. Summit OEC techs are also allowed to administer aspirin in ACS. Refer to Aspirin for Acute Coronary Syndrome ***for details***

Quick Links